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ACADEMIC CALENDARS 2009 - 2010

ALL PROGRAMS (except English Language Preparatory Program)

Autumn Semester

3 - 7 September 2009	Required "Introduction to Academic Life Program" for all students entering in 2009
7 September 2009	Announcement of COPE 2 results (18:00)
8 September 2009	Distribution of registration/enrollment records to first year students from departments
8 - 9 September 2009	Online course registration for continuing students
10 September 2009	Classes begin
21 - 22 September 2009	Holiday
28 September 2009	Last day for adding/dropping courses
28 - 29 October 2009	Republic Day, (classes finish at 12:30 on Wednesday)
10 November 2009	Commemoration of Atatürk
26 November 2009	No classes after 13:00
27 - 30 November 2009	Holiday
11 December 2009	Last day to withdraw from courses
23 December 2009	Follow Monday Classes
23 December 2009	Last day of classes
28 December 2009	Beginning of final examinations
1 January 2010	New Year's Day
9 January 2010	End of final examinations
12 January 2010	Last day for submission of course grades

Spring Semester

26 January 2010	Announcement of COPE (Stage 2) results (18:00)
27 - 28 January 2010	Online course registration
29 January 2010	Classes begin
15 February 2010	Last day for adding/dropping courses
5 - 9 April 2010	Spring recess
22 April 2010	Last day to withdraw from courses
23 April 2010	National holiday
14 May 2010	Last day of classes
17 May 2010	Beginning of final examinations
19 May 2010	National holiday
29 May 2010	Last day of final examinations
1 June 2010	Last day for submission of semester grades

Summer School

3 - 4 June 2010	Online course registration
7 June 2010	Classes begin
23 July 2010	Classes end
26 - 30 July 2010	Final examinations
3 August 2010	Last day for submission of course grades

ENGLISH LANGUAGE PREPARATORY PROGRAM

24 - 31 August 2009	Summer School (Part II)
1 September 2009	BUSEL Exemption Exam Stage 1 (10:00)
1 September 2009	BUSEL Exemption Exam Stage 1 results announced (21:00)
2 September 2009	BUSEL Exemption Exam Stage 2 (COPE) (11:00)
7 September 2009	BUSEL Exemption Exam Stage 2 results announced (COPE) (18:00)
7 - 8 September 2009	Registration for continuing students

Autumn Semester

9 September 2009	Course 1 classes start
21 - 22 September 2009	Holidays
28 September 2009	Last day for late registration
28 - 29 October 2008	Republic Days (Half day teaching on Wednesday)
30 October 2009	Holiday
9 - 13 November 2009	Course 1 exam week
10 November 2009	Commemoration of Atatürk
17 November 2009	Course 2 classes start
26 - 30 November 2009	Holidays
24 - 25 December 2009	No classes
1 January 2010	New Year's Day - No Classes
18 - 22 January 2010	Course 2 exam week
19 January 2010	Semester 1 COPE (11:00)
26 January 2010	COPE results announced (18:00)
26 January 2010	End of semester
25 - 29 January 2010	Semester break

Spring Semester

1 - 2 February 2010	Registration for continuing students
3 February 2010	Course 3 classes start
15 February 2010	Last day for late registration
29 March - 2 April 2010	Course 3 exam week
5 - 9 April 2010	Break
13 April 2010	Course 4 classes start
23 April 2010	National holiday
19 May 2010	National holiday
7 - 11 June 2010	Course 4 exam week
11 June 2010	Semester 2 COPE (11:00)
18 June 2010	Semester 2 COPE results announced (18:00)
18 June 2010	End of semester

Summer School

15 June 2010	Summer School part I starts

HISTORICAL BACKGROUND

Bilkent University was founded on October 20, 1984 by İhsan Doğramacı, through the joint resolution of İhsan Doğramacı Education Foundation, İhsan Doğramacı Science and Research Foundation and İhsan Doğramacı Health Foundation. The establishment of this private university was later approved by an act of Parliament. The aim was to create a center of excellence in higher education and research. The name "Bilkent" exemplifies the founder's aim, since it is an acronym of *"bilim kenti,"* Turkish for "city of science and knowledge."

It had long been an objective of the founder to establish a private university distinguished by its high quality education and research. The founder, himself an academic by profession, had earlier contributed to the establishment of numerous public institutions of higher learning and served as rector of Ankara University, chairman of the Board of Trustees of the Middle East Technical University and founder and first rector of Hacettepe University.

Preparations for Bilkent University had begun as early as 1967, with the purchase of a large tract of land to the west of Ankara. In the late 1970s and early 1980s the above mentioned foundations undertook construction, on the future site of Bilkent, of the buildings which now house administrative offices, the Faculty of Engineering, and the library. Construction of residences for academic staff, cafeterias, student dormitories, the Student Union building and various academic buildings followed in rapid succession.

In October 1986 Bilkent University admitted its first students. That year there were 386 undergraduate and graduate students. Currently there are over 12,000 students in nine faculties, two four-year professional schools, two two-year vocational schools and the School of English Language plus six graduate schools (called institutes). Among them are foreign students from 72 countries. With funds from the endowments provided by the founder, the university each year awards full scholarships to about 3,000 students and support and merit scholarships to about 800 students of high academic achievement.

From the outset, the design of the university structure provided for student union representatives to be voting members of the administrative committees of various schools, as well as of the University Senate. Beginning in the second year of instruction, the practice of student evaluation of courses and instructors, at the time not a common practice in Turkey, was instituted.

To promote the enrichment of teaching and research programs, Bilkent University entered into collaborative projects and exchange programs with many universities abroad. Bilkent has student exchange agreements with numerous universities including the University of California system, Georgia Institute of Technology, Maryland University, Washington University, Michigan University in the USA; McGill and Waterloo Universities in Canada; Tilburg and Amsterdam Universities in the Netherlands; Pforzheim and Konstanz Universities in Germany; Roma and Bacconi Universities in Italy; Southern Denmark University in Denmark; Essex University in England; Ecole Supérieure de Commerce de Lille and Clarmont University in France; Waikato University in New Zealand. The complete list of partner universities can be found at www.bilkent.edu.tr. The university also has a communications office at the Empire State Building in New York City, equipped with interactive video conferencing capabilities. A number of courses in addition to conferences are delivered through this office via satellite connection.

To meet the expanding needs of the university, construction has continued throughout the years since the admission of the first students. New buildings and facilities include two gymnasiums; the Faculties of Humanities and Letters, Economics, Administrative and Social Sciences, Art, Design and Architecture, Science, the Computer Center, and Music and Performing Arts; a Concert Hall for the Bilkent Academic Symphony Orchestra; a secondary school, a preschool and nursery; new dining facilities; two health centers and a pharmacy; and the East Campus which has additional classroom space, catering facilities, and student and faculty housing.

The Career Development and Placement Center, another service established at the incentive of Bilkent's founder early in the University's development, helps final-year students to acquire the skills

necessary to apply successfully for a job. The Center arranges interviews between representatives of major corporations and students seeking employment.

Each year, more than 1,500,000 high-school graduates take the national examination to enter the 94 state and 38 private universities in Turkey. Bilkent gets many of the very best of these students.

The faculty is comprised of academic staff from 41 different countries. Most of them were working in prominent universities in North America and Europe when they received offers from Bilkent University. According to *ISI Citation Indexes*, Bilkent continues to be the first in Turkey in number of published papers per faculty member and ranks high internationally.

NON DISCRIMINATION STATEMENT

Bilkent University hires academic and administrative staff and admits students regardless of gender, race, color, national or ethnic origin to all the rights, privileges, programs, and activities generally accorded or made available to staff and students at the university. It does not discriminate on the basis of gender, race, color, national or ethnic origin in administration of its educational policies, admissions policies, scholarship and loan programs, or athletic and other university-administered programs.

DEGREE PROGRAMS

Academic Year

Each academic year consists of two sixteen-week semesters, Autumn and Spring, that include the final examination period. In addition, a seven-week summer semester is offered each year. The academic calendar for 2009-2010 is given at the beginning of this catalog.

Undergraduate Programs

The bachelor's degree is awarded to students who successfully complete an eight-semester course of study (approximately 120 credit units or at least 240 ECTS).

Students must fulfill all the degree requirements determined by their departments; at graduation their cumulative grade point average must be 2.00 or higher on a scale of 4.00.

The undergraduate programs are organized in departments within nine faculties, two schools and three vocational schools offering two-year programs. These faculties and schools are as follows:

- Faculty of Art, Design and Architecture
- Faculty of Business Administration
- Faculty of Economics, Administrative and Social Sciences
- Faculty of Education
- Faculty of Engineering
- Faculty of Humanities and Letters
- Faculty of Law
- Faculty of Music and Performing Arts
- Faculty of Science
- School of Applied Languages
- School of Applied Technology and Management
- Vocational School of Computer Technology and Office Management

- Vocational School of Tourism and Hotel Services
- Vocational Program in Translation (of the School of English Language)

Study at the vocational schools leads to an Associate of Arts or Associate of Science vocational degree.

Graduate Programs

Students who have obtained either a B.A. or B.S., or an M.A. or M.S., or an equivalent degree from an accredited university are eligible to commence studies in the master or doctoral programs, respectively.

The graduate programs are administrated through:

- Graduate School of Business Administration
- Institute of Economics and Social Sciences
- Graduate School of Education
- Institute of Engineering and Science
- Institute of Fine Arts
- Institute of Materials Science and Nanotechnology
- Institute of Music and Performing Arts

Each institute coordinates the curricula for its respective departments. Information on the graduate programs are provided in this catalog under the headings of the related departments.

ADMISSION, TUITION, FEES AND ACADEMIC REQUIREMENTS

ADMISSION, TRANSFER STUDENTS, AND REGISTRATION

Language Proficiency

Students whose level of English is insufficient are required to enroll in the School of English Language. Those accepted to the Translation and Interpretation Department must take, in addition, a Proficiency Examination in French, and those whose level of French is insufficient are required to follow the language program in the Basic French Section of the School of Applied Languages.

Undergraduate Admissions

To begin undergraduate studies at Bilkent, all Turkish applicants to the Faculties of Engineering; Science; Economics, Administrative and Social Sciences; Business Administration; Humanities and Letters; Education; Law; the School of Applied Languages and the School of Tourism and Hotel Management must take the entrance examination (ÖSS) administered by the national Student Selection and Placement Center (ÖSYM). Based on the results of this exam, ÖSYM places students according to their preferences.

Applicants to the Faculties of Art, Design and Architecture and of Music and Performing Arts must successfully pass the ÖSS examination. Admission is then granted on the basis of aptitude tests administered by the respective faculty.

Applicants to vocational school programs are also placed by ÖSYM, based on their ÖSS scores. There is no application fee for first-year undergraduate students since they are placed by ÖSYM.

All international students who want to apply to Bilkent University for a full-time undergraduate program has to go through an admission procedure:

1) International students applying to join a full-time undergraduate degree program must satisfy one of the following scores:
   - At least 40 standard points in one of the two most recent YÖS Examinations for Foreign Students for Higher Education Programs in Turkey. For details of the "Examination for Foreign Students" please see www.bilkent.edu.tr/bilkent/academic/international/yos.html.
   - In the SAT I, a total score of at least 1000 or higher up to 1200 in the combined Critical Reading and Math Reasoning tests, depending on the department to which application is being made. Please see www.bilkent.edu.tr/bilkent/academic/international/sat.html for the minimum requirements of each department/program.
   - In the GCE (General Certificate Education) at least three A levels one of which is in the subject of the program.
   - In the ACT examination, a minimum score of 24 in Mathematics, Science and Composite.
   - In the Baccalaureate Libanais examinations given in Lebanon, a diploma score of at least 14 in the Scientific Stream.
   - In the Tawjih examinations given in Jordan and Palestine, a minimum average of 85 points in all courses in the Scientific Stream.
   - An International Baccalaureate diploma with a diploma score of at least 28 or higher up to 32 depending on the department to which application is being made.
   - A French Baccalaureate diploma with a diploma score of at least 12.
   - ABITUR with a score of at least 4.
   - In the Gao Kao examination of the People's Republic of China, a score of at least 540. (It may vary according to the department applied.)
   - Recipients of gold, silver or bronze medals in the International Science Olympics recognized or participated by TUBITAK (Turkish Scientific Research Council).

   Additionally, the Faculty of Art, Design and Architecture and the Faculty of Music and Performing Arts, students must take an aptitude test administered by the related Faculties in late August 2009 in addition to one of the above requirements.
2) Passport Photocopy
3) Passport Size Picture
4) Lycee or High School Diploma. The diploma should be recognized by the Ministry of Education of Turkey
5) Application Form (Please see www.bilkent.edu.tr/bilkent/academic/international/fulltime_app.doc)

Applicants should send all the needed documents for application to the address below.

Bilkent University, Registrar's Office
Office of International Students
Bilkent, Ankara,
06800 Turkey
e-mail: registrar@bilkent.edu.tr

Graduate Admissions

The following are some of the general graduate admission requirements for all departments:

- All Turkish applicants are required to take the ALES *(Lisansüstü Eğitimi Giriş Sınavı* - Postgraduate Education Entrance Exam) given by ÖSYM every year.
- Submission of GRE or GMAT scores is required of international applicants and may be required for domestic applicants in some programs.

- Fluency in written and oral English. TOEFL (Test of English for Foreign Language) scores are required for non-native English speakers who cannot take the local test.

In addition, each department establishes its own criteria for admission and departmental listings include more detailed information about these.

Application forms can be obtained either from the Graduate Admissions Office or through the Internet: **http://www.bilkent.edu.tr/gradapp.html**.

Transfer Students

Applicants may transfer to Bilkent University from an accredited university under the following conditions:

- The applicant must have successfully completed at least one full year (two semesters) at an accredited university. No transfers are allowed for the freshman year. The academic standards and the course structure of the university must be equivalent to those of Bilkent University.
- Transfer applications submitted to the Registrar's Office must be completed until mid August. Each department individually determines the number of transfer students it will accept.
- Credits earned at another university are taken into consideration when determining a transfer student's requirements for graduation from Bilkent. However, in order to graduate from Bilkent, the student must have completed at least his/her final two semesters at Bilkent.

Application forms and the list of required documents can be obtained either from the Registrar's Office or through Internet: www.bilkent.edu.tr/bilkent/academic/admission/index.html.

Exchange Programs

The Student Exchange Program gives students the opportunity to study abroad while experiencing a culture different from their own. It also exposes visiting students to the culture, art and history of Turkey. Exchange programs are coordinated under two main categories:

1) Erasmus programs with Universities in the European Union.
2) Exchange programs with the U.S. Universities and universities elsewhere.

The principle of reciprocity inherent in the exchange programs makes it possible to send Bilkent University students to the partner universities provided that students from those universities come to Bilkent. Program participants pay the regular tuition fees to their home institution for the semester, and are responsible for additional travel, housing, food, and incidental costs as well as the insurance expenses and other minor fees while at the host university. Outgoing Erasmus students are being granted with a monthly payment from EU funds. Detailed information about Erasmus and exchange programs may be found at www.bilkent.edu.tr.

Semester Registration

Students are required to register for courses at the beginning of each semester within the time limits announced by the University. Tuition must be paid prior to registration.

Students with acceptable excuses for late registration may register up to the final date for adding courses.

FEES AND FINANCIAL ASSISTANCE

Fees and Expenses

Fees and expenses for the 2009-2010 academic year are as follows:

Tuition:

Turkish citizens	16,900	TL	(8 % VAT included)
International Students	$ 13,000	(U.S.)	(8 % VAT included)

Tuition fees are payable in two installments, before the registration dates of the fall and spring semesters. All fees are subject to adjustment each year according to changes in the cost of living.

On Campus Housing:

Quadruple room	1,950	TL
Triple room	3,100	TL
Double room	3,800 - 4,100	TL
(*according to type of room*)		
Single room	7,800	TL
Single room with private bath and shared kitchen	13,500	TL
(*Special Dorms*)		

All above rates are per person per academic year, and inclusive of 8% VAT.

Payable in two installments.

In addition, expenses for meals, books and miscellaneous necessities should be taken into account.

Financial Assistance

Bilkent University is a non-profit institution supported by endowments from the Foundations. Students with high academic achievements may be eligible for a tuition subsidy from the Foundations.

COURSE PROGRAMS, GRADING, AND GRADE POINT AVERAGE

New Student Orientation

All incoming students are required to take the "GE 100 - Orientation" course before starting their first semester. This course is designed to adapt students to the university's academic and social environment. Students learn the responsibilities of studying at a university, get information on the facilities and services available to them and are introduced to their new surroundings.

Academic Advisor

At Bilkent University each student is assigned to an academic advisor. The advisor offers counseling services to the student in academic matters, takes an interest in the student's selection of courses and academic progress, and eventually assists him/her towards satisfactory job placement.

Course Load

Courses listed in the catalog on a semester basis for each department represent a normal course load. At the proposal of the student's advisor and with the approval of the Chair of the Department, the course load for a semester may be increased by a maximum of two courses. Should a course load be reduced, the student must at the first opportunity take the course(s) he/she has omitted or dropped. For students attending their final semester, the normal course load may be increased by a maximum of three courses upon the proposal of Chairperson and the approval of the Dean or School Director. See Article 2.3 of the "Regulations Related to Teaching, Examinations and Assessment".

Attendance

Students must attend all lecture, laboratory and practical sessions, take all examinations and participate in the activities which the teaching staff may consider appropriate.

Examinations and Assessment

Apart from work conducted throughout the semester, students must take a final examination at the end of each semester and at least one midterm examination for each course. If a staff member considers it appropriate, practical laboratory work or other such assignments may be assessed as midterm examinations.

Grades are finalized when they are announced via the WEB on the date specified in the Academic Calendar. Semester grades for practical studies and other non-lecture courses are determined by an evaluation of the student's overall work and performance throughout the semester.

Grades

The official University grading system uses letter grades with pluses and minuses. Passing grades range from **A** to **D**; **F** is failing. The quality-point equivalents of the grades are:

		B+	3.30	**C+**	2.30	**D+**	1.30		
A	4.00	**B**	3.00	**C**	2.00	**D**	1.00	**F**	0.00
A-	3.70	**B-**	2.70	**C-**	1.70				

Undergraduate students who receive a **C** or a higher grade are considered to have satisfactorily completed that course. A student receiving between a **C-** and a **D** in any course may only be considered successful if he/she has not been on probation or unsuccessful during that semester. (See sections on "Students on Probation", "Unsatisfactory Students" and "Repeating a Course.") The letter grade **D-** was abolished as of September 1, 2006.

Other grades used are **S** (Satisfactory), **U** (Unsatisfactory), **I** (Incomplete), **P** (in Progress), **T** (Transfer), and **W** (Withdraw). These grades do not have quality-point equivalents.

S : accorded to students who are successful in non-credit courses.

U : accorded to students who are unsuccessful in non-credit courses.

I : accorded to students who, although otherwise successful, have failed to complete the required assignments for a course due to illness or for some other valid reason. Proof of illness or other reason for non-completion must be submitted to the Department Chair within three days of the date of the final exam. A student receiving an incomplete grade for any course must make up for the deficiencies within 15 days after the final exam in order to obtain a grade. Otherwise, the grade **I** automatically becomes **F**. At the discretion of the Department Chair, the period specified above may be extended until the beginning of the following semester.

P : given at the end of the first semester of a year long course.

T : reflects approved transferred courses from other universities.

W : given for a course withdrawn by a student subject to the approval of the department chairperson.

Grade Point Average (GPA) and Cumulative Grade Point Average (CGPA)

A student's academic performance is determined at the end of each semester by computing an average of the grades he/she has received during that semester.

As an example, if the following grades were received by a student in a given semester,

Course	Grade	Quality Points		Credits		Product
ELIT 103	B+	3.3		3		9.9
ELIT 107	C–	1.7		3		5.1
ELIT 137	B	3.0	×	4	=	12.0
ELIT 139	B	3.0		3		9.0
HART 115	C	2.0		3		6.0
Total				16		42.0

to arrive at the semester grade point average (GPA), the products (credits × quality points) are added and then divided by the number of credits taken. In the above example 42 divided by 16 equals 2.63 (the semester GPA).

The cumulative grade point average (CGPA) – an average of grades from two or more terms – equals the sum of the products of all the grades at Bilkent divided by the total number of credits taken.

HONORS STUDENTS, PROBATION, REPEATING

(This section is applicable to students in undergraduate programs only.)

Please see Article 2.8 of the "Regulations Related to Teaching, Examinations and Assessment".

“High Honor” and “Honor” Students

Students achieving distinction by obtaining a semester GPA of 3.00 to 3.49 while carrying a normal course load are referred to as “Honors” students. Those earning an average of 3.50 and above, under the same conditions, are awarded “High Honors.”

“Successful” Students

Students maintaining a CGPA of 2.00 or higher at the end of a semester are deemed successful. However, they must repeat any courses for which they have received **F**, **W** or **U** grades.

Students on “Probation”

Students obtaining a CGPA of 1.80 - 1.99 at the end of a semester are placed on probation. Students on probation are required to retake courses of their choice from among the courses in which they previously received grades of C-, D+, D in addition to courses with F, U or W grades. Additional courses, not previously taken, may also be enrolled, but their number is limited.

“Unsuccessful” Students

A student with a CGPA of below 1.80 at the end of a semester is an “unsuccessful” student. Unsuccessful students are required to retake courses of their choice from among the courses in which they previously received grades of C-, D+ or D in addition to courses with F, U or W grades. No additional courses, not previously taken, may be enrolled.

Dismissal

A student whose CGPA falls below 1.20 at the end of a semester, except during the first three semesters, is dismissed from the university unless the student is granted an internal transfer into another department.

Repeating a Course

Students receiving either a grade of **F** or **U** in a course must repeat that course the first time it is offered. Additionally, students receiving below a C grade in ENG 101 or ELS 101 must repeat it in the immediately following semester.

To improve their CGPA, students in satisfactory standing may repeat courses previously taken in which they received a grade of C- or lower, within the subsequent two semesters, subject to departmental approval and semester course load constraints. If the course selected to be repeated is an elective or has been cancelled, students may take an equivalent course approved by their Department.

Period of Study

The normal period for completion of undergraduate studies at Bilkent University is four academic years. Students in four-year programs must complete the requirements of their programs at most within seven academic years (excluding studies in the School of English Language). Students who fail to graduate within that period or who will be unable to qualify for such graduation are dismissed from the University. Students in two-year vocational schools must complete the requirements of their programs within four academic years (excluding studies in the School of English Language). Students in five-year teacher education programs must complete the requirements of their programs within eight academic years (excluding studies in the School of English Language). Otherwise, they are dismissed from the University.

DIPLOMAS AND AWARDS

The bachelor's degree is awarded to students completing an eight-semester course of study which complies with the Section "Course Programs" of this catalog. To be eligible for a bachelor's degree, students must have a cumulative GPA of 2.00 or higher on completion of all the degree requirements. The diploma indicates the department from which the student has graduated.

To be eligible for graduation, students transferring to Bilkent University from another institution of higher education must study at Bilkent University for at least their final two semesters.

The vocational schools award associate degrees upon the completion of their requirements.

As for graduate degrees, please refer to the graduate programs listed in this catalog, under the respective departments.

LEAVE AND WITHDRAWAL

Leave of Absence

Students may be granted permission to leave the University temporarily. Applications detailing valid and reasonable grounds for request of such permission are made to the respective Dean's Office or School Director. If a decision to grant leave is taken by the Executive Board of the related Faculty or School, notice is given to the Registrar's Office. Leave may not exceed two semesters at a time, or a total of four semesters for a student's entire study period. Periods which elapse during the course of such leave are not counted as part of the study period. Applications for leave should be submitted in writing at the beginning of the semester. Applications for leave for health reasons must be properly authenticated by proper medical certificates.

Withdrawal from the University

Students may withdraw from the University by applying to the Registrar's Office. However, tuition fees paid are not refundable in such cases.

FACILITIES and SERVICES

COMPUTER CENTER

Seyit Koçberber, Ph.D., Director

The Bilkent Computer Center (BCC) provides a variety of computing resources and services to meet the administrative, educational and research computing requirements in the university community. These services include providing computational, networking, and internetworking equipment, their hardware and software maintenance, maintenance of software resources such as compilers, utilities and application programs. Additionally, BCC develops in-house application software for the university itself including the academic information system, student information system, library information system and others.

Hardware Resources

Workstation and PC Laboratories

There are approximately 4,000 personal computers distributes in offices and laboratories throughout the campus and around 3,000 student computers in the dormitories; all connected to BILNET. BCC maintains 15 general purpose computer labs, populated with around 600 computers in total, for student and staff use. All users have access to laser printers and to the Internet. In addition to the BCC labs, many departments, schools and institutes maintain their individual educational and research labs.

Networking Capabilities

The campus network is built on a Gigabit Ethernet backbone. This star topology backbone connects all the faculties to the central switch via fiber-optic cables.

Wireless network access points are scattered around the campus providing hot spots for the mobile users.

All students and faculty are authorized to have accounts for their e-mail and their access to the resources in the labs.

Dorm Net

Bilkent University's networking facilities are extended to the dormitories as well. All campus dormitory rooms are wired for the Ethernet and students living in the dormitories can connect their own computers to BILNET and the Internet.

Software Resources

BCC provides and maintains a wide variety of scientific tools at the users' disposal. These include statistical, mathematical, simulation libraries and packages together with various VLSI and graphics design tools and imaging tools. All modern and classical programming languages and development tools are available in various hardware platforms. State-of-the-art word processors, spreadsheets, database application software and presentation graphics software are available in most of the labs.

Some software developed in-house are also available to faculty, students and staff. The most widely used one being BLISS (Bilkent Library Information Services System), which enables readers to browse the Bilkent Library catalogs on terminals or WEB pages on the Internet. AIRS (Academic Information Review System), SRS (Student Review System), and DAIS (Department Academic Information System) are the valuable tools to help the faculty and students in planning their course loads and academic preferences. ORS (Online Registration System) enables students to see and register to offered courses.

UNIVERSITY LIBRARY

David E. Thornton, Ph.D., Library Director

Ebru Kaya, Associate Director

Bilkent University Library is a lending and research library where open stacks permit free access to the entire collection, except the rare book collections. The main library, housed in its own four-story building at the center of the Main Campus, is open from 8:30 to 23:30 weekdays; from 9:00 to 23:30 weekends. The East Campus branch library, located on the top floor of the Catering Center, is open from 8:30 (weekends from 9:00) to 23:20, Monday-Thursday and closes at 17:00 on Friday and weekends. Summer hours are announced.

Bilkent Library was the first Turkish university library to offer its readers automated services through an integrated computer system. It provides the use of an online public access catalog to all readers with access to computer terminals both in the libraries and elsewhere on campus as well as to researchers, any place in the world, with access to the internet. There are also 32 computers with internet access in the Reference and Current Periodical Rooms for the purpose of searching e-resources and browsing the internet. Circulation of the collection is also automated. Internet access is available in both libraries.

The collection contains over 500,000 items. The book collection, of over 400,000 volumes, increases by approximately 20,000 volumes annually. The library subscribes to over 2,000 print journals from the USA and Europe and provides electronic access to over 87,000. Over $3 million is spent each year on databases, books, journals and other resources, including video and audio cassettes, DVDs and VCDs, maps, microforms, CD-ROMs, music scores and sound recordings. The library makes over 100 databases available on-line, which provide access to both citations and the fulltexts of journal articles, conference proceedings and papers and research material. Working papers and technical reports are received from leading research centers in Europe, the USA and Japan.

The Turkish Plastic Arts Archive makes available a file of over 50,000 newspaper clippings, magazine articles and exhibition materials (invitations, posters, catalogs). The collection has been catalogued and is accessible on the Internet.

Bilkent University Library has been designated by the Library of Congress to receive U.S. Government documents and makes them available in the combined Government Documents Room and EUI Centre. The Bilkent University European Union Information Centre opened in 2001 with the status of a full EUI serving as a depository for European Commission publications and World Bank regional publications

Materials of special interest to students include the “easy reading” section. The newspaper collection includes leading foreign newspapers. Daily newspapers and popular magazines can be read in the "Newspaper and Magazine Reading Room" which contains comfortable chairs. Photocopying is available in the library.

Reciprocal lending-borrowing agreements with a number of Ankara area universities make it possible for Bilkent graduate students and faculty to borrow books from those libraries as well.

Orientation tours of the Bilkent University Library are conducted on request in English and Turkish.

Wireless Network Service is available in both the Main and East Campus Libraries.

In order to make studying and research pleasant there is a cafe at the entrance of Main Library.

Further information about the Library and its collection can be found at: www.library.bilkent.edu.tr.

OFFICE OF THE DEAN OF STUDENTS

Perin Öztin, Dean

The Office of the Dean of Students is the center for students' development through a large variety of means where they build their skills, a sense of responsibility, maturity and belonging as well as teamwork efforts in an environment where their imagination and creativity spirits can also be stimulated that will hold them in good stead in the future.

Student Activities

The variety of activities offered on campus add a social component to students' academic life.

The Student Union organizes students' social and cultural activities. Student representatives are elected by the student body; they are responsible for managing the Student Union and creating a program of activities. Located in the center of the Main Campus, the Student Union building houses multifunctional rooms, offices and a small conference hall. All the clubs are established to cater to students' various interests and needs are coordinated by the Student Union. Some of these clubs are:

Aviation Club	Management-Economics Club
Bridge Club	Music Club
Cinema Club	Operational Research
Debate Society	Outdoor Sports Society
Engineering Society	Photography Club
Diving Club	Theater Club
MBA Club	Turkish Society

In addition, meetings, seminars, debates and trips are regularly organized allowing students to participate in various activities with many facets.

Student Union Coordination Office

The Student Union Coordination Office provides the necessary liaison between the university administration and the Student Union. In addition, the office offers students advisory services about their personal or institutional representation in domestic or international activities. The Coordinator's office is located in the Student Union building for a better accessibility. Working closely with the Student Union, the Student Union Coordinator also provides guidance when needed for clubs and extracurricular activities.

Radio Bilkent

Radio Bilkent is a voluntary student radio station which is broadcasting on FM frequency **96.6** to the campus and citywide. Radyo Bilkent provides an opportunity for Bilkent University students to gain social and professional experiences as well as adds value to the social and cultural life of Ankara with its organizations and programmes. Radio may be listened live through internet at "www.radyobilkent.com". Bilkent University students can follow the recent news about the station from the university newspaper, Bilkent News, and also from the radio's web site. Radio Bilkent's main studio is located in the Engineering Building top floor, and the second studio "Radyo Bilkent Orçun Gül", is located in the food court on main campus.

Career Center

The Career Center provides career related services for Bilkent students throughout their university years. To prepare them for entering the business world, the Center offers workshops which focus on employment-seeking skills such as resumé writing, interviewing techniques, and career seminars. Various companies, international organizations and government agencies refer to the Center to recruit graduates.

Psychological Counseling and Development Center

Psychological Counseling and Development Center guides Bilkent students through their self-development journey. Helping them to develop awareness about their potential and how to apply

this information into academic, professional, social and intimate lives is the main focus of the center personell and supports their process of becoming unique identities.

The services offered by the center are individual and group counseling for the immediate purposes and seminars, workshops and self help materials for preventive purposes. Stress management; examination and performance anxiety; interpersonal communication; concentration and study skills; time management; realistic self-evaluation; intimate relations; problem solving; effective presentation skills, enhancing cognitive skills in learning; developmental stages of life and importance of identity in personality development are some the topics covered in the preventive facilities.

The center also conducts survey type studies to explore the expectations and needs of the students. The outcome of these studies contributes to the ongoing program flow and the future plannings.

ALUMNI CENTER

Ayşe Tuğcu, Coordinator

The founding aim of Bilkent University Alumni Center is to offer the best service to our valuable graduates. The Alumni Center provides a network among Bilkent alumni to perpetuate their ties with the University and with one another. To this end, as center, we actively update our data about our graduates.

The Alumni Center prepares organizations to our alumni, such as the panel discussions that are being periodically organized by the Alumni Center since 2006. Furthermore, the center also organizes the annual "Alumni Homecoming" fair every year, on the third weekend of May.

Bilkent Alumni Center always aims to create the opportunities for our current students to meet with our graduates of the same departments, by encouraging senior year students to learn more about business world and ensuring that prospective graduates are getting sufficient support from the postgraduates regarding the preparation process. In this regard, the Center always puts a great emphasis on maintaining a close contact among all the members of Bilkent University.

The Alumni Center is also responsible from the publication of the yearbook and the organization of the "Graduation Ball" the Bilkent students.

The cooperation with the Career Center enables the center to inform our graduates through e-mail, about the job opportunities announced by the Career Center.

HEALTH CENTER

Ülker Türksoy, M.D., Director (Main Campus)

Jale Erten, M.D., Director (East Campus)

The Health Centers, located on the Main and East Campuses, provide health services to students and faculty members. The services are provided free of charge to all Bilkent graduate and undergraduate students.

The Health Centers offer the services of a public health specialist, six general practitioners, two gynecologists, two ophthalmologist, a pediatrician, two psychiatrists, two dermatologists, an orthopedist, a dentist, an ENT specialist, and five nurses and one paramedic. The Centers have two in-house laboratories for immediate medical analyses such as blood count, urine analysis, blood chemistry and a unit for X-Ray and ultrasonographic examinations. Medicines are available on prescription at the Main Campus pharmacy and the pharmacies at Bilkent 1, 2 and 3 (the neighboring residential area). A physician and a nurse are both on duty at the Health Centers on the Main and East Campuses 24 hours a day, including weekends. In case of emergencies, there is an ambulance on duty 24 hours a day to take patients, accompanied by Health Centers doctors, to hospitals in Ankara.

Services Provided

- General check-up for students
- Prevention against contagious diseases
- Medical examinations and first aid treatment
- Referral of patients to a specialist or hospital, if necessary
- Supervision of patients' recovery in certain cases and provision of relevant medical services
- Conducting research into the environmental health conditions on campus and reporting the results to the university administration
- Health education programs to students and staff on general medical and health issues and first aid (providing certificates for the first aid education by the government health authorities).

Applying to the Health Center
The Health Center is the first place that students contact in the event of illness or injury. Initial treatment or first aid would be carried out at the Health Center and, if necessary, the patient may be referred to a specialist or hospital which has an agreement with the University.

The Health Mutual Aid Fund
Every student registering at Bilkent becomes a member of the Health Mutual Aid Fund which provides financial support to the Health Center. The Fund pays for routine medical services for students, such as check-up, consultations, medical tests, medicine, emergency hospital costs, etc. However, costs incurred by long-term illness such as tuberculosis, chronic kidney diseases, autoimmune diseases, chronic congestive heart failure, rheumatoid arthritis, rheumatic heart disease, diabetes mellitus, diabetes insipidus, chronic neurologic diseases, glaucoma, cataract, chronic diseases of the thyroid, chronic diseases of the parathyroid, chronic intestinal diseases, or chronic liver disease are not covered by the Fund.

In the event of relapse of previously diagnosed diseases, the Fund will provide for a maximum of 10 days of therapy.

Hospitals and Specialists Outside the Health Center
The Fund has reciprocal agreements with a number of private physicians in various specialized fields and with State and University hospitals in Ankara. The names and addresses of these doctors and hospitals are listed in a booklet available at the Health Center.

A student who wants an examination by a specialist who has an agreement with the Bilkent Health Center, should see the doctors in the Health Center first. If the doctor in the Health Center decides for a specialist's examination, the doctor will give a referral letter to the student which is to be taken to the specialist or hospital along with the student's ID and health membership card.

The medical documents (medical report, prescription) given to the student after medical treatment must be submitted to the Health Center for approval within three days. Approved medical documents are given to the Fund's accounting office for payment.

All medical reports given from hospitals or doctors must be approved by the doctors at the Health Center in order to be eligible for coverage. If a student is treated in a hospital or by a doctor not affiliated with Bilkent University, the charges must be paid by the student.

Costs Not Covered
The following expenses are **not** paid by the Fund:

- Treatment of diseases listed in the paragraph on the Health Mutual Aid Fund
- Tests or treatment outside Ankara or in foreign countries

- Tests or treatments conducted by hospitals, institutions or doctors having no agreement with the Center
- Dental check-up, tests, and treatments outside the Health Center
- Glasses and frames, hearing aid, dentures
- Any medical expenses for a member's relatives
- Hospitalization stage.

PHYSICAL EDUCATION AND SPORTS CENTER

Hayri Özkan, Ed.D., Director

The sports programs, activities and facilities of the University are expanding constantly to keep pace with the growing needs of the large student body. The facilities include three gymnasiums, three outdoor tennis courts, one indoor tennis court, several outdoor volleyball and basketball courts, three mini football fields, several aerobic/step studios, fitness/conditioning room and multi-purpose rooms, a regulation size grass football field on Main Campus and a 60 m x 40 m multi-purpose grass football field on East Campus. In addition, a new seven thousand square meter multi-purpose sports complex (with a large state of the art fitness center, basketball, volleyball, team handball courts, three squash courts, aerobic/step and program studios and an indoor running-walking track) on Main Campus added to the current facilities in the Fall of 2001.

On-campus activities like courses, training sessions, tournaments and competitions are available in the following sports: Aerobic/step, aikido, American football, badminton, ballroom dancing, basketball, capoeira, fencing, fitness/conditioning, football (soccer), mountaineering, squash, table tennis, taekwondo, tennis, Turkish folk dancing, volleyball, yoga, and others. The students can also take many of the sports courses mentioned above as elective-credit courses every semester (see page 519 for details).

STUDENT HOUSING

Bilkent University offers undergraduate student housing on campus, in twenty-five dormitories accommodating over 4,000 students. Advice and information about accommodation in dormitories can be obtained from the Dormitories Administration Office, Bilkent University, 06800 Ankara, Turkey. Admission to the university does not automatically guarantee a space in the dormitories. Applications for housing must be submitted to the Dormitories Administration Office according to the time table announced each year.

To be considered for a space in the dormitories, or other Bilkent University identified housing after the dormitories are filled, students must meet all payment commitments (tuition and housing) on time. Dormitory openings will be assigned as they occur.

The dormitories are within walking distance of academic buildings and provide a good environment where friendships can be made and social needs met. Students learn the value of collective living and the need to develop self-discipline. They are ultimately responsible for their individual conduct, but a resident supervisor and assistant live in each dormitory in order to provide on-hand support to students.

Rooms are arranged for single, double, triple and quadruple occupancies. Facilities within the dormitory complexes include central heating, social and study areas, laundry and ironing rooms, kitchens and bathing facilities.

All rooms are furnished and equipped with telephones and ethernet connection. General cleaning service is provided in each dormitory, but students are responsible for keeping their rooms tidy. Lavatories and showers are located on each floor. Students are required to provide their own towels.

Food may be purchased from campus grocery stores or meals may be purchased at any of the restaurants or cafeterias on campus. There are parking lots at the dormitories.

Students who bring in their own computers are able to attach their hardware directly into the university campus network from their dormitory rooms and have access to all network facilities.

Regularly scheduled activities are conducted within each dorm to round out academic programs and to familiarize students with one another and the Bilkent campus and staff. Activities include speakers, group presentations, picnics, charity fund-raisers and team sports.

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FACULTY OF ART, DESIGN AND ARCHITECTURE

Bülent Özgüç, Ph.D., Dean
Halime Demirkan, Ph.D., Asst. Dean

The Faculty of Art, Design and Architecture comprises five academic departments:

- Communication and Design
- Fine Arts
- Graphic Design
- Interior Architecture and Environmental Design
- Urban Design and Landscape Architecture

These departments offer undergraduate programs that lead to Bachelor of Fine Arts (B.F.A.) and Bachelor of Arts (B.A.) degrees. The graduate programs of the Faculty include Master of Fine Arts (M.F.A.) degree programs in the areas of Graphic Design, Interior Architecture and Environmental Design, Painting and Printmaking, Master of Arts (M.A.) degree in the area of Media and Visual Studies, and an interdisciplinary doctoral program in Art, Design and Architecture.

The educational principles of the faculty are based upon the fact that the creative process in art and design relies on a broad body of knowledge for direction and inspiration. Guided by this principle, the degree programs aim to train highly competent research, design and performance oriented artists having a deep understanding of basic concepts, modern design and performance methods. The international and multidisciplinary composition of the academic staff allows the provision of interdisciplinary programs, as well as particular courses of study to meet individual educational needs.

ACADEMIC STAFF

Yusuf Akçura, Instructor
B.A., French Language and Literature, Faculty of Letters, Department of Western Languages and Literatures, Ankara University, 1985.

Işık Aksoy, Instructor
B.Arch., Architecture, Middle East Technical University, 1975.

Jülide Akşiyote, Instructor
M.F.A., Photography and Related Media, School of Visual Arts, NY, 2000.

Burçak Altay, Instructor
Ph.D., Interior Architecture and Environmental Design, Bilkent University, 2000.

Deniz Altay, Instructor
Ph.D., Urban Geography, Ecole des Hautes Etudes en Sciences Sociales, 2007.

Serpil Altay, Instructor
M.S., Urban and Regional Planning, London School of Economics, 1972.

Orhan Anafarta, Instructor
Ph.D., Graphic Design, Bilkent University, 2001.

Genevieve Appleton, Assistant Professor
M.F.A., Graduate Film and Video Program, York University, 2003.

Kumru Arapkirlioğlu, Instructor
Ph.D., Public Administration and Political Sciences, Ankara University, 2003. Environmental Planning and Administration.

Şule Aybar, Instructor
M.Arch., Architecture, University of Texas at Arlington, 1990.

David Maxwell Barchard, Instructor
B.A., Journalism, Modern History, Oxford University, 1968.

İnci Basa, Assistant Professor
Ph.D., Architecture, Middle East Technical University, 2000.
Herbert Bassler, Instructor
B.Arch., Architecture, The University of Manitoba, 1968.
Marek Brzozowski, Assistant Professor
Higher Diploma in Art, Graphic Design and Typography, Gdansk Academy of Fine Arts, 1978.
Nilgün Camgöz Olguntürk, Assistant Professor
Ph.D., Interior Architecture and Environmental Design. Bilkent University, 2000. Color, lighting, universal design.
Gaye Çulcuoğlu, Instructor
Ph.D., Landscape Architecture, Ankara University, 1997. Urban green systems, urban heritage and regenaration of historical towns.
Osman Demirbaş, Instructor
Ph.D., Interior Architecture and Environmental Design, Bilkent University, 2001.
Halime Demirkan, Professor
Ph.D., Architecture, Middle East Technical University, 1989. Computer aided architectural design, human factors.
Mehmet Hakan Erdoğ, Instructor
B.S., Science Education, Middle East Technical University, 1989.
Feyzan Erkip, Associate Professor
Ph.D., City and Regional Planning, Middle East Technical University, 1993. Environmental analysis and design.
Anita M. Gob, Visiting Instructor
M.S., Art Management, Carnegie Mellon University, 1998.
Ahmet Gürata, Visiting Assistant Professor
Ph.D., Cultural Studies and Humanities, University of London, 2003.
Meltem Gürel, Assistant Professor
Ph.D, Architecture, University of Illinois at Urbana-Champaign, 2007.
Cengiz Gürer, Instructor
B.F.A., Graphic Arts, İstanbul School of Applied Arts (D.T.G.S.Y.O.), 1978.
Murad Gürzumar, Instructor
B.A., Classical Archaeology, Ankara University, 1985.
İrem Petek Güven, Instructor
M.F.A., Graphic Design, Bilkent University, 1994.
Orhan İktu, Instructor
B.A., Ethnomusicology, State Conservatory, Mimar Sinan University, 1995.
Çağrı İmamoğlu, Assistant Professor
Ph.D., Architecture, University of Wisconsin-Milwaukee, 2002.
Fulya İnce, Instructor
M.F.A., Graphic Design, Eastern Michigan University, 1995.
Cihangir İstek, Assistant Professor
Ph.D. Architecture, University of Tokyo, 1998. Design thinking and representation, space communication design, architecture and urban design, spatial analysis and applied studies in architecture and urban studies.
Hatice Karaca, Instructor
D.E.S.S., Paris X Nanterre, 1999.
Nazife Karamullaoğlu, Instructor
M.F.A., Graphic Design, Bilkent University, 2005.

Hazım Murat Karamüftüoğlu, Assistant Professor
Ph.D., Information Science, City University, London, 1998. Design and evaluation of information retrieval systems, computer semiotics, computer mediated communication, philosophical aspects of information systems.

Dilek Kaya-Mutlu, Assistant Professor
Ph.D., Graphic Design, Bilkent University, 2002. Film Studies, Cultural Studies, Media Reception.

Turhan Kayasü, Instructor
M.Arch., Architecture, Middle East Technical University, 1976.

Nina Kertselli, Instructor (on leave)
M.A., Institute of Architecture, Moscow, 1985.

Aren Emre Kurtgözü, Instructor
Ph.D., Graphic Design, Bilkent University, 2001.

Atıl Kurttekin, Instructor
B.F.A., Graphic Design, Bilkent University, 1997.

Alper Küçük, Instructor
Ph.D., Architecture, Middle East Technical University, 2007.

Hayati Misman, Visiting Professor
Higher Diploma in Art, Printmaking, Gazi University, 1984.

Mahmut Mutman, Assistant Professor
Ph.D., Sociology, University of California, Santa Cruz, 1992. Cultural studies, semiotics, mass media.

Oktan Nalbantoğlu, Instructor
Ph.D., Landscape Architecture, Ankara University, 1997. Landscape economics.

Kağan Olguntürk, Instructor
Competency in Art, Film Directing and Visual Techniques, Marmara University, 2004.

Serpil Özaloğlu, Instructor
Ph.D., Architecture, Middle East Technical University, 2006.

Damla Özer Ülvan, Instructor
M.S., Industrial Design, Middle East technical University, 2004.

Ahmet Özsalar, Assistant Professor
M.F.A., Plastic Arts, Pratt Institute, New York, 1984.

Maya Öztürk, Instructor
Ph.D., Architecture, Middle East Technical University, 1999.

Adam Pekalski, Visiting Instructor
Higher Diploma in Art, Gdansk Academy of Fine Arts, Graphic Design and Illustration, 2000.

Mustafa Pultar, Adjunct Professor
Ph.D., Princeton University, 1965. Structural design, architectural science, environmental analysis and design.

Ercan Sağlam, Assistant Professor
Higher Diploma in Art, Sculpture, Hacettepe University, 2001.

Çağla Nezehat Saraç, Instructor
M.A., Museum Studies, Ankara University, 2002.

Özlem Savaş, Instructor
Ph.D., Design History and Theory, University of Applied Arts Vienna, 2008.

Mariusz Sladczyk, Instructor
Higher Diploma in Art, Graphic Design, Gdansk Academy of Fine Arts, 1999.

Tijen Sonkan Türkkan, Instructor
M.A., Architecture, Academy of Fine Arts, Hamburg, 1984.

Agnieszka Srokosz, Instructor
M.F.A., Graphic Design and Painting, Gdansk Academy of Fine Arts, 2001.

Burcu Şenyapılı Özcan, Assistant Professor
Ph.D., Interior Architecture and Environmental Design, Bilkent University, 1998.

Mehmet Şiray, Instructor
Ph.D., Performance and Media Studies, Johannes Gutenberg University of Mainz, Germany, 2007.

Şule Taşlı Pektaş, Instructor
Ph.D., Interior Architecture and Environmental Design, Bilkent University, 2003.

Sedvan Teber, Instructor
D.E.A., Université de Paris VIII, 1977.

Dominique Tezgör-Kassab, Associate Professor
Ph.D., (State Doctorate), History of Civilization and Archaeology, University of Human Sciences of Dijon, 1993.

Saadet Ayşegül Tokol, Instructor
Ph.D., Architecture, Middle East Technical University, 1997. Urban morphology, space syntax, urban theory.

Andreas Treske, Assistant Professor
M.A., Film Directing, Hochschule für Fernsehen und Film, Munich, 1992.

Elif Erdemir Türkkan, Instructor
Ph.D., Interior Architecture and Environmental Design, Bilkent University, 1998.

Sibel Ertez Ural, Instructor
Ph.D., Architecture, Karadeniz Technical University, 1995. Basic design, color dynamics.

Tomris Yardımcı, Instructor
M.Arch., Restoration, Middle East Technical University, 1975.

Semiha Yılmazer, Assistant Professor
Ph.D., Architecture, Karadeniz Technical University, 1998.

Mehmet Hakan Yurdadoğan, Instructor
M.Arch., Architecture, Middle East technical University, 1982.

Beata Zalewska-Sladczyk, Instructor
M.A., Graphic Design, Gdansk Academy of Fine Arts, 1992.

PART-TIME ACADEMIC STAFF

Aykan Alemdaroğlu, M.A., Latin Languages and Literature, İstanbul University, 2001.
Burcu Aydınalp, M.F.A., Lighting Design in Theatre, University of Florida, 2001.
Funda Baş Bütüner, M.A., Urban Design in City and Reginal Planning, Middle East Technical University, 2003.
Nilgün Çarkacı, M.F.A., Interior Architecture and Environmental Design, Hacettepe University, 1994.
Birsu Semra Çeltek, B.A., Graphic Design, Bilkent University, 2005.
Nilgün Çuha, Ph.D., Restoration, Middle East Technical University, 1989.
Doruk Eker, B.A., Industrial Engineering, Başkent University , 2004.
Ferhan Erder, Freelance Ceramics Artist.
Ufuk Ertem, B.Arch., Architecture, Middle East technical University, 1985.
Zeynep Genç, M.F.A., Interior Architecture and Environmental Design, Bilkent University, 1992.
Doruk Gökşin, B.Arch., Interior Architecture and Environmental Design, Bilkent University, 1992.
Berna Güner, M.Arch., Architecture, University of Miami, 1996.
Dürال Kadıoğlu, Ph.D., Department of Anatomy, Faculty of Medicine, Liverpool University, 1973.
Fulten Larlar, M.F.A., Motion Pictures and Television, San Fransisco, 2004.
Nazlı Manyas, B.A., Visual Communication, American Intercontinental University, Los Angeles, 1998.
Terence P. Moran, Ph.D., Media Ecology, New York University, 1971.
Ufuk Önen, M.A., Media and Visual Studies, Bilkent University, 2008.

Murat Özdamar, M.F.A., Interior Architecture and Environmetal Design, Bilkent University, 1998.
Kurtuluş Özgen, B.A., Cinema and T.V., Marmara University, 2001.
Irmak Özman, M.F.A., Interior Architecture and Environmental Design, Bilkent University, 1996.
Jale Duman Tunçok, M.A. Interior Architecture, Çankaya, 2004.
Elif Ünal Arslan, B.A., International Relations, Ankara Unviversity, 1992.

DEPARTMENT OF COMMUNICATION AND DESIGN

A. Treske (Chair), Y. Akçura, J. Akşiyote, G. Appleton, D. M. Barchard, M. H. Erdoğ, A. Gürata, N. Karamullaoğlu, H. M. Karamüftüoğlu, A. E. Kurtgözü, M. Mutman, K. Olguntürk, Ö. Savaş, M. Şiray.

Part-time: D. Eker, F. Larlar, N. Manyas, T. P. Moran, U. Önen, K. Özgen, E. Ünal Arslan.

Modern media of communication are a leading force in the contemporary process of globalization. The department of Communication and Design aims to educate media professionals, with a special emphasis on visual communication and visual technologies, specifically in the fields of advertising, journalism, visual design, video and TV production and new media. Students are provided with a wide range of courses in media studies, theories and practice, like interpersonal communication and individual presentation, forms and techniques of public and mass communication, visual design and visual studies, advertising, marketing and public relations, basic computer and Internet knowledge. The visual design and communication courses in practical fields such as photography, television, computer and video are conducted in computer labs with the most developed visual design programs, photography studios and a very well equipped digital video production studio. Since the department's philosophy is to educate both creative and responsible media professionals, it also includes several must and elective courses on the ethical, legal and social problems related with mass communication.

UNDERGRADUATE CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
COMD 101	Introduction to Visual Communication Design I	4 / 7
CS 153	Introduction to Computing I	3 / 6
ENG 101	English and Composition I	3 / 6
FA 171	Introduction to Art and Culture I	3 / 5
GE 100	Orientation	1 / 1
SOC 101	Introduction to Sociology	3 / 5
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
COMD 102	Introduction to Visual Communication Design II	4 / 7
CS 154	Introduction to Computing II	3 / 6
ENG 102	English and Composition II	3 / 6
FA 172	Introduction to Art and Culture II	3 / 5
PSYC 102	Introduction to Social Psychology	3 / 5
TURK 102	Turkish II	2 / 1

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
COMD 203	Introduction to Communication Studies I	3 / 6
COMD 205	Basic Photography	3 / 6
CS 155	Multimedia Authoring System and Standards	3 / 6
HISTR 201	History of Turkish Republic I	2 / 1
HUM 111	Cultures Civilizations and Ideas I	3 / 4
MATH 264	Statistics for Social Sciences	3 / 6

Spring Semester		Credits / ECTS Credits
COMD 204	Introduction to Communication Studies II	3 / 6
COMD 210	Introduction to Screenwriting	3 / 6
ECON 103	Principles of Economics	3 / 6
HISTR 202	History of Turkish Republic II	2 / 1
HUM 112	Cultures Civilizations and Ideas II	3 / 4
	Restricted Elective (1)	3 / 6

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
COMD 290	Summer Practice I	- / -
COMD 321	Analysis of Moving Image	3 / 6
COMD 341	Media and Society	3 / 6
GRA 351	Introduction to Video Production Techniques I	3 / 6
	Restricted Elective (1)	3 / 6

Journalism

COMD 333	News and Society	3 / 6

Advertising

MAN 333	Marketing Principles	3 / 6

Visual Studies

COMD 342	Popular Culture	3 / 6

Spring Semester		Credits / ECTS Credits
COMD 322	Film Theory	3 / 6
GRA 352	Introduction to Video Production Techniques II	3 / 6
	Restricted Electives (2)	6 / 12

Journalism

COMD 331	News Reporting and Writing	3 / 6

Advertising

COMD 346	Introduction to Advertising	3 / 6

Visual Studies

COMD 344	Visual Technologies and Visual Narratives	3 / 6

FOURTH YEAR

Autumn Semester		Credits / ECTS Credits
COMD 390	Summer Practice II	- / -
COMD 471	Media Ethics and Responsibility	3 / 6
COMD 481	Visual Communication Project I	4 / 6
	Restricted Elective (1)	3 / 6

Journalism

COMD 431	Global Communications	3 / 6

Advertising

MAN 432	Consumer Behavior	3 / 6

Visual Studies

COMD 433	Gender and Media	3 / 6

Spring Semester		Credits / ECTS Credits
COMD 424	Media Theory and Methods	3 / 6
COMD 482	Visual Communication Project II	4 / 6
	Restricted Elective (1)	3 / 6

Journalism

COMD 434	Special Topics in Journalism	3 / 6

Advertising

COMD 462	Special Topics in Advertising	3 / 6

Visual Studies

COMD 442	Special Topics in Visual Studies	3 / 6

RESTRICTED ELECTIVES

AMER 343	American Theater	3 / 6
AMER 384	American Novel From 1900	3 / 6
AMER 393	Intellectuals and Public Culture	3 / 6
COMD 310	Screenwriting	3 / 6
COMD 345	Interpersonal Communication	3 / 6
COMD 352	Internet Technologies and Electronic Commerce	3 / 6
COMD 354	Interactive Media Design and Development	3 / 6
COMD 432	Principles of Journalism	3 / 6
COMD 461	Public Relations and Communication Campaigns	3 / 6
CS 156	Introduction to Advanced User Interfaces	3 / 6
CS 223	Digital Design	4 / 8
ELIT 242	Introduction to Drama	3 / 6
ELIT 463	Post-Colonial Fiction	3 / 6
ENG 215	Special Topics for English Development	3 / -
FA 213	Introduction to Printmaking I	3 / 6
FA 214	Introduction to Printmaking II	3 / 6
FA 215	Introduction to Sculpture I	3 / 6
FA 271	History of Art I	3 / 5
FA 272	History of Art II	3 / 5
FA 307	Composition in Drawing I	3 / 6
FA 308	Composition in Drawing II	3 / 6
FA 421	Analysis of Art Work I	3 / 4
FA 422	Analysis of Art Work II	3 / 4
FA 461	Philosophy of Art	3 / 4
FA 467	Curatorial Studies I	3 / 6
FA 468	Curatorial Studies II	3 / 6
GE 401	Innovative Product Design and Development I	3 / 6
GE 402	Innovative Product Design and Development II	3 / 6
GRA 207	Conceptual Design	3 / 6
GRA 208	Graphic Design Concepts	3 / 6
GRA 210	Multimedia and Web Design	3 / 6
GRA 215	Animation and Film/Television Graphics I	3 / 6
GRA 216	Animation and Film/Television Graphics II	3 / 6
GRA 223	Photographic Image Processing I	3 / 6
GRA 224	Photographic Image Processing II	3 / 6
GRA 324	Photographic Practice	3 / 6

GRA 353	Design: Image and Text I	3 / 6
GRA 354	Design: Image and Text II	3 / 6
HIST 354	Comparative Perspectives on Museum and Archives History and Practice	3 / -
HIST 432	History of the United States from the Reconstruction	3 / 6
HUM 114	The Seventh Art:Film Analysis and Theory	3 / -
HUM 291	Selected Topics in the Humanities	3 / 6
HUM 293	Selected Topics in Humanities	3 / -
LAUD 465	Cities as Informationscapes	3 / 6
LAUD 475	Cinema and Space	3 / 6
MAN 201	Introduction to Business	3 / 6
MAN 216	Elements of Finance	3 / 6
MAN 262	Organizational Behavior	3 / 6
PHIL 101	Introduction to Logic	3 / 6
PHIL 103	Introduction to Philosophy I	3 / 6
PHIL 104	Introduction to Philosophy II	3 / 6
PHIL 204	Empiricists	3 / 6
PHIL 408	Nineteenth Century Philosophy	3 / 6
POLS 101	Introduction to Political Science I	3 / 6
POLS 102	Introduction to Law	3 / 6
POLS 454	Politics Media and Propaganda	3 / 6
PSYC 100	Introduction to Psychology	3 / 6

GRADUATE PROGRAM

Master of Arts (M.A.) in Media and Visual Studies

The Department of Communication and Design offers Master of Arts program in Media and Visual Studies. The M.A. program aims to prepare students for careers in the media and communications sector as well as academic careers. It provides students with a sophisticated conceptual framework and analytical skills to enable them to make original contributions to media, visual and cultural studies by specializing in a particular aspect of Turkish or international media such as film, television, Internet or printed medium. The program encourages free and creative thinking, emphasizing research, analysis, interpretation, and criticism. Aiming at improving the standards of Turkish media, visual and cultural studies, the program encourages theoretical, interdisciplinary, and comparative approaches.

Admission: Applicants are required to have a Bachelor's degree. In addition to the general requirements set forth by the university, admittance to the graduate program is determined by the results of an entrance examination that includes a portfolio presentation and an interview. The date and place of the examination are announced each year by the University. During the interview applicants should present a body of well-defined original work as well as slides, videotapes or photographs of previous work.

Degree Requirements: After the completion of at least 24 units of course work in two successive terms, the candidates must take two seminars in their area of interest and prepare and submit a thesis. The maximum duration of program is five semesters.

CURRICULUM OF MASTERS PROGRAM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
COMD 511	Theory and Method in Media Visual and Cultural Studies	3 / 7.5
	Graduate Electives (3)	- / -

Spring Semester		Credits / ECTS Credits
	Graduate Electives (4)	- / -

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
COMD 590	Research Topics	- / 6
COMD 599	Master's Thesis	- / 24

Spring Semester		Credits / ECTS Credits
COMD 590	Research Topics	- / 6
COMD 599	Master's Thesis	- / 24

ELECTIVES

COMD 351	Internet Technologies and Electronic Commerce	3 / -
COMD 513	Film and Genre	3 / 7.5
COMD 514	Identity Space and Image	3 / 7.5
COMD 515	Media Reception	3 / 7.5
COMD 516	Turkish Cinema and Modernity	3 / 7.5
COMD 521	Body Movement and Vision in Immersive and Interactive Media I	3 / 7.5
COMD 522	Body Movement and Vision in Immersive and Interactive Media II	3 / 7.5
EDEB 505	Turkish Literature 1839-1922 I	3 / 6
EDEB 506	Literature of the Republic	3 / -
EDEB 510	Turkish Literature 1839-1922 II	3 / 6
EDEB 524	The Turkish Novel	3 / 6
EDEB 529	Ottoman Culture Through Miniatures	3 / -
GRA 517	Image Time and Motion I	3 / 7.5
GRA 518	Image Time and Motion II	3 / 7.5
GRA 519	Critical Approaches to Advertising Consumer Culture	3 / 7.5
GRA 520	Critical Approaches to Popular Culture	3 / 7.5
GRA 541	Graphic and Visual Representation	3 / 7.5
GRA 542	Mass Media and Visual Technologies	3 / 7.5
GRA 555	On Critical Reasoning and Artwork	3 / 7.5
GRA 556	What is Contemporary?	3 / 7.5
GRA 561	Philosophy of Modern Art	3 / 7.5
GRA 562	Current Perspectives within Post-Modernity	3 / 7.5
GRA 567	Semiotics and the Work of Art I	3 / 7.5
GRA 568	Semiotics and the Work of Art II	3 / 7.5
HIST 513	Intellectual Movements in the Tanzimat Period I	3 / 6
HIST 535	Abdulhamid: Reformer or Reactionary	3 / 6
HIST 569	Cultural History of the Ottoman Empire I	3 / -
HIST 570	Cultural History of the Ottoman Empire II	3 / -
IAED 561	History of Theory and Criticism	3 / 7.5
IAED 574	Art, Science and Technology	3 / 7.5
IAED 583	Design Principles and Theories	3 / 7.5
IAED 587	Spatial Practices	3 / 7.5
MAN 539	Consumer Behavior	3 / 6
PNT 511	Philosophy of Art	3 / 7.5
PNT 512	Psychology of Art	3 / 7.5
PNT 515	Issues and Problems in Contemporary Art I	3 / 7.5
PNT 516	Issues and Problems in Contemporary Art II	3 / 7.5
POLS 514	Comparative Politics and Ideology in the Middle East	4 / 7
POLS 521	Comparative Politics	4 / 7
POLS 541	Political Theory	4 / 7

COURSE DESCRIPTIONS

UNDERGRADUATE COURSES

COMD 100 Basic Design
An elementary introduction to the principles of visual design and communication. Concepts of form, pattern, color, composition and function. Examination of design problems and development of problem-solving skills in visual design. Various theories of design. *Credit units: 6 ECTS Credit Units: 12.*

COMD 101 Introduction to Visual Communication Design I
An elementary introduction to the principles of visual design and communication. Concepts of from, pattern, color, composition and function. Basic problem solving strategies in two-dimensional design. Development of visual awareness and visual literacy. Theories of perception, Gestalt and design dynamics. *Credit units: 4 ECTS Credit Units: 7. Aut (J. Akşiyote, N. Karamullaoğlu)*

COMD 102 Introduction to Visual Communication Design II
Traditional media approaches and contemporary digital applications incorporated to solve problems within the visual arts. Advanced uses of form, pattern, color, composition and function to solve both two-dimensional and three-dimensional problems. Usage of different visual forms through photography, illustration, typography and graphic design. *Credit units: 4 ECTS Credit Units: 7, Prerequisite: COMD 101.*

COMD 203 Introduction to Communication Studies I
Communication as a process: Code, massage, sign, medium and context. Theories and models of communication: Linguistics, semiotics and engineering models. Encoding and decoding, analog and digital codes. Convention and use. Leteral, symbolic and metophorical communication; visual metaphors. *Credit units: 3 ECTS Credit Units: 6. Aut (A. E. Kurtgözü, Ö. Savaş)*

COMD 204 Introduction to Communication Studies II
Various forms and modes of communication. Modern media of communication. The impact of technology on communication, especially mass communication. Visual and verbal aspects; narrative, technology and spectatorship. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: COMD 203.*

COMD 205 Basic Photography
An introductory course in photography. Taking photographs: interior/exterior, knowledge of composition and film developing, and basic laboratory practices. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: COMD 102. Aut (Y. Akçura, K. Olguntürk)*

COMD 210 Introduction to Screenwriting
This course introduces basic notions of classical narrative scriptwriting such as character, structure, plot, dialogue, genre, and theme, as well as the textual elements of other audio-visual forms such as documentary, experimental and multimedia presentations. Students acquire experience in the correct formatting of scripts, writing dialogue rich with subtext, pitching their ideas, and proposal writing. By the end of the course, students will have completed a short script using classical narrative tools and a proposal for a second audio-visual project of any type or genre. *Credit units: 3 ECTS Credit Units: 6. Aut (F. Larlar)*

COMD 212 Principles of Visual Communication Design
Introduction to the history, theory and principles of communicating visually through art, illustration, photography, design, typography, video and other visual forms. *Credit units: 3 ECTS Credit Units: 5.*

COMD 221 Visual Communication and Perception
Basic principles of visual communication and several competing theories of visual perception. The role of frames and conventions in visual communication. The impact of cultural and other factors in perception. Development of visual awareness and visual literacy. Learning from misperceptions and illusions as positive errors. Gestalt and information processing theories on the simulation of human perception. *Credit units: 3 ECTS Credit Units: 5.*

COMD 290 Summer Practice I
This summer training is intended to give the students an experience in the organization, structure and working of an advertising agency, graphic design studio, multimedia studio, public relations office or bureau, newspaper, television and television production. The minimum time of this practice is 4 weeks. *Credit units: None ECTS Credit Units: None, Prerequisite: COMD 204. Aut (K. Olguntürk)*

COMD 310 Screenwriting
An introduction to the art of story-telling and examination of the ways people communicate experiences to each other. It aims to encourage students to recognize the significance of memory, observation and interpersonal relationships from their own experience, in the construction of narrative from for the screen. It examines the ways in which an audience can be manipulated through the use of language, particularly the spoken word. It seeks to illustrate “universal” or shared themes with stories drawn from experience and to introduce students to the conventions, problems and possibilities of screenwriting from. It is complementary to video production. *Credit units: 3 ECTS Credit Units: 6. Aut (G. Appleton)*

COMD 321 Analysis of Moving Image
This course introduces students to basic grammar of cinematic language, which has become the basis for making meaning in a variety of visual media. Topics to be covered include mise-en-scene, cinematography, editing, sound-image relationships, narrative forms, and non-narrative forms (documentary and experimental). Attention is given to both dominant practices (e.g., Classical Hollywood Cinema) and alternatives. Attention is also paid to how and why different media (cinema, video, broadcast television) make different uses of this shared grammar. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: COMD 204. Aut (A. Gürata)*

COMD 322 Film Theory
This course aims to introduce the key debates in film theory. Some of the topics and concepts that will be covered are “realism,” “formalism,” “avant-garde cinema,” “auteur theory,” “film language,” “genre theory,” “film, subjectivity and ideology,” and “reception theory.” These topics will be discussed in relation to the basic elements of film such as narrative, mise-en-scene, camera use, sound, and editing. *Credit units: 3 ECTS Credit Units: 6.*

COMD 331 News Reporting and Writing
News reporting and production techniques of radio and television. Gathering information, editing and writing under strict deadlines in order to prepare the student for a professional position. News values, and responsibilities. Basic news writing and style principles, interviewing techniques. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

COMD 333 News and Society
The function and nature of news in contemporary society and its role and impact on social and political affairs. The topics that will be covered are: the concept of information and its role in the modern world; news and story-telling, news as genre of writing and discourse; news values; agenda-setting; construction of reality; news and propaganda; journalistic ethics. *Credit units: 3 ECTS Credit Units: 6. Aut (D. M. Barchard)*

COMD 341 Media and Society
The media as a major social institution, the relationship between media and society. The production and reception of media content, the impact of media over other institutions, society and culture as well as the effects over individual behavior. Questions of control and ownership, public and private media. Mass culture and popular culture. Different forms and genres of media, fictional and news material. Propaganda and ideological influence. The impact of new technologies of communication. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

COMD 342 Popular Culture
This course aims to give the students an awareness of how popular culture operates in specific ways. Popular narrative and entertainment forms will be examined in contrast with "higher" forms of culture. The course will focus on the impact of cultural forms on the audiences and offer a critical study of the existing theories on the subject. Significant cases from literature, press, film and TV will be discussed in the class. *Credit units: 3 ECTS Credit Units: 6. Aut (Ö. Savaş)*

COMD 344 Visual Technologies and Visual Narratives
An intermediary course on various issues relating to visual technologies such as photography, film, television and internet. Emergence, history and development visual technologies. Image in modernity. The nature of technological images, questions of signification and identification. Technology and body. Technological image and its perception. Images, simulations, and hyper-reality. Cyberspace and interactive media. *Credit units: 3 ECTS Credit Units: 6.*

COMD 345 Interpersonal Communication
Main principles and issues of interpersonal communication and self-presentation in everyday life. The interplay of verbal and non-verbal language which operate in face-to-face encounters. The impact of context, the interaction of language and social setting. Performance of self-regulation and self-presentation in everyday communication. *Credit units: 3 ECTS Credit Units: 6.*

COMD 346 Introduction to Advertising
This course provides an introduction to the basics of advertising: the functions of advertising; planning, execution and production of advertisements; its role in marketing communications mix; economics and social influence; advertising institutions and media; campaigns and appropriations; retail and business-to-business aspects; social and ethical aspects of advertising. *Credit units: 3 ECTS Credit Units: 6.*

COMD 352 Internet Technologies and Electronic Commerce
The course will cover the technological infrastructure that enables electronic commerce. Issues included are Internet, Intranets, Extranets, search facilities and engines, security, authentication, and privacy, electronic payment systems and electronic commerce services. Organizational challenges on developing appropriate business models are discussed with respect to the simultaneous response and online threats to the existing models. *Credit units: 3 ECTS Credit Units: 6.*

COMD 354 Interactive Media Design and Development
This course introduces the students to both the practical and theoretical fundamentals of design and implementation of interactive multimedia systems. Topics covered include: Principles of Human Computer Interaction, Interaction Design, Camera-based Interaction, Interactive Games, Live Audio and Video Processing, Motion Detection, Gesture Recognition, Tangible Media, Interactive Spaces. *Credit units: 3 ECTS Credit Units: 6.*

COMD 361 Sound Design I
A introductory course designed to create and improve students' awareness of and respect for audio in relation to visual media. Students are introduced to basic audio production and post-production techniques for video and film. Emphasize is given to skill development in sound recording in studio and on location, signal processing, digital audio editing and mixing. *Credit units: 3 ECTS Credit Units: 6. Aut (U. Önen)*

COMD 362 Sound Design II
Continuation of Sound Design I. This course provides the students with advanced audio post-production techniques for video and film and also explores the constituents and creative potential of sound design for better communication of ideas through artistic and expressive uses of sound. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: COMD 361.*

COMD 390 Summer Practice II
In this summer training, students are expected to participate actively audiovisual media productions, such as television, multimedia, public relations, and advertisement. Students are also expected to make detailed observations in planning, media integration, and production techniques and tools, as well as to get an understanding of teamwork, team relations, and production/client relations. The minimum time for the practice is 4 weeks. *Credit units: None ECTS Credit Units: None, Prerequisite: GRA 352. Aut (Y. Akçura)*

COMD 422 Advanced Issues in Communication Studies
This course is designed to introduce students to advanced issues in communication studies and recent research. Topics to be covered may include: revisiting the communication process; audience groups and different interpretations of media messages; ratings system; media practice and democracy; issues of identification, image and visuality; internet, cyberspace and the impact of recent technologies; digital cinema and digital television; interactive media and media art. *Credit units: 3 ECTS Credit Units: 6.*

COMD 424 Media Theory and Methods
Examination of various methods of studying media at an advanced senior level: semiological and content analysis, theories of identification, audience studies and ethnographies, economics of media. Students are supposed to design and conduct their own research and write research and write research papers in media studies. *Credit units: 3 ECTS Credit Units: 6.*

COMD 431 Global Communications
The course will focus international communication system and global news media and television such as CNN and BBC; global media and entertainment industries such as Hollywood or MTV. Global ideologies and paradigms: Orientalism, global information inequality, local reception of global media production. Global vs local or national media. *Credit units: 3 ECTS Credit Units: 6. Aut (E. Ünal Arslan)*

COMD 432 Principles of Journalism
A survey of the journalism profession, including the history and study of various media. Emphasis is placed upon journalistic principles, writing, editing, and make up, journalistic values. *Credit units: 3 ECTS Credit Units: 6.*

COMD 433 Gender and Media
Representation of masculinity and feminity in the media. Gender bias and stereotypes in the portroyal of gender in film, television, internet and print media. Gendered audiences and gender differences in media reception. Issues of pornography and censorship, in the use of women's images in advertising and marketing. The role of media transforming as well as perpetuating gender roles gender inequality. *Credit units: 3 ECTS Credit Units: 6. Aut (Ö. Savaş)*

COMD 434 Special Topics in Journalism
Study of selected advanced topics in journalism with the purpose of depending a critical understanding of their profession for would-be journalists. Among the possible topics are: a critical focus on the complicated nature of concepts such fact, truth and evidence as well as the context in which journalism takes places; issues of privacy and publicity; journalistic ethics; the setting of the news agenda; the impact technological change and varieties of journalism such as science journalism, art and culture journalism, investigative journalism, investigate journalism, political journalism and business and economic journalism. *Credit units: 3 ECTS Credit Units: 6.*

COMD 442 Special Topics in Visual Studies
Study of selected advanced topics in visual media and technologies. The modern concept of technology and the concepts of image, visual language. The new media and digital language and signs. The role and power of visual technology and media in the shaping of culture, language, subjectivity and society. *Credit units: 3 ECTS Credit Units: 6.*

COMD 461 Public Relations and Communication Campaigns
Theory and practice of public relations and public communication. PR and opinion research, communication process and building effective campaign strategy. Case studies in PR and public communication, commercial and political advertising, humanitarian campaigns. Ethical considerations and impact on society. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

COMD 462 Special Topics in Advertising
Study of selected advanced topics in advertisement production and research focusing on various media application and future developments. Creativity and diversity, advertising research and planning of campaigns, generating ideas and strategy, copywriting for television, radio and direct marketing. *Credit units: 3 ECTS Credit Units: 6.*

COMD 471 Media Ethics and Responsibility
A survey of the current ethical problems and issues in reporting, editing and broadcasting moral principles, legal regulations and their application to these problems. Examination of case studies with special emphasis on questions of privacy and freedom of information. *Credit units: 3 ECTS Credit Units: 6. Aut (T. P. Moran)*

COMD 481 Visual Communication Project I
Introduction to planning, media integration, and production techniques and tools of interactive multimedia. Through practical exercises. The course will expose students to major component media including computer text, graphics, photography, animation, speech, sound, and video. Technical and human interface issues also are covered. *Credit units: 4 ECTS Credit Units: 6, Prerequisite: GRA 352. Aut (G. Appleton, K. Olguntürk)*

COMD 482 Visual Communication Project II
Introduction to planning, media integration, and production techniques and tools of interactive multimedia. Through practical exercises. The course will expose students to major component media including computer text, graphic, photography, animation, speech, sound, and video. Technical and human interface issues also are covered. *Credit units: 4 ECTS Credit Units: 6, Prerequisite: COMD 481.*

GRADUATE COURSES

COMD 511 Theory and Method in Media Visual and Cultural Studies
This course is designed to introduce the student to major theories and methods in media, visual and cultural studies: mass culture theory, empirical effect studies, ethnography, Frankfurt School, semiotics and structuralism, cultural studies, psychoanalysis and post-structuralism. Various issues and aspects of modern media and culture will come under consideration such as effects and affectivity, signs and signification, image and power, issues of class, race and gender, the ways of studying media as text, institution, audiences and subcultures. *Credit units: 3 ECTS Credit Units: 7.5. Aut (M. Mutman)*

COMD 513 Film and Genre
This course aims to investigate the key terms of film theory such as narrative, mise-en-scene, subjectivity, the gaze, the voice, spectatorship, sexual difference, suture and so forth in relation to the question of “genre.” Selections from various film genres will be examined. *Credit units: 3 ECTS Credit Units: 7.5. Aut (A. Gürata)*

COMD 514 Identity Space and Image
This course will introduce students to debates on “identity” and “subjectivity” in contemporary visual and cultural studies. Drawing upon various theoretical and methodological sources, the course places the emphasis on how identity and subjectivity can be conceived in relation to the concepts of space, memory, belonging, hybridity and migrancy in contemporary global culture. *Credit units: 3 ECTS Credit Units: 7.5.*

COMD 515 Media Reception
Drawing upon different theoretical and methodological approaches to the study of media reception, this course explores the relationship between media texts and their audiences. A variety of media and media genres including films, TV serials, comics and popular literature are discussed together with topics such as media effects, active audience theory, ethnography, “fandom”, gender, nation, and ethnicity. *Credit units: 3 ECTS Credit Units: 7.5. Aut (D. Kaya-Mutlu)*

COMD 516 Turkish Cinema and Modernity
This course aims to discuss Turkish cinema in relation to the question of “modernity.” Making a critical analysis of the historical development of Turkish cinema in the context of Turkey’s experience of modernity, the course will investigate the debates around “Yesilcam cinema,” “national cinema,” “social realism,” “Third world cinema,” “women’s films,” “art cinema,” and “the new Turkish cinema.” *Credit units: 3 ECTS Credit Units: 7.5.*

COMD 521 Body Movement and Vision in Immersive and Interactive Media I
This course examines the role of body, movement and vision in art and traditional and digital media including literature, cinema, computer and video games, multimedia and online systems and the Internet. Topics covered include: historical development of digital art and culture; cybernetics and systems theory; digital avant-garde; concepts of virtual and virtuality; theories of immersive and interaction in literature, visual and digital media; perception, attention and memory; conscious and unconscious information processing; design of interactive and Immersive systems and user interfaces; computer vision; aesthetics of digital media, information and interactive arts. *Credit units: 3 ECTS Credit Units: 7.5.*

COMD 522 Body Movement and Vision in Immersive and Interactive Media II
This course extends and applies the ideas studied in “Body, Movement and Vision in Immersive and Interactive Media I” to a wide range of contemporary art works that use computer and other forms of high technology. The focus is on critical examination and evaluation of artworks that have been created in the past ten years, however, earlier computer aided artworks are also studied. The course explores the ways in which art, science and technology are converging in the twenty-first century and how they might be integrated in the future. Emerging patterns of integration between art and various scientific disciplines and technologies are studied, but particular emphasis is put on the role of computers in visual arts. Concepts, methods and terminology derived from critical and media theory, philosophy, science and engineering are introduced to analyse emerging forms of “Hi-Tech” or “Information Art”. *Credit units: 3 ECTS Credit Units: 7.5.*

COMD 531 Science and Media
The Science and the Media course will introduce students to the history and current state of science reporting in various media and their specific journalistic forms. Students will also get to know different methodological alternatives for studying trends in science reporting as well as increase their abilities in media-oriented writing through practical journalistic exercises. *Credit units: 3 ECTS Credit Units: 7.5.*

COMD 590 Research Topics
Credit units: None ECTS Credit Units: 6. Aut (Staff)

COMD 599 Master's Thesis
Credit units: None ECTS Credit Units: 24. Aut (Staff)

DEPARTMENT OF FINE ARTS

B. Özgüç (Acting Chair), A. M. Gob, N. Kertselli, H. Misman, A. Özsalar, E. Sağlam, Ç. N. Saraç, A. Srokosz, D. Tezgör-Kassab, B. Zalewska-Sladczyk.

Part-time: F. Erder, D. Kadıoğlu.

The Fine Arts Department has a distinctive structure and curriculum that contrast with other art schools in Turkey. The Department offers a flexible program that unites studio practice and art theory, combining art disciplines such as painting, printmaking, sculpture, installation, and ceramics with courses in theory and criticism. The aim of the curriculum is to equip future artists with a capacity for studio work and an understanding of artistic production as well as the theoretical dimensions of art. The well-equipped etching, lithography, silk screen, ceramics, and sculpture studios offer students excellent opportunities to explore new horizons.

UNDERGRADUATE PROGRAM

The interdisciplinary program of the Department integrates theory and practice. The aim is to enhance the students in various fields of fine arts. The students are expected to go through the phases of research, recognition, experience, and production of original works of art. They are continuously encouraged to develop their own artistic and critical formation.

The undergraduate curriculum of the Department of Fine Arts offers two program options, *Studio Arts* and *Theory and Criticism.*

In the *Studio Arts* Program, students experiment with various fields of arts such as painting, print-making, sculpture, ceramics, and multi-media and are encouraged to conceive and produce creative original works and modes of thought. In the *Theory and Criticism* Program, critical and theoretical thinking on art is promoted. Both programs follow the same curriculum during the first two academic years. The student is then expected to specialize in one of the programs according to his/her own interest and ability.

UNDERGRADUATE CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
ENG 101	English and Composition I	3 / 6
FA 101	Basic Design I	6 / 10
FA 103	Drawing I	3 / 4
FA 131	Technical Drawing and Lettering I	3 / 4
FA 171	Introduction to Art and Culture I	3 / 5
GE 100	Orientation	1 / 1
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
ENG 102	English and Composition II	3 / 6
FA 102	Basic Design II	6 / 10
FA 104	Drawing II	3 / 4
FA 132	Technical Drawing and Lettering II	3 / 4
FA 172	Introduction to Art and Culture II	3 / 5
TURK 102	Turkish II	2 / 1

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
FA 190	Summer Practice I	- / -
FA 201	Art Studio I	6 / 10
FA 203	Drawing III	3 / 4
FA 223	Visual Perception and Color	3 / 4

FA 271	History of Art I	3 / 5
HISTR 201	History of Turkish Republic I	2 / 1
	Restricted Elective	3 / 6

Spring Semester Credits / ECTS Credits

FA 202	Art Studio II	6 / 10
FA 204	Drawing IV	3 / 4
FA 262	Fine Arts Seminar	3 / 4
FA 272	History of Art II	3 / 5
HISTR 202	History of Turkish Republic II	2 / 1
	Restricted Elective	3 / 6

THIRD YEAR

Autumn Semester Credits / ECTS Credits

FA 290	Summer Practice II	- / -
FA 301	Art Studio III	6 / 10
FA 331	Technology of Art	3 / 4
FA 371	History of Art III	3 / 4
	Restricted Electives(2)	6 / 12

Spring Semester Credits / ECTS Credits

FA 302	Art Studio IV	6 / 10
FA 304	Special Problems in Drawing	3 / 4
FA 372	History of Art IV	3 / 4
	Restricted Electives(2)	6 / 12

FOURTH YEAR

Autumn Semester Credits / ECTS Credits

FA 390	Summer Practice III	- / -
FA 401	Art Studio V	6 / 10
FA 421	Analysis of Art Work I	3 / 4
FA 461	Philosophy of Art	3 / 4
	Restricted Electives(2)	6 / 12

Spring Semester Credits / ECTS Credits

FA 402	Art Studio VI - Degree Project	9 / 16
FA 422	Analysis of Art Work II	3 / 4
FA 462	Senior Seminar	3 / 4
	Restricted Elective	3 / 6

ELECTIVES

FA 200	Fine Arts Techniques Workshop	- / -
FA 205	Figure Drawing I	3 / 6
FA 206	Figure Drawing II	3 / 6
FA 211	Introduction to Painting I	3 / 6
FA 212	Introduction to Painting II	3 / 6
FA 213	Introduction to Printmaking I	3 / 6
FA 214	Introduction to Printmaking II	3 / 6
FA 215	Introduction to Sculpture I	3 / 6
FA 216	Introduction to Sculpture II	3 / 6
FA 217	Introduction to Ceramics I	3 / 6
FA 218	Introduction to Ceramics II	3 / 6
FA 305	Advanced Drawing I	3 / 6
FA 306	Advanced Drawing II	3 / 6
FA 307	Composition in Drawing I	3 / 6
FA 308	Composition in Drawing II	3 / 6
FA 332	Art and Technology	3 / 6
FA 467	Curatorial Studies I	3 / 6
FA 468	Curatorial Studies II	3 / 6
FA 473	Contemporary Turkish Art	3 / 6

GRA 205	Rendering for Graphic Design I	3 / 6
GRA 206	Rendering for Graphic Design II	3 / 6
GRA 213	Computers in Graphic Design I	3 / 6
GRA 214	Computers in Graphic Design II	3 / 6
GRA 215	Animation and Film/Television Graphics I	3 / 6
GRA 224	Photographic Image Processing II	3 / 6
GRA 421	Illustration I	3 / 6
GRA 422	Illustration II	3 / 6

GRADUATE PROGRAM

Master of Fine Arts in Painting and Printmaking

The M.F.A. program of the Department of Fine Arts offers the students options to concentrate on two studio areas and/or to concentrate on a theoretical study in art theory. The studio areas are painting and printmaking. The program encourages freedom of expression within a framework of regularly scheduled critiques and open studio classes, and centers around the individual student's work in progress. Both painting and printmaking today encompasses virtually any medium and students are motivated to explore the boundaries of their art making. Students are encouraged to view their profession as an innovative path. They are advised to embrace the inevitable changes which occur in direction and destination as they seek and progress.

Graduate students are offered large studio space. Well recognized artists visit the faculty and offer seminars to graduate students. Twenty-four hour access to the facilities supports personal growth of the students. Emphasis is placed on twentieth and twentfirst century theory in both lecture and studio classes.

Admission: Applicants are required to have a Bachelor's degree. In addition to the general requirements set forth by the university, admittance to the graduate program is determined by the results of an entrance examination that includes a portfolio presentation and an interview. The date and place of the examination are announced each year by the University. During the interview the applicants should present a body of well-defined original work as well as slides, videotapes or photographs of previous work. All applicants must have a proof of their English proficiency.

Degree Requirements: After the completion of at least 24 units of course work in two successive terms, the candidates must take two seminar courses in their area of interest and prepare and submit a thesis. The maximum duration of the program is five semesters.

CURRICULUM OF MASTERS PROGRAM

PAINTING OPTION

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
IAED 511	Research Methods I	3 / 7.5
PNT 501	Painting I	4 / 7.5
PNT 503	Drawing I	4 / 7.5
PNT 511	Philosophy of Art	3 / 7.5
PNT 515	Issues and Problems in Contemporary Art I	3 / 7.5

Spring Semester		Credits / ECTS Credits
PNT 502	Painting II	4 / 7.5
PNT 504	Drawing II	4 / 7.5
PNT 512	Psychology of Art	3 / 7.5
PNT 516	Issues and Problems in Contemporary Art II	3 / 7.5

SECOND YEAR

PNT 590	Research Topics	- / 6
PNT 599	Master's Thesis	- / 24

PRINTMAKING OPTION

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
IAED 511	Research Methods I	3 / 7.5
PNT 503	Drawing I	4 / 7.5
PNT 505	Printmaking I	4 / 8
PNT 511	Philosophy of Art	3 / 7.5
PNT 515	Issues and Problems in Contemporary Art I	3 / 7.5

Spring Semester		Credits / ECTS Credits
PNT 504	Drawing II	4 / 7.5
PNT 506	Printmaking II	4 / 8
PNT 512	Psychology of Art	3 / 7.5
PNT 516	Issues and Problems in Contemporary Art II	3 / 7.5

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
PNT 590	Research Topics	- / 6
PNT 599	Master's Thesis	- / 24

Doctor of Philosophy in Art, Design and Architecture

Aims and Objectives: The Ph.D. program in Art, Design and Architecture is basically an interdisciplinary research program open to all candidates holding a Master's Degree in fine arts, design, architecture or a related field. The research done is expected to be either a novel contribution to art and science, or the introduction of a new method, or a completely innovative application of a widely known method to the selected area. The program aims at inquiring into various issues of art, design and architecture, both in theoretical and practical fields by encouraging the students to carry out research in unexplored topics. By investigating pertinent past and current developments in the world and in Turkey within a cross-cultural framework, various aspects of processes in design, implementation, performance and evaluation are examined by students to achieve the objective of producing work, demonstrating competence in research, interpretation and assessment.

Admission Requirements: Applicants are required to have a Master's degree in a relevant field. In addition to the general requirements set forth by the university, admittance is through an interview given before the beginning of each academic year. The date and place of the interview is announced each year by the university. All applicants must have a proof of their English proficiency.

Degree Requirements: The minimum course load for the Ph.D. program is 24 credit units. After completion of the courses, the Ph.D. candidate must take a qualifying examination and make a presentation related to his/her thesis and submit a thesis proposal which will be evaluated by a jury composed of well-known scholars and/or artists in the relevant field. Upon a favorable evaluation by the jury, the candidate will qualify for work towards a Ph.D. thesis. At the completion of the thesis, a similar jury will examine the thesis and the candidate for a final decision on the degree. The maximum duration allowed for the completion of degree requirements is nine semesters.

Typical course of study involves the completion of required course work during the first year of the program. The course selection is subject to the approval of the Academic Committee. In the subsequent years, Ph.D. candidates register in ADA 690 *Advanced Research Topics* (0 Credit / 6 ECTS) and/or ADA 699 *Ph.D. Dissertation* (0 Credit / 6 ECTS) for completion of the seminar and thesis requirements.

COURSE DESCRIPTIONS

UNDERGRADUATE COURSES

FA 101 Basic Design I

Introduces basic design concepts of form, pattern, color, composition, texture, and shade, as well as the principles of two and three dimensional design without emphasizing function as a determinant. Problem solving skills in

design are developed. Theories of design will also be introduced. *Credit units: 6 ECTS Credit Units: 10. Aut (O. Anafarta, M. Sladczyk, S. Teber)*

FA 102 Basic Design II
Continues to explore the concepts introduced in FA 101. More emphasis is given to problems in three dimensional design. Function is introduced. Theories of design will be further discussed. *Credit units: 6 ECTS Credit Units: 10, Prerequisite: FA 101.*

FA 103 Drawing I
Exploration of the human figure, its parts and its form as far as structure and functions are concerned. Drawing fundamentals in figurative expression, proportions and compositional expressions by working directly from the model in various media. *Credit units: 3 ECTS Credit Units: 4. Aut (H. Misman, A. Srokosz, B. Zalewska-Sladczyk)*

FA 104 Drawing II
Exploration of visual form, character and gesture of movements of the human figure. Searching, evaluating and applying the basic elements of life drawing: line, form, color, value, module and composition. *Credit units: 3 ECTS Credit Units: 4, Prerequisite: FA 103.*

FA 131 Technical Drawing and Lettering I
Introduction of technical drawing materials. Drawing plans, sections and elevations on various scales. Principles of perspective in three dimensional drawing. Perspective drawings with one, two or three vanishing points. *Credit units: 3 ECTS Credit Units: 4. Aut (H. Karaca, A. Küçük, D. Özer Ülvan, S. Teber)*

FA 132 Technical Drawing and Lettering II
Norms of technical drawing. Rendering of various geometric forms. Shading techniques. Orthogonal and axonometric drawings, projections and sections. *Credit units: 3 ECTS Credit Units: 4, Prerequisite: FA 131.*

FA 171 Introduction to Art and Culture I
Introduces concepts related to art and culture. A variety of topics such as painting, sculpture, drama, music, literature and architecture are discussed within a socioeconomic and political perspective; to give the student a general understanding of a particular time and place in history. *Credit units: 3 ECTS Credit Units: 5. Aut (A. M. Gob, N. Karamullaoğlu, D. Kaya-Mutlu, Ç. N. Saraç, M. H. Yurdadoğan)*

FA 172 Introduction to Art and Culture II
Continues to develop an understanding of the relation of culture and philosophy to the arts and their effect on the creation of artistic activity and design through the analyses of the accumulated art work of human history. *Credit units: 3 ECTS Credit Units: 5.*

FA 190 Summer Practice I
The aim of this summer practice is to give the students first hand experience in drawing sculpture, bust-relief etc. at archaeological museums. The minimum time for this practice is 6 weeks. *Credit units: None ECTS Credit Units: None.*

FA 201 Art Studio I
An introductory course on visual arts. Basic concepts and information on different fields such as painting, printmaking, sculpture, ceramics, etc. The possibilities of diverse media are introduced within the frame of studio studies. *Credit units: 6 ECTS Credit Units: 10, Prerequisite: FA 102. Aut (A. Özsalar)*

FA 202 Art Studio II
A continuation of FA 201. Development of concepts towards the transformation of basic design criteria to artwork with contribution of fantasy and imagination. *Credit units: 6 ECTS Credit Units: 10, Prerequisite: FA 201.*

FA 203 Drawing III
Study of the figure to improve drawing skills and knowledge. Fast sketching, figural expression, transformation, drawing materials and techniques. *Credit units: 3 ECTS Credit Units: 4, Prerequisite: FA 104. Aut (M. Brzozowski, A. Özsalar)*

FA 204 Drawing IV
Examining the human body in terms of form, color and color values. Studies leading to individual expression in model drawing based on the basic principles of art. *Credit units: 3 ECTS Credit Units: 4, Prerequisite: FA 203.*

FA 205 Figure Drawing I
Initial studies on the basic principles of drawing; the perception of the proportions of the human body. Studies of the model with various materials. (non-FA majors only) *Credit units: 3 ECTS Credit Units: 6.*

FA 206 Figure Drawing II
Developing drawing skills and knowledge through studying the human body. Examining action, contour, modeling (shaping) and composition. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: FA 205 or approval of the FA Department.*

FA 207 Artistic Anatomy
Aim is to unveil the extraordinary construction of the human body and celebrate its continuing prominence in Art today. This course is designed for those who widh to gain the ability to catch the perfection of form and moves of human body in space by creating techniques and attitudes in observing and drawing the skeleton, head, ribcage, pelvis, hands and feet. *Credit units: 3 ECTS Credit Units: None. Aut (D. Kadıoğlu)*

FA 208 Anatomical Figure Drawing
The main objective of this course is to further the Artistic and Anatomical approach to figure drawing by critical interpretation and detailed study of the works of Renaissance Great Masters means of studio sessions. *Credit units: 3 ECTS Credit Units: 6. Aut (D. Kadıoğlu)*

FA 211 Introduction to Painting I
Building basic technical skills. Experiments with the use of paint. Conceptual and practical experiments on color mixing. Examining the creative processes through these experiments. (non-FA majors only). *Credit units: 3 ECTS Credit Units: 6.*

FA 213 Introduction to Printmaking I
The course aims to give basic techniques of printmaking with compositional and color values. (non-FA majors only.) *Credit units: 3 ECTS Credit Units: 6. Aut (H. Misman)*

FA 215 Introduction to Sculpture I
An introductory studio course on the basic concepts, materials and processes of sculpture, with an emphasis on the understanding of perception and representation of three dimensional objects for students from other disciplines. (non-FA majors only.) *Credit units: 3 ECTS Credit Units: 6. Aut (E. Sağlam)*

FA 217 Introduction to Ceramics I
Forming functional and three dimensional objects using basic ceramic techniques. White, red and colored clays are used. Techniques of colored clay combination are introduced. Creation of texture with an understanding of design principles is emphasized. (non-FA majors only) *Credit units: 3 ECTS Credit Units: 6. Aut (F. Erder, A. Özsalar)*

FA 218 Introduction to Ceramics II
Creation of form using red, white and colored clay on the potters' wheel. Decoration techniques using glaze in accordance with design principles is emphasized. Molding by plaster and/or polyester as a process of duplicating already created work is introduced. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: FA 217 or approval of the FA Department.*

FA 219 Ancient Techniques and New Technology in Ceramics
This is an experimental course, combining the current techniques and the new technology in ceramics such as using ceramic colours on fired tiles. During the course the students will search for new ways of expression in colour. Using the clay as the Canvas. *Credit units: 3 ECTS Credit Units: 6. Aut (A. Özsalar)*

FA 223 Visual Perception and Color
Examination of subjects such as psychology of visual perception, seeing the color and perception of color-form, concepts and theories of color. *Credit units: 3 ECTS Credit Units: 4. Aut (E. Sağlam)*

FA 262 Fine Arts Seminar
Critical assessment of selected national and international artist's works and their ideas and approaches. *Credit units: 3 ECTS Credit Units: 4.*

FA 271 History of Art I
A chronological survey of the history of art from the Stone Age to the Byzantine World. *Credit units: 3 ECTS Credit Units: 5. Aut (D. Tezgör-Kassab)*

FA 272 History of Art II
A chronological survey of the history of art from the Early Medieval age to the Early Renaissance period. Comparative material from art of the non-western world, especially that of Anatolia, is also introduced. *Credit units: 3 ECTS Credit Units: 5.*

FA 290 Summer Practice II
The aim of this summer practice is to give the students experience in copying from original works of art at various museums; to examine figure-sculpture relations within spaces; to practice and to study ceramics; to examine art collections. The minimum time for this practice is 6 weeks. *Credit units: None ECTS Credit Units: None.*

FA 301 Art Studio III
Studio work in one of the selected fields of fine arts such as painting, printmaking, sculpture, ceramics, etc. Students are expected to apply controlled experimentation on visual schemes. *Credit units: 6 ECTS Credit Units: 10, Prerequisite: FA 202. Aut (B. Zalewska-Sladczyk)*

FA 302 Art Studio IV
Continuation of FA 301. With emphasis on the development of individual vision and personal expression. *Credit units: 6 ECTS Credit Units: 10, Prerequisite: FA 301.*

FA 304 Special Problems in Drawing
Studies of the human body concerning form, color and value. Exploration of individual expression by using models to build up thought and imagery. Contemporary figural expressions. *Credit units: 3 ECTS Credit Units: 4, Prerequisite: FA 204.*

FA 305 Advanced Drawing I
Figural studies to develop skills and knowledge of drawing beyond the scope of the course series FA 205 and FA 206. Different ways of expression and interpretation of the figure drawing with emphasis on drawing techniques and materials. *Credit units: 3 ECTS Credit Units: 6.*

FA 306 Advanced Drawing II
Examination of the human body in form, color and value by line and paint. Developing individual expression, artistic thought and imagination based on live model studies. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: FA 305 or approval of the FA Department.*

FA 307 Composition in Drawing I
An advanced drawing course to help students transform the initial academic experience into the artistic expression. *Credit units: 3 ECTS Credit Units: 6.*

FA 308 Composition in Drawing II
An advanced course, developing the abilities of using drawing as a tool of visual thinking and a language of the visual communication, based on previous academic experiences. *Credit units: 3 ECTS Credit Units: 6.*

FA 331 Technology of Art
Introduction to technical materials used in various visual arts and technical, physical and chemical characteristics of the natural and synthetic materials used in sculpture, painting, printmaking and ceramics. *Credit units: 3 ECTS Credit Units: 4.*

FA 332 Art and Technology
Art has been deeply interconnected with changes in technology, it has either responded to it or has changed with it leading to redefinitions in the making of art as well as changes in how it is viewed. This course examines symptomatic positions of interaction in the history, and discusses the contemporary situation with emphasis on recent changes. *Credit units: 3 ECTS Credit Units: 6.*

FA 361 Philosophy of Art I
This course examines philosophical issues that arise concerning the creation, interpretation and viewing of art since Plato and Aristotle. Topics to be discussed include: what is “mimesis”; who is the best judge of art; is art beautiful and good; should art be viewed dis-interestedly; what is it to get at the meaning of a work of art; how does technology affect the meaning and experience of art? *Credit units: 3 ECTS Credit Units: 6. Aut (A. Alemdaroğlu)*

FA 362 Philosophy of Art II
In this course, will be examined a number of ways that philosophy and modern art have come into dialogue with each other. These dialogues have taken many different forms: philosophers have written about artists and their works, and sometimes artists have appropriated the ideas of philosophers and created works that are inspired by their readings of philosophers. Within this matrix also is investigated what constitutes a work of art, artistic representation, the nature of aesthetic qualities, and the relevance of artist’s intentions to the evaluation of works of art. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: FA 361.*

FA 371 History of Art III
A chronological survey of the history of art from the Renaissance to the end of late Baroque and Rococo. Comparative material on the art of non-western lands, especially that of the Ottoman Empire is also discussed. *Credit units: 3 ECTS Credit Units: 4. Aut (A. M. Gob)*

FA 372 History of Art IV
A chronological survey of the history of art from the French Revolution to the end of the twentieth century. Comparative material on the art of non-western lands, especially that of Anatolia and Turkey is also discussed. *Credit units: 3 ECTS Credit Units: 4.*

FA 390 Summer Practice III
The aim of this summer practice is to give the students experience in making art in a studio or in a professional art environment. The minimum time for this practice is 6 weeks. *Credit units: None ECTS Credit Units: None.*

FA 401 Art Studio V
Studio work related to the student’s preference of thematic possibilities in the selected field of fine arts. The course focuses on the individual formative process. *Credit units: 6 ECTS Credit Units: 10, Prerequisite: FA 302. Aut (E. Sağlam)*

FA 402 Art Studio VI - Degree Project
Individual work geared to the completion of the degree program. The student is expected to come up with a coherent body of work in his/her field of concentration. This degree study reflects the student's personal direction and can be selected from one of the fields of painting, printmaking, sculpture, ceramic, multi-media (studio). *Credit units: 9 ECTS Credit Units: 16, Prerequisite: FA 401.*

FA 421 Analysis of Art Work I
This course aims to introduce students to critical analysis of works of art by concentrating on the theoretical debates developed around various issues on art theory since the 19th c. Also will be to put into question our understanding of art by traversing certain changes that have taken place in our perception of art and the world through various genres such as painting, photography, and cinema. *Credit units: 3 ECTS Credit Units: 4. Aut (A. Alemdaroğlu)*

FA 422 Analysis of Art Work II
Having dealt with the nature of painting, photography and cinema in the first part of this course, we shall be studying various postmodern approaches to art - such as semiotic, psychoanalytic, social and political approaches in order to foreground the impact of the postmodern theory on arts. What happens to the spectacle from the 1970's on? How have the computers and multimedia changed our conception of art? *Credit units: 3 ECTS Credit Units: 4, Prerequisite: FA 421.*

FA 461 Philosophy of Art
Specific works of art, visual images and objects are examined through diverse philosophical view points. There are discussions on the production of meaning with resource to philosophical approaches. Does art have a philosophy, and if so, what kind of philosophy is it? Where and what are the crossovers between philosophy and art? Specific cases where there have been intimate relations between philosophers and artists are studied. *Credit units: 3 ECTS Credit Units: 4. Aut (A. Alemdaroğlu)*

FA 462 Senior Seminar
Students work together as critics and artists on projects that require collaboration and interdisciplinary dialogue. They discuss and experiment in finding alternative ways and language of communication with the public. Projects may be real or imaginary. *Credit units: 3 ECTS Credit Units: 4.*

FA 467 Curatorial Studies I
An introduction to the critical development of museum studies as an emerging academic discipline. The course will be a basis in the study of museum education and curatorship. Historical development of the art institutions and their relation to the society today is discussed and evaluated in an analytical and critical way of thinking. *Credit units: 3 ECTS Credit Units: 6. Aut (Ç. N. Saraç)*

FA 468 Curatorial Studies II
A continuation of FA 467. The course will be based on the works of well-known curators throughout the world. Students are encouraged to experiment the exhibition techniques within a contextual approach. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: FA 467.*

FA 473 Contemporary Turkish Art
Analysis of the general features of various movements in Modern Turkish Art. Painting, sculpture and ceramics in Turkey from the late nineteenth century to the present. Its evaluation in comparison with European and other modern art movements. *Credit units: 3 ECTS Credit Units: 6.*

GRADUATE COURSES

PNT 333 News and Society
Credit units: 3 ECTS Credit Units: 7.5.

PNT 501 Painting I
Artistic and conceptual surveys at the specialization level. *Credit units: 4 ECTS Credit Units: 7.5.*

PNT 502 Painting II
Artistic and conceptual surveys at the specialization level; searching for new ways of expression. *Credit units: 4 ECTS Credit Units: 7.5.*

PNT 503 Drawing I
An advanced course in free-hand drawing which aims at producing an original final product from various initial studies in free-hand drawing techniques. *Credit units: 4 ECTS Credit Units: 7.5.*

PNT 504 Drawing II
An experimental course in advanced drawing where the students are introduced to abstraction, image construction and rendering through various drawing techniques. *Credit units: 4 ECTS Credit Units: 7.5, Prerequisite: PNT 503.*

PNT 511 Philosophy of Art
The leading views in the fine arts are discussed and analyzed from an artistic point of view. The social environment and world views in which painting, sculpture and architecture arose and developed are investigated as well as the logic of artistic formation which appeared parallel to the social and artistic views. *Credit units: 3 ECTS Credit Units: 7.5.*

PNT 512 Psychology of Art
Psychological nature of the artistic environment and artist. Relationship of the psychology of creation and art work. Views of some researchers in that field. *Credit units: 3 ECTS Credit Units: 7.5.*

PNT 515 Issues and Problems in Contemporary Art I
Contemporary issues and problems as art and artists are selected to be analyzed and discussed. Students are expected to participate in class discussions, conduct in-depth research and write on topics covered. *Credit units: 3 ECTS Credit Units: 7.5.*

PNT 516 Issues and Problems in Contemporary Art II
Continuation of PNT 515. Advanced issues and problems in contemporary art. Works by various artists are selected and analyzed in terms of approaches and trends. Students are encouraged to participate in class discussions and expected to do in-depth research as well as to write term papers on contemporary art issues. *Credit units: 3 ECTS Credit Units: 7.5.*

PNT 590 Research Topics
Credit units: None ECTS Credit Units: 6.

PNT 599 Master's Thesis
Credit units: None ECTS Credit Units: 24.

ADA 511 Research Methods in Design I
This course aims to develop a critical perspective on theory and practice in art with the intention of clarifying problematical positions maintained due to appropriation of a conception of art which presents itself with a clear-cut distinction of theory and practice. In this sense, this is a project-based course with a stress on "project"s intermediary position between theory and practice. *Credit units: 3 ECTS Credit Units: None.*

ADA 512 Research Methods in Design II
This is the second part of a two term course in which students are encouraged to develop a critical perspective on theory and practice in art. In relationship with the first part of the course, the second term lays a special stress on such conditioning that pertain to the hypostatizations of the separatedness of theory and practice. With the intention of finding a way out of this situation, the readings for the course will focus on Spinoza, Leibniz, and Deleuze. Since, going through stages of a work-shop, the course aims to end up in finalizing student projects in an exhibition, the first part of the course will be counted as prerequisite for the second part. *Credit units: 3 ECTS Credit Units: None.*

ADA 690 Advanced Research Topics
Credit units: None ECTS Credit Units: None.

ADA 699 Ph.D. Dissertation
Credit units: None ECTS Credit Units: None.

DEPARTMENT OF GRAPHIC DESIGN

B. Özgüç (Acting Chair), I. Aksoy, O. Anafarta, M. Brzozowski, C. Gürer, M. Gürzumar, İ. P. Güven, O. İktu, F. İnce, D. Kaya-Mutlu, A. Kurttekin, D. Özer Ülvan, A. Pekalski, M. Sladczyk.

Part-time: A. Alemdaroğlu, B. S. Çeltek.

Turkey, in recent years, has witnessed an explosion in advertising and communication that has resulted in the emergence of an aesthetic awareness in both the public and the private domain. There is a growing demand for well-educated designers in all aspects of visual language and communication.

The Department of Graphic Design strives to promote visual literacy, and the production of visual language to communicate messages through illustration, typography, photography, advertising, computer graphics, packaging, and contemporary media. To this aim, students are encouraged to utilize and experiment with contemporary production technologies.

The educational philosophy of the Department of Graphic Design is to question well-worn graphic trends, emphasize critical and theoretical thinking, and contribute innovative and individual proposals to the field.

UNDERGRADUATE PROGRAM

The Department of Graphic Design's undergraduate program consists of a two-phase curriculum. The first two years constitute the initial phase. A broad based curriculum during the first year exposes the students to fundamental art and language education as well as courses in Art History, Art and Culture and foundation studio art classes. The second year is made up of more intensive studio classes in Visual Communications, Illustration, Photography, Computer Graphics and Video Technology and Production.

The last two years comprise the final phase of the Graphic Department curriculum, where the student may choose to concentrate on Visual Communication Graphic Design, Illustration or Media Technology and Production. In-depth theoretical courses such as Analysis of Artwork and Philosophy are offered, in addition to a comprehensive array of electives which support and enhance the core curriculum.

UNDERGRADUATE CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
ENG 101	English and Composition I	3 / 6
FA 101	Basic Design I	6 / 10
FA 103	Drawing I	3 / 4
FA 131	Technical Drawing and Lettering I	3 / 4
FA 171	Introduction to Art and Culture I	3 / 5
GE 100	Orientation	1 / 1
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
ENG 102	English and Composition II	3 / 6
FA 102	Basic Design II	6 / 10
FA 104	Drawing II	3 / 4
FA 132	Technical Drawing and Lettering II	3 / 4
FA 172	Introduction to Art and Culture II	3 / 5
TURK 102	Turkish II	2 / 1

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
FA 203	Drawing III	3 / 4
FA 271	History of Art I	3 / 5

GRA 201	Graphic Design I	6 / 8
GRA 211	Typography I	3 / 6
GRA 225	Introduction to Visual Techniques I	3 / 6
HISTR 201	History of Turkish Republic I	2 / 1

Spring Semester Credits / ECTS Credits

FA 204	Drawing IV	3 / 4
FA 272	History of Art II	3 / 5
GRA 202	Graphic Design II	6 / 8
GRA 212	Typography II	3 / 6
GRA 226	Introduction to Visual Techniques II	3 / 6
HISTR 202	History of Turkish Republic II	2 / 1

THIRD YEAR

Autumn Semester Credits / ECTS Credits

FA 361	Philosophy of Art I	3 / 6
GRA 290	Summer Practice I	- / -
GRA 301	Graphic Design III	6 / 8
GRA 341	History of Graphic Art	3 / 4
	Restricted Elective(2)	6 / 12

Spring Semester Credits / ECTS Credits

FA 362	Philosophy of Art II	3 / 6
GRA 302	Graphic Design IV	6 / 8
GRA 344	Psychology of Advertisement	3 / 4
	Restricted Elective(2)	6 / 12

FOURTH YEAR

Autumn Semester Credits / ECTS Credits

FA 421	Analysis of Art Work I	3 / 4
GRA 390	Summer Practice II	- / -
GRA 401	Graphic Design V	6 / 8
	Restricted Elective(3)	9 / 18

Spring Semester Credits / ECTS Credits

FA 422	Analysis of Art Work II	3 / 4
GRA 402	Graphic Design VI	8 / 14
MAN 333	Marketing Principles	3 / 6
	Restricted Elective(1)	3 / 6

ELECTIVES

GRA 205	Rendering for Graphic Design I	3 / 6
GRA 206	Rendering for Graphic Design II	3 / 6
GRA 207	Conceptual Design	3 / 6
GRA 208	Graphic Design Concepts	3 / 6
GRA 210	Multimedia and Web Design	3 / 6
GRA 213	Computers in Graphic Design I	3 / 6
GRA 214	Computers in Graphic Design II	3 / 6
GRA 215	Animation and Film/Television Graphics I	3 / 6
GRA 216	Animation and Film/Television Graphics II	3 / 6
GRA 217	Motion Graphics	3 / 6
GRA 223	Photographic Image Processing I	3 / 6
GRA 224	Photographic Image Processing II	3 / 6
GRA 313	Typographic Design and Theories	3 / 6
GRA 324	Photographic Practice	3 / 6
GRA 333	Packaging I	3 / 6
GRA 334	Packaging II	3 / 6
GRA 351	Introduction to Video Production Techniques I	3 / 6
GRA 352	Introduction to Video Production Techniques II	3 / 6
GRA 353	Design: Image and Text I	3 / 6
GRA 354	Design: Image and Text II	3 / 6

GRA 421	Illustration I	3 / 6
GRA 422	Illustration II	3 / 6

GRADUATE PROGRAM

The aim of the graduate program in the Department of Graphic Design is to provide students with a theoretical background in visual arts, communications, cultural studies. Students with different backgrounds in the humanities, engineering, social sciences, art and design are encouraged to sharpen and enhance their views and skills in an interdisciplinary environment. Students can select an area in which to specialize, such as cultural studies, media and film studies, and art history, criticism, and philosophy. A diverse faculty of professionals, including visiting lecturers from Turkey and abroad, help students broaden their outlook in a larger scientific, cultural and social context.

Master of Fine Arts in Graphic Design

Admission: Applicants are required to have a Bachelor's degree. In addition to the general requirements set forth by the university, admittance to the program is determined by the results of an interview as well as the evaluation of the portfolios (optional) which should represent work that has been done within the undergraduate years. The date and place of the interview are announced each year by the University. All applicants must have a proof of their English proficiency.

Degree Requirements: After the completion of at least 24 units of course work in two successive terms, the candidates must take two seminar courses in their area of interest and prepare and submit a thesis. The maximum duration of the program is five semesters.

CURRICULUM OF MASTERS PROGRAM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
IAED 511	Research Methods I	3 / 7.5
	Graduate Electives(3)	9 / 18

Spring Semester		Credits / ECTS Credits
	Graduate Electives(4)	12 / 24

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
GRA 590	Research Topics	- / 6
GRA 599	Master's Thesis	- / 24

Spring Semester		Credits / ECTS Credits
GRA 590	Research Topics	- / 6
GRA 599	Master's Thesis	- / 24

GRADUATE ELECTIVES

COMD 513	Film and Genre	3 / 7.5
COMD 514	Identity Space and Image	3 / 7.5
COMD 515	Media Reception	3 / 7.5
COMD 516	Turkish Cinema and Modernity	3 / 7.5
COMD 521	Body Movement and Vision in Immersive and Interactive Media I	3 / 7.5
COMD 522	Body Movement and Vision in Immersive and Interactive Media II	3 / 7.5
GRA 517	Image Time and Motion I	3 / 7.5
GRA 518	Image Time and Motion II	3 / 7.5
GRA 519	Critical Approaches to Advertising Consumer Culture	3 / 7.5
GRA 520	Critical Approaches to Popular Culture	3 / 7.5
GRA 541	Graphic and Visual Representation	3 / 7.5
GRA 542	Mass Media and Visual Technologies	3 / 7.5
GRA 555	On Critical Reasoning and Artwork	3 / 7.5
GRA 556	What is Contemporary?	3 / 7.5

GRA 558	Visual Communication Approach to Artistic Thinking	3 / 7.5
GRA 561	Philosophy of Modern Art	3 / 7.5
GRA 562	Current Perspectives within Post-Modernity	3 / 7.5
GRA 567	Semiotics and the Work of Art I	3 / 7.5
GRA 568	Semiotics and the Work of Art II	3 / 7.5
PNT 511	Philosophy of Art	3 / 7.5
PNT 512	Psychology of Art	3 / 7.5
PNT 515	Issues and Problems in Contemporary Art I	3 / 7.5
PNT 516	Issues and Problems in Contemporary Art II	3 / 7.5

COURSE DESCRIPTIONS

UNDERGRADUATE COURSES

GRA 201 Graphic Design I
Work on advanced theoretical and technical knowledge in the area of graphic design. Design systems, determining design issues and criteria, their visual forms, functions and solutions to these problems. Design media and materials. *Credit units: 6 ECTS Credit Units: 8, Prerequisite: FA 102. Aut (M. Brzozowski, A. Pekalski)*

GRA 202 Graphic Design II
The technical and artistic problems of graphic design, methods of realization, two and three dimensional layout techniques, posters, brochures, book covers, etc; work with portfolio subjects. The visual concepts and functional problems during synthesis of graphical design elements. *Credit units: 6 ECTS Credit Units: 8, Prerequisite: GRA 201.*

GRA 205 Rendering for Graphic Design I
This studio course involves black and white visual presentation techniques of 2-D visual materials by means of pencil and marker. The course aims to give information to the students about rapid visualization. *Credit units: 3 ECTS Credit Units: 6. Aut (B. S. Çeltek)*

GRA 206 Rendering for Graphic Design II
This course consists of black and white and color presentation techniques of 3-D real objects by means of marker, water color and mixed media. The continuation of GRA 205 with emphasis on more advanced visualization. *Credit units: 3 ECTS Credit Units: 6.*

GRA 207 Conceptual Design
An investigation of the application of abstract concepts to concrete design products, i.e., packaging, advertising and printed material, as a vehicle to create specific moods and associations in design. *Credit units: 3 ECTS Credit Units: 6. Aut (İ. P. Güven)*

GRA 208 Graphic Design Concepts
A seminar course with an emphasis on group based concept development to be implemented in everyday graphic design products, i.e., packaging, advertising and printed material. *Credit units: 3 ECTS Credit Units: 6.*

GRA 210 Multimedia and Web Design
A study of graphic design principles as they apply to the development of multimedia projects. The course integrates graphics, color, images, icons, text, animation, sound, multimedia authoring and web design software to teach the student relevant technology as it applies to multimedia design. Students apply graphic design principles in developing a variety of multimedia instructional products working individually and in teams. *Credit units: 3 ECTS Credit Units: 6.*

GRA 211 Typography I
Typographic design systems, the aesthetic functional and conceptual use of lettering for printing, typographic uses of various visual media and technical methods. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: FA 132. Aut (F. İnce, A. Kurttekin)*

GRA 212 Typography II
The artistic and technical problems of typographic design, typographic layout techniques, letterform design, portfolio studies on logos and signs. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: GRA 211.*

GRA 213 Computers in Graphic Design I
An introduction to the graphic capabilities of a sophisticated full color computer graphics system. Using advanced “user-friendly” software designed primarily for artists and graphic designers, students will learn to create art on the computer. Subjects covered will include computer graphics terminology, saving and recalling images on disk, digitizing a photographic image, and producing “hard copy” (35 mm. slides) with a film recorder. *Credit units: 3 ECTS Credit Units: 6. Aut (M. Sladczyk)*

GRA 214 Computers in Graphic Design II
A continuation of GRA 213 with emphasis on more advanced computer techniques. Development of two dimensional graphics. Animation and three dimensional graphics. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: GRA 213.*

GRA 215 Animation and Film/Television Graphics I
Main principles of visual images and movement. Making images move. Continuity, lighting, filming and linking. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

GRA 216 Animation and Film/Television Graphics II
Methods of animation, preparation of sketch board and storyboard. Studies with application of various graphic elements in motion. *Credit units: 3 ECTS Credit Units: 6.*

GRA 217 Motion Graphics
This course introduces students to time-based graphics through animation. The focus of the course will be on developing a beginner-to-intermediate vector and bitmap animation for film, animation, video, digital media, and the web delivery and related presentation applications. Students will learn to design effective timeline sequences incorporating vector-drawing techniques, tweening, frame-by-frame animation procedures, bitmap imagery, typographic techniques and basic scripting. Design theory for interactive media is coupled with hands-on experience for creating visually rich animations, broadcast and presentations. This course is intended for students who desire intermediate-level study in animation and time-based motion graphics. *Credit units: 3 ECTS Credit Units: 6. Aut (O. İktu, N. Manyas)*

GRA 223 Photographic Image Processing I
A course on the processing techniques of digitized still images, including digital darkroom methods, color manipulation, collage and the like by using related computer software. *Credit units: 3 ECTS Credit Units: 6. Aut (O. İktu, N. Manyas)*

GRA 224 Photographic Image Processing II
A continuation of GRA 223. The students are expected to develop the projects of their interest by using a variety of possible sources for still images like printed media and video. *Credit units: 3 ECTS Credit Units: 6.*

GRA 225 Introduction to Visual Techniques I
An introductory course on photography and electronic imaging techniques. Students are expected to acquire basic technical knowledge of black and white photography including film developing, enlarging and paper processing in synchronization with the fundamental video production basics. Also within the same course, students are introduced to computers and graphic design software. *Credit units: 3 ECTS Credit Units: 6. Aut (M. Gürzumar)*

GRA 226 Introduction to Visual Techniques II
Advanced photography techniques such as color photography, including color negative/slide film processing and color printing. Also provided are training in computer paint software and two dimensional animation software supported by video presentation skills. *Credit units: 3 ECTS Credit Units: 6. Aut (A. Kurttekin)*

GRA 290 Summer Practice I
This summer training is intended to give the student a hands-on experience in an offset printing facility. The minimum time for this practice is 4 weeks. *Credit units: None ECTS Credit Units: None. Aut (C. Gürer)*

GRA 301 Graphic Design III
Color, stylization of form and spots, demonstration and composition in graphics. Finding slogans for graphic work and expressing them in graphic terms. Preparing projects for different subjects in graphics. *Credit units: 6 ECTS Credit Units: 8, Prerequisite: GRA 202. Aut (İ. P. Güven, F. İnce)*

GRA 302 Graphic Design IV
Preparing a portfolio for communication media using one or all of the techniques of illustration, photography, typography. Studies on realization of graphic projects. *Credit units: 6 ECTS Credit Units: 8, Prerequisite: GRA 301.*

GRA 313 Typographic Design and Theories
Typographic Design and Theories is a course which aims to promote students' practice and knowledge in the field of typography, thus instill an awareness in the dynamics and the creative potential of this discipline. Serving as a studio course, Typographic Design and Theories concentrates on typography based projects assisted by visual lectures and theoretical discussions, and it encourages students to explore new forms of visual expressions by using the typographical grammar. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

GRA 324 Photographic Practice
This course is for non-majors only. An introductory course in the techniques of photography. Taking photographs: Interior/exterior, information about composition, film developing and basic laboratory practices. *Credit units: 3 ECTS Credit Units: 6. Aut (I. Aksoy)*

GRA 333 Packaging I
Projects on various subjects of publication graphics. Methods of realizing these projects with various graphics media. Use of airbrush and reproduction camera. *Credit units: 3 ECTS Credit Units: 6. Aut (C. Gürer)*

GRA 334 Packaging II
Realization and preparation of graphics projects on mass communication media. *Credit units: 3 ECTS Credit Units: 6.*

GRA 341 History of Graphic Art
The evolution of graphic communications from prehistoric times until the invention of movable typography. The origins of printing and typography in Europe. The impact of industrial technology upon visual communications. The growth and development of modern graphic design. History of Turkish graphic art. *Credit units: 3 ECTS Credit Units: 4. Aut (D. Tezgör-Kassab)*

GRA 344 Psychology of Advertisement
An introduction to the psychological aspects of the current consumer market. Its relation to cultural and sociological phenomena as an aid in determining an effective policy in advertising. *Credit units: 3 ECTS Credit Units: 4.*

GRA 351 Introduction to Video Production Techniques I
Attending the course, students are expected to acquire basic video production skills such as pre-production planning, lighting for video, shooting with a video camera and sound recording. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: COMD 205. Aut (Y. Akçura, O. İktu, A. Treske)*

GRA 352 Introduction to Video Production Techniques II
Students attending the course will gain insight about video post-production concepts such as sound mixing and editing. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: GRA 351.*

GRA 353 Design: Image and Text I
The nature of "image" will be discussed from various points of view. Specific and cultural codes involved in designing and understanding an image, communicative processes. Psychoanalytical approaches to the subject matter will also be examined. *Credit units: 3 ECTS Credit Units: 6. Aut (B. S. Çeltek)*

GRA 354 Design: Image and Text II
The text and image relationship. Discursive analysis of text and image. Narrative forms, i.e. novel, theatre, film, etc. Adaptations. Written text as a "sign" of image. Bridging text and image: scriptwriting. Students will be expected to write screenplays of various forms. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: GRA 353.*

GRA 390 Summer Practice II
The aim of this summer practice is to give the student experience in the organization and working of an advertising agency/graphic design studio/photographic studio. The minimum time for the practice is 4 weeks. *Credit units: None ECTS Credit Units: None. Aut (C. Gürer)*

GRA 401 Graphic Design V
Subjects such as tourism, health training, education, environmental health. Preparation of design projects using mass media for banks, clothing firms, industrial products, press organizations, and publishing organizations. *Credit units: 6 ECTS Credit Units: 8, Prerequisite: GRA 302. Aut (C. Gürer)*

GRA 402 Graphic Design VI
Using different types of media to prepare, realize and print design projects. Acquisition of knowledge about advanced contemporary graphic products. *Credit units: 8 ECTS Credit Units: 14, Prerequisite: GRA 401.*

GRA 421 Illustration I
Ways of interpreting a subject through pictures. Black and white and color illustrations. Interpretation of graphic subjects through pictures. *Credit units: 3 ECTS Credit Units: 6. Aut (A. Pekalski)*

GRA 422 Illustration II
Realization and printing either a technical book, children's book, story book, poetry book or illustration of a book written in another field. *Credit units: 3 ECTS Credit Units: 6.*

GRADUATE COURSES

GRA 517 Image Time and Motion I
Through digital technology, our moving image culture is being redefined. The computer enables the mixture of images captured through many different means (cinema, stills, and drawings), and enables new levels of representation. Video gave the birth to simultaneity; the computer extends simultaneity to multiplicity. "Cinema becomes therefore a particular branch of painting - painting in time. No longer a kino-eye, but a kino-brush." Will this shift through technology change the way we organize time and space to create forms of narrative, or are we developing new kinds of vertical narratives? This course will engage students to make meaningful generalizations for interpreting or evaluating local experiences and practices in digital media, art and communication. *Credit units: 3 ECTS Credit Units: 7.5. Aut (A. Treske)*

GRA 518 Image Time and Motion II
A continuation from 'Image, Time and Motion I'. The course is an extended attempt to think about popular developments of time-based media in digital environments. The focus as on the critical discourse created through the works of digital artisans, net.artists and cyber entrepreneurs as well as the theoretical and analytical localization of current trends. *Credit units: 3 ECTS Credit Units: 7.5.*

GRA 519 Critical Approaches to Advertising Consumer Culture
This course introduces students to the critical scholarship on advertising and the economic, social, and cultural context in which modern advertising has emerged, a context often called "consumerism" or "consumer culture." While some emphasis is placed on the semiotics of advertising, more is placed on the ways in which advertising has become a crucial component in the "complex whole" of contemporary culture both informing and informed by that culture. Significant attention is thus given to the historical development of modern advertising; to the cultural/ideological power of advertising, with regard to both form and content; and to the implications of the material/economic power of advertising as an industry that supports other cultural industries and forms (newspaper, magazines television, the Web, etc.) *Credit units: 3 ECTS Credit Units: 7.5. Aut (A. E. Kurtgözü)*

GRA 520 Critical Approaches to Popular Culture
The aim of this course is to introduce students to a range of theoretical and methodological approaches to the study of popular culture. Particular emphasis is placed on current critical-cultural approaches arising out of cultural studies, postmodern theory, and feminism; attention is also given, however, to traditional communication theories, as well as to semiotic and sociological approaches. *Credit units: 3 ECTS Credit Units: 7.5.*

GRA 541 Graphic and Visual Representation
The aim of this course is to make the students familiar with both conventional and recent theories, issues, and debates in the fields of graphic and visual arts. The course will begin with a discussion of the "origins" of graphic and pictorial representation in early human cultures. Then, the notion of "representation" with a special emphasis on its aesthetic and visual aspects will be examined. The course will particularly focus on the relations between perception, image, language and subjectivity, and will examine several theories of visuality and image such as semiotics, psychoanalysis and postmodern approaches. *Credit units: 3 ECTS Credit Units: 7.5. Aut (M. Mutman)*

GRA 542 Mass Media and Visual Technologies
This course aims to present the recent developments in the field of visual media and technologies. It begins with an overview of the transformation of vision since Renaissance and examines the specificity of modern mass media as social institution and visual technology. Several theories of media and approaches to technology are discussed and a particular emphasis is given to recent technologies such as television, computers and virtual reality as well as urban space as a visual and technological environment. *Credit units: 3 ECTS Credit Units: 7.5.*

GRA 555 On Critical Reasoning and Artwork
The aim of this course is to give the basic concepts to analyze how critical reasoning and transformation of the world and the object has been articulated with the artistic creativity. The course also aims to shed a light on the ontological problematic of the artistic work within this context. *Credit units: 3 ECTS Credit Units: 7.5.*

GRA 556 What is Contemporary?
In today's world "contemporary" plays a leading role not only as an art(istic) concept, but as a wholistic one, that determines even the art(istic) production. After the impact of modernism at the beginning of the century, visual arts and many related fields continue on finding answers to the question, *what is contemporary?* The aim of the course is to give the students a basic and paradigmatic approach to the debate. At the end it is expected that the students will acquire the essential sensibility in defining and differentiating the contemporary art(istic) production. *Credit units: 3 ECTS Credit Units: 7.5.*

GRA 558 Visual Communication Approach to Artistic Thinking
This course focuses on the process of artistic thinking and creation understood in terms of visual communication and visual arts. The ways in which artistic thinking is shaped at the perceptual, conceptual and semiotic level of processing information will be explored. At the conceptual and semiotic levels the focus will be on the ways in which social, political and cultural factors generate patterns of visual communication. Examples from graphic art, painting, sculpture and architecture will be analyzed. The course will have a seminar format, combining lectures with student research on specific topics, which will be presented in class and discussed. The student presentation will be developed into term papers. *Credit units: 3 ECTS Credit Units: 7.5.*

GRA 561 Philosophy of Modern Art
In-depth descriptions of contemporary art, and the concepts underlying it in the international community. Analyses and evaluations of recent developments and new movements in fine arts during the 20th century. Discussion of the relationships between contemporary art and philosophy. *Credit units: 3 ECTS Credit Units: 7.5.*

GRA 562 Current Perspectives within Post-Modernity
Specific works of art, images and objects are examined through diverse philosophical perspectives within post-modernity. In-dept investigations within post-modern condition in consideration of emerging visions and conception. *Credit units: 3 ECTS Credit Units: 7.5.*

GRA 567 Semiotics and the Work of Art I
An examination of related terms and concepts such as sign, signification. Art as a signifying practice. First semiotics: linguistics and the emphasis on text. Second semiotics: the introduction of psychoanalysis and the role of the receiver. Current trends in semiotics and diverse approaches to art within a cultural context. *Credit units: 3 ECTS Credit Units: 7.5.*

GRA 568 Semiotics and the Work of Art II
A continuation of Semiotics and the Work of Art I. This course offers a critical look into the classical notions of semiotics and the discussions it raised. It also places more emphasis on the relationship between theory and analysis. There is a focus on the nature of the critical discourse and examples of critical work are examined. Students are expected to produce written work on the analysis of works of art. *Credit units: 3 ECTS Credit Units: 7.5.*

GRA 590 Research Topics
Credit units: None ECTS Credit Units: 6. Aut (Staff)

GRA 599 Master's Thesis
Credit units: None ECTS Credit Units: 24. Aut (Staff)

DEPARTMENT OF INTERIOR ARCHITECTURE AND ENVIRONMENTAL DESIGN

H. Demirkan (Chair), B. Altay, S. Altay, Ş. Aybar, İ. Basa, H. Bassler, N. Camgöz Olguntürk, O. Demirbaş, F. Erkip, M. Gürel, Ç. İmamoğlu, T. Kayasü, A. Küçük, S. Özaloğlu, M. Öztürk, M. Pultar, T. Sonkan Türkkan, B. Şenyapılı Özcan, Ş. Taşlı Pektaş, E. E. Türkkan, S. E. Ural, T. Yardımcı, S. Yılmazer, M. H. Yurdadoğan.

Part-time: B. Aydınalp, N. Çarkacı, N. Çuha, Z. Genç, D. Gökşin, B. Güner, M. Özdamar, I. Özman.

The curriculum combines the arts with technical and scientific studies in order to give students a well-rounded education. As the department is cognizant of modern trends in interior architecture and the implications of new technologies, it aims at providing a balanced education between the artistic, technological and humane aspects of the profession.

UNDERGRADUATE PROGRAM

The curriculum is organized around studios which prepare the novice designer to deal progressively with larger and more complex interiors and greater technical detail. The studios enable students to synthesize knowledge from parallel courses in history, art, technology, drawing and principles of design. The first two years are intended to develop an understanding of different concepts of design in form, material, space, composition, and introduce the fundamentals of total interior space planning and design. The third and fourth years provide the opportunity to specialize in different interest areas such as: computers, new materials and technologies, humanities, social sciences, safety, special needs of the handicapped, and elderly etc. Computers and CADD (Computer Aided Design and Drafting) are also integrated into different levels of education.

UNDERGRADUATE CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
ENG 101	English and Composition I	3 / 6
FA 101	Basic Design I	6 / 10
FA 103	Drawing I	3 / 4
FA 131	Technical Drawing and Lettering I	3 / 4
FA 171	Introduction to Art and Culture I	3 / 5
GE 100	Orientation	1 / 1
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
ENG 102	English and Composition II	3 / 6
FA 102	Basic Design II	6 / 10
FA 104	Drawing II	3 / 4
FA 132	Technical Drawing and Lettering II	3 / 4
FA 172	Introduction to Art and Culture II	3 / 5
TURK 102	Turkish II	2 / 1

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
HISTR 201	History of Turkish Republic I	2 / 1
IAED 201	Interior Design Studio I	6 / 10
IAED 212	Computers and Geometry	3 / 4
IAED 231	Advanced Design Graphics	3 / 4
IAED 251	Construction and Materials I	4 / 6
IAED 263	History of Built Environment I	3 / 5

Spring Semester		Credits / ECTS Credits
HISTR 202	History of Turkish Republic II	2 / 1
IAED 202	Interior Design Studio II	6 / 10

IAED 221	Human Factors	3 / 4
IAED 244	Building Performance: Physical Factors	3 / 4
IAED 252	Construction and Materials II	4 / 6
IAED 264	History of Built Environment II	3 / 5

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
IAED 290	Summer Practice I	- / -
IAED 301	Interior Design Studio III	6 / 10
IAED 311	Computer Aided Design	3 / 5
IAED 341	Building Performance: Codes	3 / 5
IAED 351	Detailing Studio	3 / 4
IAED 463	History of Furniture	3 / 6

Spring Semester		Credits / ECTS Credits
IAED 302	Interior Design Studio IV	6 / 10
IAED 322	People and Environment	3 / 5
IAED 342	Building Performance: Services	3 / 5
IAED 381	Product Detailing	3 / 4
	Restricted Elective(1)	3 / 6

FOURTH YEAR

Autumn Semester		Credits / ECTS Credits
IAED 390	Summer Practice II	- / -
IAED 401	Interior Design Studio V	6 / 10
IAED 415	Modular Interior Systems	3 / 4
IAED 417	Interior Design Documentation	3 / 4
	Restricted Elective(2)	6 / 12

Spring Semester		Credits / ECTS Credits
IAED 402	Interior Design Studio VI	9 / 14
IAED 418	Interior Design: Professional Practice	3 / 4
	Restricted Elective(2)	6 / 12

ELECTIVES

FA 211	Introduction to Painting I	3 / 6
FA 212	Introduction to Painting II	3 / 6
FA 215	Introduction to Sculpture I	3 / 6
FA 216	Introduction to Sculpture II	3 / 6
FA 467	Curatorial Studies I	3 / 6
FA 468	Curatorial Studies II	3 / 6
FRE 111	Basic French I	3 / 6
FRE 112	Basic French II	3 / 6
FRL 430	Intensive Arabic I	3 / 6
FRL 431	Intensive Arabic II	3 / 6
GER 111	Basic German I	3 / 6
GER 112	Basic German II	3 / 6
GRA 324	Photographic Practice	3 / 6
HART 128	History of the Ancient Near East and Mediterranean Civilizations	3 / -
HART 380	Archaeology of Phoenicia	3 / 4
IAED 315	Computerized Presentation Techniques	3 / 6
IAED 316	Computer Applications	3 / 6
IAED 365	Places/Memories	3 / 6
IAED 391	Special Topics in Interior Design I	3 / 6
IAED 392	Special Topics in Interior Design II	3 / 6
IAED 393	Visionary and Future Environments	3 / 6
IAED 394	TV Set Design	3 / 6
IAED 397	Color Theory and Applications	3 / 6
IAED 424	Experience of Space and Place	3 / 6
IAED 461	Environmental Management	3 / 6

IAED 462	Contemporary Architecture	3 / 6
IAED 471	Interior Analysis Systems	3 / 6
IAED 485	Design Methodology	3 / 6
IAED 491	Current Issues in Interior Design I	3 / 6
IAED 492	Current Issues in Interior Design II	3 / 6
IAED 495	Public Interiors	3 / 6
ITA 111	Basic Italian I	3 / 6
ITA 112	Basic Italian II	3 / 6
ITA 113	Basic Italian III	3 / 6
LAUD 314	Presentation Techniques	3 / 6
LAUD 463	Design Scenarios for Everyday Spaces	3 / 6
LAUD 465	Cities as Informationscapes	3 / 6
LAUD 474	Space, Culture and Identity	3 / 6
LAUD 475	Cinema and Space	3 / 6
LAUD 482	Nature Conservation and Tourism	3 / 6
LAW 412	Labor Law I	3 / 5
MSC 901	Music Appreciation I	3 / 5
RUS 111	Basic Russian I	3 / 6
SPA 111	Basic Spanish I	3 / 6
SPA 112	Basic Spanish II	3 / 6

GRADUATE PROGRAM

Master of Fine Arts in Interior Architecture and Environmental Design

The M.F.A. program is structured to provide specialization in various areas that require expertise in the Interior Architecture and Environmental Design discipline in addition to scholarly inquiry and research skills. Students are guided through an intensive, concentrated program that is based primarily on established educational objectives that the students have selected for themselves. The courses are chosen according to the areas of interest related to issues of interior and architectural design. Graduate students are expected to be highly motivated, technically competent and prepared to deal with ideas at a professional level.

Admission: Applicants are required to have a Bachelors degree in a relevant field of design. In addition to the general requirements set forth by the university, admittance to the program is through an interview as well as a portfolio evaluation. The portfolio should represent work done during undergraduate years and contain those pieces of work the applicants consider their best efforts. All students are expected to be fluent in written and oral English in order to be admitted to the program.

Degree Requirements: After the completion of at least 24 units of course work in two successive terms, the candidates must take two seminar courses in their area of interest and prepare and submit a thesis. The maximum duration of the program is five semesters.

CURRICULUM OF MASTERS PROGRAM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
IAED 501	Graduate Studio I	3 / 7.5
IAED 511	Research Methods I	3 / 7.5
	Graduate Elective	- / 2

Spring Semester		Credits / ECTS Credits
IAED 502	Graduate Studio II	3 / 7.5
	Graduate Elective	- / 3

SECOND YEAR

IAED 590	Research Topics	- / 6
IAED 599	Master's Thesis	- / 24

COURSE DESCRIPTIONS

UNDERGRADUATE COURSES

IAED 201 Interior Design Studio I
Three dimensional problem solving techniques are used to relate the elements and principles which shape interior space to the functional and aesthetic factors which affect individual space requirements. *Credit units: 6 ECTS Credit Units: 10, Prerequisite: FA 102. Aut (Staff)*

IAED 202 Interior Design Studio II
Basic concepts and design methods for residential interiors and structures. Individual and group needs in relation to personal, family and institutional living. *Credit units: 6 ECTS Credit Units: 10, Prerequisite: IAED 201.*

IAED 212 Computers and Geometry
Introduction of basic hardware and software concepts and the command language relevant to the operating system. A fully covered text processor. Basic geometric concepts related to two and three dimensional design are introduced through various software systems. *Credit units: 3 ECTS Credit Units: 4. Aut (Ş. Taşlı Pektaş)*

IAED 221 Human Factors
Investigation of human factors and dimensions as a determinant in the design of interior environments. *Credit units: 3 ECTS Credit Units: 4. Aut (B. Altay)*

IAED 231 Advanced Design Graphics
Study of presentation techniques employing various media. Students are expected to employ appropriate light, shade, textural and color effects to communicate interior design concepts. *Credit units: 3 ECTS Credit Units: 4. Aut (İ. Basa, M. Gürel, S. E. Ural)*

IAED 244 Building Performance: Physical Factors
Lighting, color and thermal comfort in the interiors of buildings. *Credit units: 3 ECTS Credit Units: 4.*

IAED 251 Construction and Materials I
The basic elements of building (such as furniture, cabinetry, etc.) construction. *Credit units: 4 ECTS Credit Units: 6, Prerequisite: FA 132. Aut (Ş. Aybar, T. Kayasü)*

IAED 252 Construction and Materials II
Properties of basic groups of building materials are reviewed, investigated and evaluated together with an overall knowledge of their typical traditional and current applications and the criteria for their selection. *Credit units: 4 ECTS Credit Units: 6, Prerequisite: IAED 251.*

IAED 263 History of Built Environment I
Concepts of “history” and “continuity” as surveyed through selected examples from the built environment, from prehistory to the end of the Byzantine era, with particular emphasis on the interior space. Neolithic, Mesopotamian, Egyptian, Greco-Roman, Romanesque, Gothic and Byzantine periods in the West, and classical Islam, Ommiad, Abbasside and Seljuk civilizations in the East are particular areas of study. *Credit units: 3 ECTS Credit Units: 5. Aut (H. Bassler, S. Özaloğlu)*

IAED 264 History of Built Environment II
A comparative analysis of monuments in Eastern and Western civilizations from the 15th century to the present, with particular emphasis on interior space. The Renaissance, Baroque and Neoclassicism versus the Ottomans. The Safavids and the Moguls till the 19th century, 19th and 20th century developments such as the industrial revolution and the effects on the built environment, Internationalism, Regionalism, Modernism and Post Modernism. *Credit units: 3 ECTS Credit Units: 5.*

IAED 290 Summer Practice I
The aim of this summer training is to give the student experience on site and/or in production techniques. The minimum time for this practice is 4 weeks. *Credit units: None ECTS Credit Units: None. Aut (H. Demirkan)*

IAED 301 Interior Design Studio III
Special consideration is given to office planning. Space planning, tenant development, interior design and documentation for a humane working environment. Corporate structure, management theory, humanistic ideals, and building systems and components in relation to office design. *Credit units: 6 ECTS Credit Units: 10, Prerequisite: IAED 202. Aut (Staff)*

IAED 302 Interior Design Studio IV
Design of large office complexes, public use interiors, service and care facilities. Individual activity, group interaction, cultural relationships, handicapped requirements, health, safety, comfort and technological factors for space design. CADD is introduced to support extensive design and drafting activity. *Credit units: 6 ECTS Credit Units: 10, Prerequisite: IAED 301.*

IAED 311 Computer Aided Design
Matrix representations of the homogeneous coordinate system and transformations are introduced. Concepts such as symmetry, pattern, shape and graph theory are covered. Two and three dimensional design concepts are demonstrated through a CADD system. Prerequisite: IAED 212. *Credit units: 3 ECTS Credit Units: 5, Prerequisite: IAED 212. Aut (T. Sonkan Türkkan)*

IAED 315 Computerized Presentation Techniques
Advanced usage of computerized programs for representation of the student projects by integrating classical and computer media. *Credit units: 3 ECTS Credit Units: 6.*

IAED 316 Computer Applications
Introduction to an efficient use of information and data management. Creating simple screen macros. Working with various application programs. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: IAED 311. Aut (B. Şenyapılı Özcan)*

IAED 322 People and Environment
Human behavior and its relation to the design of environments. Concepts such as private and public space, territoriality, perception and cognition of spaces, and spatial experience are explored. *Credit units: 3 ECTS Credit Units: 5. Aut (F. Erkip, Ç. İmamoğlu)*

IAED 341 Building Performance: Codes
Acoustics, noise control and fire prevention in buildings. *Credit units: 3 ECTS Credit Units: 5. Aut (S. Yılmazer)*

IAED 342 Building Performance: Services
Creation of a basic understanding of issues related to mechanical and electrical equipment and services in building; the requirements related to the installation, operation and maintenance of such equipment. Technical drawing of such systems. *Credit units: 3 ECTS Credit Units: 5.*

IAED 351 Detailing Studio
An overall assessment of the knowledge of building construction and material science is sought with emphasis on conceptual and detail drawings related to interior architecture problems. *Credit units: 3 ECTS Credit Units: 4, Prerequisite: IAED 252. Aut (O. Demirbaş, T. Yardımcı)*

IAED 365 Places/Memories
The course approaches histories and identities of places in the contexts of precedence/obsolescence/continuance. Memory here refers to traditions, origins and roots. Place relates to sites of remembering/forgetting, fragments and traces of the past either appearing or disappearing in the present environment constitute the basic upon which the themes of temporality and spatiality will be discussed. Selected readings on the city, on history and memory will be used to analyze different aspects of the subject. *Credit units: 3 ECTS Credit Units: 6.*

IAED 381 Product Detailing
Detailing problems of products such as the detailing of furniture, cabinetry, upholstery, fixtures, etc. Problems related to the nature of materials and production methods. *Credit units: 3 ECTS Credit Units: 4, Prerequisite: IAED 351.*

IAED 390 Summer Practice II
The aim of this summer practice is to give the student experience in the organization and working of an architecture/interior architecture/design office. The student is expected to make observations on the project developing order, project application and designer/client relationships in a private or institutional design office. The minimum time for this practice is 4 weeks. *Credit units: None ECTS Credit Units: None. Aut (H. Demirkan)*

IAED 391 Special Topics in Interior Design I
An investigation and research in depth of a topic related to interior design. A course that encourages the student's self conduct and research capabilities in theoretical issues to justify proposed design solutions. *Credit units: 3 ECTS Credit Units: 6. Aut (D. Gökşin)*

IAED 392 Special Topics in Interior Design II
A specialized course designed to deliver topics of special interest for the students. The course aims at taking advantage of expertise within the faculty and possibly invited guest lecturers. *Credit units: 3 ECTS Credit Units: 6. Aut (B. Aydınalp)*

IAED 393 Visionary and Future Environments
A global perspective and investigation of the means to conceptualize, plan, and design visionary and futuristic environments will be researched. Futuristic technology, fantasy, illusionistic, and utopian environments will be explored with an emphasis on innovative, alternative, and divergent conceptual problem-solving. *Credit units: 3 ECTS Credit Units: 6. Aut (H. Demirkan)*

IAED 394 TV Set Design
The aim is to teach the basic principles of TV set design. A term project is assigned to each student that is supported by a series of lectures. The term project covers each phase of design process starting from planning

to model making. Developing conceptual alternatives, concept boards, use of material, choice of finishings, use of camera and light are the basic issues that are emphasized within the course. *Credit units: 3 ECTS Credit Units: 6. Aut (I. Özman)*

IAED 397 Color Theory and Applications
Titles as color theories and systems; color vision and perception; color interactions; symbolic color and preferences; spatial perception and color illusion are discussed within the scope of architectural applications. *Credit units: 3 ECTS Credit Units: 6.*

IAED 401 Interior Design Studio V
Exploration of design concepts for commercial enterprises. Adaptive re-use of existing spaces, prototype solutions, interior arrangement systems, exhibition and graphic modes. *Credit units: 6 ECTS Credit Units: 10, Prerequisite: IAED 302. Aut (Staff)*

IAED 402 Interior Design Studio VI
Public space: programming, schematic design, and design development for a public, historic, or special interior environment in the community. *Credit units: 9 ECTS Credit Units: 14, Prerequisite: IAED 401.*

IAED 415 Modular Interior Systems
Systems research for the interior environment: furniture technology and materials. Emphasis on the design of general and multi purpose interior systems generated for mass production. *Credit units: 3 ECTS Credit Units: 4, Prerequisite: IAED 351. Aut (S. Altay)*

IAED 417 Interior Design Documentation
Students will be required to complete a project at the production drawing level. Design documentation skills are offered. *Credit units: 3 ECTS Credit Units: 4. Aut (N. Çarkacı)*

IAED 418 Interior Design: Professional Practice
Information on the administration of a major interior design project is given. Client and trade relations, codes, government and legal requirements are emphasized. *Credit units: 3 ECTS Credit Units: 4.*

IAED 424 Experience of Space and Place
Human experience of spaces and places are explored through psycho-spatial approaches. Spatial factors which influence human perception and resultant behavior at both the individual and societal level are discussed. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: IAED 322.*

IAED 426 Leisure Practices and Spaces
This course is planned to provide a comprehensive understanding of leisure issues, which constitute one of the major practices in contemporary societies. With the global cultural influences, leisure patterns and spaces have been transforming rapidly and significantly in every society. Leisure turns out to be a part of the daily life and leisure spaces are merged into spaces used for other daily practices like shopping, recreation, relaxation. In this course, the transformation in the definition and practices of leisure will be discussed to develop a basis for the critical analysis of new leisure spaces. Students are expected to participate in the discussions through extensive reading and observation on relevant sites. *Credit units: 3 ECTS Credit Units: 6.*

IAED 461 Environmental Management
As introduction to the issues in environmental administration and economics. Economic and organizational dimensions of environmental decisions. Evaluation of economic approaches. Relations between environmental organizations and various interest groups. The role of the design professional in environmental decision-making process. Basic concepts of building economics. *Credit units: 3 ECTS Credit Units: 6.*

IAED 462 Contemporary Architecture
An introduction to the roots of Modern Architecture, its formation through Bauhaus and evolution into International Style, Late Modernism and Post Modernism. Understanding movements of post 1980's such as New Expression, High Tech, Deconstruction and others. *Credit units: 3 ECTS Credit Units: 6.*

IAED 463 History of Furniture
A course dealing with historical evolution of furniture within a chronological spectrum. Students are asked to prepare portfolios and give seminar presentations. *Credit units: 3 ECTS Credit Units: 6. Aut (E. E. Türkkan)*

IAED 471 Interior Analysis Systems
The course will cover the analysis of interior systems and the assessment of interior elements to reveal the basic facets of interior design and its relation to environment in general. Interpretation of qualitative and quantitative spatial analysis; perceptions and deceptions for space qualities through design systems scope the course. *Credit units: 3 ECTS Credit Units: 6.*

IAED 485 Design Methodology
Increasing degree of complexity of problem situations in contemporary living requires more objective scientific tools, methods or techniques which this course aims to develop an understanding of; while demonstrating the

conceptual framework, a retrospective analysis of the contributions to the field, and technical base needed to relate theoretical issues to relevant contexts via methodology. *Credit units: 3 ECTS Credit Units: 6.*

IAED 491 Current Issues in Interior Design I
Investigating existing innovative planning, design issues in interior design to give more insight to the students for the development of their design skills. *Credit units: 3 ECTS Credit Units: 6.*

IAED 492 Current Issues in Interior Design II
Introduction to specialized issues related to contemporary techniques and materials in differing complexity and combinations for special interior design problem solving. *Credit units: 3 ECTS Credit Units: 6. Aut (M. Öztürk)*

IAED 495 Public Interiors
Introduction to issues pertaining to image formation and public functions of cultural and business interiors as evaluation and design sources. The course work is based on study of current approaches to design through analysis of projects, realizations and experienced spaces, as well as readings and discussions of essential topics. *Credit units: 3 ECTS Credit Units: 6.*

GRADUATE COURSES

IAED 501 Graduate Studio I
An analytical approach to critical issues in interior design. The studio is planned to provide the necessary knowledge and skills to deal with specific interior design problems, particularly related to the understanding of space, materials and detailing, through lectures, site trips and studio work. *Credit units: 3 ECTS Credit Units: 7.5. Aut (F. Erkip)*

IAED 502 Graduate Studio II
The students are expected to conduct their own research in the studio under the supervision of the instructors where they are to analyze, test, and criticize particular case studies. These studies may be structured around different theoretical concepts or typologies. *Credit units: 3 ECTS Credit Units: 7.5, Prerequisite: IAED 501.*

IAED 511 Research Methods I
A foundation course which deals with system and methods regarding information acquisition, verification of sources, theory of interpretation and hypothesis formulation for developing a critical ability to understand and study the issues related to interiors. *Credit units: 3 ECTS Credit Units: 7.5. Aut (M. Pultar)*

IAED 512 Statistical Analysis
The principles of statistical analysis methods, concepts of data collection and structuring are discussed with the aim of providing the student with the necessary tools to deal with large amounts of data and to draw conclusions from such data. *Credit units: 3 ECTS Credit Units: 7.5.*

IAED 514 Research Methods II
This is a tutorial course involving the conduct of an actual research project in interior and/or environmental design. The students shall be responsible, individually and in group work, for initiating, designing and conducting a research project under the guidance of the instructor. The work will include gathering and analyzing data, drawing conclusions and preparing a research report. *Credit units: 3 ECTS Credit Units: 7.5, Prerequisite: IAED 511.*

IAED 524 Construction of Design as a Social Practice
The interpretation of nature, urban life and city form in various theories will be explored. Each interpretation will be discussed as a different “way of looking” at the environment. The emphasis will be on design activity, design culture, and social practice of design. “Knowledge” will be explored as a major theme in the professionalization of design. *Credit units: 3 ECTS Credit Units: 7.5.*

IAED 531 Axiology and Ethics of Building
Introduction to Axiology: Value, value judgements, value systems, valuation and worth. Introduction to Ethics: Oughtness, actual and conditional oughtness, first and second order ethical statements. Building axiology: Technical, socio-cultural and percepto-cognitional values in building. Building ethics: Building codes, specifications and standards; the performance approach; healthy and green building concepts. Cultural processes: Enculturation, acculturation and criticism in building. *Credit units: 3 ECTS Credit Units: 7.5.*

IAED 542 Environmental Factors
Topics such as heat, bioclimatic comfort, heating, cooling and ventilating, energy efficiency of buildings, and condensation are covered. Physics of sound, acoustics and noise control are also discussed. *Credit units: 3 ECTS Credit Units: 7.5.*

IAED 543 Environmental Analysis I
An interdisciplinary course designed to develop cognitive skills and sensitivity for the evaluation of the built environment. Investigation of techniques and methods pertaining to analysis, synthesis and physical, social aspects of spatial formations will be dealt. Students are expected to participate in seminars and work on case studies in the studio. *Credit units: 3 ECTS Credit Units: 7.5.*

IAED 544 Environmental Analysis II
The methodology of environmental research and measurement technique for various aspects of environmental attitudes and user responses/behaviors are the major topics in this course. The students are expected to carry out empirical analyses for the measurement of any aspect in the field. IAED 543 is recommended as a preliminary. *Credit units: 3 ECTS Credit Units: 7.5.*

IAED 561 History of Theory and Criticism
The specific intent of the course is to explore the relevance of the history and theory of criticism in the evaluation, interpretation and development of an interior environment. *Credit units: 3 ECTS Credit Units: 7.5.*

IAED 571 Lighting and Color
Importance of light and color as design factors, physics of light, light and vision, light sources and lighting methods, symbolic and functional color, color in interiors. *Credit units: 3 ECTS Credit Units: 7.5.*

IAED 572 Building Safety
Fire and fire-safe design parameters, accidents in buildings and accident prevention measures and design for handicapped are the main topics of this course. After theoretical study, buildings will be evaluated as case studies. *Credit units: 3 ECTS Credit Units: 7.5.*

IAED 573 Computer Programming
Introduction to computers, computer applications and programming. Starting with the Disk Operating System, some word processing applications will be used to describe programming logic and high level language constructs. *Credit units: 3 ECTS Credit Units: 7.5.*

IAED 574 Art, Science and Technology
A seminar-based course to investigate the characteristics of various disciplines that relate to art, science and technology and correlate to the unity of mankind. *Credit units: 3 ECTS Credit Units: 7.5.*

IAED 578 Computer Modeling in Design
The use of computers as media in developing and communicating design ideas is discussed. Models of computation, how software can be understood in terms of computational models and how models relate to the process and products of design will be studied. *Credit units: 3 ECTS Credit Units: 7.5.*

IAED 583 Design Principles and Theories
The aim of the course is to develop a critical understanding of theories of architecture and principles of design. Course will explore, question and discuss classical, modern and contemporary theories of architecture, the works of some well known architects as well as works of the students. The course will be on a mixture of lectures, seminars and applied studies. The students are expected to do regular reading and to take active part in seminar preparations and discussions. *Credit units: 3 ECTS Credit Units: 7.5. Aut (H. Demirkan)*

IAED 585 Design Requirements
This course is intended to introduce students to the requirement concept in product/space model environment. Requirement specification and modeling are critical design strategies used during the early phases of design delivery of design solutions. The course will cover the following topics: problem analysis; user needs; system definition; refining the system definition, and; building the right system. A project as a teamwork will be conducted for the specification and modeling of the requirements in building product model environment. *Credit units: 3 ECTS Credit Units: 7.5.*

IAED 587 Spatial Practices
Today, spatial practices (i.e., the relationship between bodies, spaces and the socio-cultural context) constitute the focus of a broad range of disciplines not necessarily confined to architecture, interior architecture and planning. Subjectivity and space are studied as part of a web of complex entanglements including issues of representation, identity and power mechanism. The aim of this course is twofold: On one hand it provides familiarity with recent theoretical developments regarding subject/space relationships. On the other hand, it provides the tools for interpretive explanations of concrete practices with particular focus on the materiality of space. Students are expected to do regular reading and to participate and share their individual research findings in class discussions. *Credit units: 3 ECTS Credit Units: 7.5.*

IAED 590 Research Topics
Credit units: None ECTS Credit Units: 6. Aut (Staff)

IAED 599 Master's Thesis
Credit units: None ECTS Credit Units: 24. Aut (Staff)

DEPARTMENT OF URBAN DESIGN AND LANDSCAPE ARCHITECTURE

G. Çulcuoğlu (Acting Chair), D. Altay, K. Arapkirlioğlu, C. İstek, H. Karaca, O. Nalbantoğlu, S. Teber, S. A. Tokol.

Part-time: F. Baş Bütüner, U. Ertem, J. D. Tunçok.

The design of urban environments requires the skills of conceptualization at different scales, proposing solutions, and their implementation. Another requirement is developing familiarity with such issues as heterogeneous human populations, dense building stocks, natural and environmental assets, a specialized labor force and a shared urban identity, as well as building an ability to address these issues in design. Finally, it is necessary to master the appropriate use of natural and artificial materials.

Urban projects, of which landscape design is an integral part, have constituted the most intriguing design products in the world during the last two decades. These projects and their implementation have opened discussions leading to contemporary design theories, indicating that the integration of landscape architecture and urban design will further prosper in the future. Addressing the issues of urban context with those of landscape architecture, the department is the first to offer an undergraduate degree. The growing number of academic staff includes faculty who come from various disciplinary backgrounds including landscape architecture, city planning, architecture and anthropology.

UNDERGRADUATE PROGRAM

Unlike other programs of landscape architecture, the Department of Urban Design and Landscape Architecture at Bilkent University is affiliated with a design faculty focusing on studios. The design studios and the technical and theoretical courses that make up the curriculum are supported by field trips in order to study various urban contexts as their project sites. These trips range from intra-city daily tours to international summer programs.

UNDERGRADUATE CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
ENG 101	English and Composition I	3 / 6
FA 101	Basic Design I	6 / 10
FA 103	Drawing I	3 / 4
FA 131	Technical Drawing and Lettering I	3 / 4
FA 171	Introduction to Art and Culture I	3 / 5
GE 100	Orientation	1 / 1
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
ENG 102	English and Composition II	3 / 6
FA 102	Basic Design II	6 / 10
FA 104	Drawing II	3 / 4
FA 132	Technical Drawing and Lettering II	3 / 4
FA 172	Introduction to Art and Culture II	3 / 5
TURK 102	Turkish II	2 / 1

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
HISTR 201	History of Turkish Republic I	2 / 1
LAUD 190	Summer Practice I	- / -
LAUD 201	Design Studio I	6 / 10
LAUD 221	Introduction to Urban Concepts	3 / 4
LAUD 241	Plant Material I	3 / 5

LAUD 251	Techniques and Materials of Landscape and Urban Environment I	3 / 5
LAUD 261	History of Landscape and Urban Environment I	3 / 5

Spring Semester Credits / ECTS Credits

HISTR 202	History of Turkish Republic II	2 / 1
LAUD 202	Design Studio II	6 / 10
LAUD 212	Computers and Geometry	3 / 5
LAUD 242	Plant Material II	3 / 4
LAUD 252	Techniques and Materials of Landscape and Urban Environment II	3 / 5
LAUD 262	History of Landscape and Urban Environment II	3 / 5

THIRD YEAR

Autumn Semester Credits / ECTS Credits

LAUD 290	Summer Practice II	- / -
LAUD 301	Design Studio III	6 / 10
LAUD 311	Computer Aided Design	3 / 5
LAUD 351	Techniques and Materials of Landscape and Urban Environment III	3 / 5
LAUD 371	Analysis of Urban Environment I	3 / 4
	Restricted Elective(1)	3 / 6

Spring Semester Credits / ECTS Credits

LAUD 302	Design Studio IV	6 / 10
LAUD 322	People and Environment	3 / 5
LAUD 342	Planting Design	3 / 4
LAUD 372	Analysis of Urban Environment II	3 / 5
	Restricted Elective(1)	3 / 6

FOURTH YEAR

Autumn Semester Credits / ECTS Credits

LAUD 390	Summer Practice III	- / -
LAUD 401	Design Studio V	6 / 10
LAUD 417	Contract Documents	3 / 4
LAUD 471	Urban Sociology	3 / 4
	Restricted Elective(2)	6 / 12

Spring Semester Credits / ECTS Credits

LAUD 402	Senior Design Studio	6 / 10
LAUD 404	Senior Design Research	3 / 4
LAUD 418	Professional Practice	3 / 4
	Restricted Elective(2)	6 / 12

ELECTIVES

LAUD 312	Advanced Modelling Techniques in C.A.D.	3 / 6
LAUD 314	Presentation Techniques	3 / 6
LAUD 324	Morphology and Typology of Urban Spaces	3 / 6
LAUD 362	Making of Urban Landscape	3 / 6
LAUD 381	Conservation Planning and Design	3 / 6
LAUD 421	Realization of Urban Projects	3 / 6
LAUD 432	Structuring and Infrastructuring in Urban Zones	3 / 6
LAUD 441	Planting Plans	3 / 6
LAUD 442	Interior Planting Design	3 / 6
LAUD 461	Occupancy in Urban Areas	3 / 6
LAUD 462	Contemporary History of Landscape Architecture	3 / 6
LAUD 463	Design Scenarios for Everyday Spaces	3 / 6
LAUD 465	Cities as Informationscapes	3 / 6
LAUD 472	Recent Issues in Human Geography	3 / 6
LAUD 474	Space, Culture and Identity	3 / 6
LAUD 475	Cinema and Space	3 / 6
LAUD 481	Landscape Ecology	3 / 6

LAUD 482 Nature Conservation and Tourism ..... 3 / 6
LAUD 483 Environment Philosophy and Ethics ..... 3 / 6

COURSE DESCRIPTIONS

UNDERGRADUATE COURSES

LAUD 190 Summer Practice I
This first part of summer training aims to give students basic knowledge about surveying methods, grading techniques and the basic skills of map reading and recognizing topographic symbols. Measurements pertaining to topography and landforms are demonstrated. This part of the summer training will have both field surveying and drawing components. The second part aims to provide basic computer literacy to help students throughout their education for processing data, word processing and researching through the Internet. *Credit units: None ECTS Credit Units: None. Aut (G. Çulcuoğlu)*

LAUD 201 Design Studio I
A studio of an interdisciplinary nature that tends to investigate the role of nature and environmental factors on the built environment. Analytical work supplemented with lectures, followed by elementary designs to practice the design process involved in environmental design. *Credit units: 6 ECTS Credit Units: 10, Prerequisite: FA 102. Aut (K. Arapkirlioğlu, U. Ertem)*

LAUD 202 Design Studio II
Small scale site planning and design problems that integrate landscape and urban design issues. Preparation of base plans, analysis of spaces, volumetric evaluations and project brief writing exercised as integral phases of a design problem. Frequent presentations and studio critiques will develop oral and graphic skills and techniques. *Credit units: 6 ECTS Credit Units: 10, Prerequisite: LAUD 201.*

LAUD 212 Computers and Geometry
Introduction of basic hardware and software concepts and the command language relevant to the operating system. A fully covered text processor. Basic geometric concepts related to two and three dimensional design are introduced through various software systems. *Credit units: 3 ECTS Credit Units: 5.*

LAUD 221 Introduction to Urban Concepts
This introductory course, consisting of lectures and fieldwork, aims to provide a foundation for the concepts and issues related to urban environment. The cultural, social and economical factors that influence the urban context are discussed, and the students are expected to do fieldwork using the techniques introduced in the course. *Credit units: 3 ECTS Credit Units: 4. Aut (S. A. Tokol)*

LAUD 241 Plant Material I
This beginning level lecture and field study course is the first one of a series of courses on plants. The aim here is to introduce basic plants that are used in landscape architecture, with an emphasis on their visual characteristics, ecological requirements and their use in design. The course also involves term projects for building a general framework to familiarize the students with the variety of Turkey's regional flora. *Credit units: 3 ECTS Credit Units: 5. Aut (J. D. Tunçok)*

LAUD 242 Plant Material II
A lecture and studio/field course studying the design characteristics and landscape use of plant materials available in Turkey. This includes the principles of planting design, the aesthetic and functional use of plant material and the preparation of planting plans and plant schedules. Students are expected to prepare a plant manual. *Credit units: 3 ECTS Credit Units: 4.*

LAUD 251 Techniques and Materials of Landscape and Urban Environment I
In this first course of a series of courses on technical aspects, the natural environment and its resources are introduced as basic elements of site design. Climatic factors, topography, soil, water and vegetation are discussed to provide a foundation on which to build further knowledge on site development and construction. *Credit units: 3 ECTS Credit Units: 5. Aut (H. Karaca)*

LAUD 252 Techniques and Materials of Landscape and Urban Environment II
A lecture and studio/field course, investigating the variety of hard materials available and suitable for landscape and urban construction. The emphasis is on appearance, physical properties and behavior and cost effectiveness. The principles of designing construction details are investigated. *Credit units: 3 ECTS Credit Units: 5.*

LAUD 261 History of Landscape and Urban Environment I
A survey of selected examples from the built environment covering the Antiquity and Middle Ages with particular emphasis on the landscape and urban formations. *Credit units: 3 ECTS Credit Units: 5. Aut (S. A. Tokol)*

LAUD 262 History of Landscape and Urban Environment II
Analysis of elements of the built environment starting from the Renaissance until today. Examples are investigated to demonstrate the historic background of the evolution of the exterior spaces with respect to the landscape and urban context. *Credit units: 3 ECTS Credit Units: 5.*

LAUD 290 Summer Practice II
The second summer practice that focuses on plant material aims to build a familiarity with plant material, to learn their physical properties, to develop a basic understanding about their propagation techniques, design principles, application and maintenance techniques. This summer practice is done in nurseries for a minimum period of 4 weeks. *Credit units: None ECTS Credit Units: None. Aut (G. Çulcuoğlu)*

LAUD 301 Design Studio III
Medium scale projects that involve planning and architectural consideration, including aspects of settlement design and townscape. Appreciation of building and site relationships and evaluation of indoor-outdoor spaces. Emphasis is also given to design levels (phases) and effects of land form. *Credit units: 6 ECTS Credit Units: 10, Prerequisite: LAUD 202. Aut (F. Baş Bütüner, H. Karaca, O. Nalbantoğlu)*

LAUD 302 Design Studio IV
Emphasis on hard and soft details while dealing with small and medium scaled projects. Construction details, material specifications, planting plans and schedules, irrigation layouts are prepared. Considerations related to landform and leveling, climatic factors and social influences are integrated. *Credit units: 6 ECTS Credit Units: 10, Prerequisite: LAUD 301.*

LAUD 311 Computer Aided Design
Matrix representations of the homogeneous coordinate system and transformations are introduced. Concepts such as symmetry, pattern, shape and graph theory are covered. Two and three dimensional design concepts are demonstrated through a CADD system. *Credit units: 3 ECTS Credit Units: 5, Prerequisite: LAUD 212. Aut (Staff)*

LAUD 312 Advanced Modelling Techniques in C.A.D.
This course aims to strengthen and improve the students' CAD abilities, especially in 3-dimensions. Surface modelling and solid modelling techniques are focused, with a particular emphasis on photorealistic images obtained through these models. Although the course is taught using AutoCAD software, it is possible to work in other CAD programs using the techniques mastered here. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: LAUD 311.*

LAUD 314 Presentation Techniques
The course aims at improving presentation skills in design process through various techniques by means of visual and verbal presentations and illustrations. The course is preceded by series of lectures and discussions including basics of presentation techniques, elements and concepts of design process. Students will be assigned projects and will start to create their own portfolios for their professional and academic life. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

LAUD 322 People and Environment
Human behavior and its relation to design of environments. Concepts such as private and public space, territoriality, perception and cognition of spaces, and spatial experience are explored. *Credit units: 3 ECTS Credit Units: 5.*

LAUD 324 Morphology and Typology of Urban Spaces
This elective course discusses and analyzes the physical principles, functions, relationships, and physical elements of urban spaces (buildings, landform levels, and plants). The course presents various techniques/methods to make a typological and morphological study of urban spaces to prepare a morphic language and an elementary lexicon. *Credit units: 3 ECTS Credit Units: 6.*

LAUD 342 Planting Design
This course focuses on the identification and study of plant materials as landscape design elements. Theoretical aspects of planting design is studied to provide a basis for plant selection and arrangement in landscape projects of various scales and contexts. *Credit units: 3 ECTS Credit Units: 4.*

LAUD 351 Techniques and Materials of Landscape and Urban Environment III
A lecture and studio/field course investigating the methods of installation of hard materials in landscape and urban construction with emphasis on structural concepts and practical requirements of implementation. Issues of infrastructure, soil types and irrigation are also introduced. This involves the preparation of construction details, setting-out drawings and writing simple specifications. *Credit units: 3 ECTS Credit Units: 5. Aut (O. Nalbantoğlu)*

LAUD 362 Making of Urban Landscape
A field study oriented elective course dealing with arranged structures on urban land and shaped spaces in between. The aim is to reveal the "spirit of the place", to make places which enhance everyday life. Survey, analysis, diagnosis and design/reshaping of the city's components to see the relations between these pieces

and to assess their condition, to understand the city's element, their working form and consequent appearance. Related issues will be linked to architecture, engineering, landscape architecture, city planning and visual arts. The subject area is concerned with public open spaces, squares, clusters of houses, transport amenities, cultural and educational complexes, malls and plazas, parking areas, recreational areas, etc. *Credit units: 3 ECTS Credit Units: 6.*

LAUD 371 Analysis of Urban Environment I
Elements of form in cities, buildings and spatial analysis of the built environment. The historic and contemporary examples are investigated. *Credit units: 3 ECTS Credit Units: 4. Aut (K. Arapkirlioğlu)*

LAUD 372 Analysis of Urban Environment II
Analysis of the physical and cultural factors that shape residential communities in urban settings. *Credit units: 3 ECTS Credit Units: 5.*

LAUD 381 Conservation Planning and Design
This course aims to introduce the students with urban and archaeological conservation as well as renewal planning and policy issues. Principles of conservation are focused and urban design examples in urban historic sites both in Turkey and abroad are studied. Within this context, legal and institutional framework of urban and archaeological site conservation, governmental policies, sustainable conservation policies, survey and planning methods and materials will be dealt with. *Credit units: 3 ECTS Credit Units: 6.*

LAUD 390 Summer Practice III
The third summer practice has two stages. The first stage focuses on the application of soft material where planting techniques, plant composition, maintenance process are dealt with. The second stage focuses on the application of hard material, dealing with the process and techniques of production of hard material, the technical properties of materials, in addition to the preparation of bills of quantity and tender documents. Each stage lasts 3 weeks, a total duration of 6 weeks. *Credit units: None ECTS Credit Units: None. Aut (G. Çulcuoğlu)*

LAUD 401 Design Studio V
A studio course designed to equip the students with knowledge pertaining to other design disciplines and professions that take part in the formation of the built environment. Issues related to urban planning and design, architecture, landscape architecture and interior architecture are handled in varying scales of the built environment. Site visits, supplementary lectures and multidisciplinary team work are encouraged. *Credit units: 6 ECTS Credit Units: 10, Prerequisite: LAUD 302. Aut (G. Çulcuoğlu, C. İstek, S. A. Tokol)*

LAUD 402 Senior Design Studio
A multi-scale project which requires submission of drawings that illustrate all aspects of the design process together with appropriate documentation. Individual effort is evaluated with respect to competence in all aspects of the professional practice. *Credit units: 6 ECTS Credit Units: 10, Prerequisite: LAUD 401.*

LAUD 404 Senior Design Research
This intensive research and writing course is organized in seminar format. It aims on the one hand to provide a knowledge basis for the Senior Design Studio, while on the other, to help prepare students for a variety of professional careers. This preparation includes enhancing skills of critical and analytical thinking and creative problem solving, while developing a sensitivity and responsibility to social problems. *Credit units: 3 ECTS Credit Units: 4.*

LAUD 417 Contract Documents
A lecture/studio course studying the technical and practical aspects of organizing the components of a full set of contract documents for a landscape and urban design project. All working drawings, bills of quantity, organization of the specifications and relationship of these components to the conditions of tender and contract are prepared and compiled in a portfolio. *Credit units: 3 ECTS Credit Units: 4. Aut (O. Nalbantoğlu)*

LAUD 418 Professional Practice
A lecture/seminar course studying the practical aspects of professional practice, social, legal, technical, ethical and financial factors. The relations between the designer, contractor and client, office management and organization, tendering and contracting procedures and project management and supervision are also studied. *Credit units: 3 ECTS Credit Units: 4.*

LAUD 421 Realization of Urban Projects
An interactive course studying the conditions/factors, partners/actors, elements of project realization to provide better urban environments. During the course, problems that may be encountered at different levels of urban project realization in terms of legal, institutional, financial issues will be taken up. Ways of approach will be discussed with the students and the students will be exposed to different case studies. *Credit units: 3 ECTS Credit Units: 6.*

LAUD 432 Structuring and Infrastructuring in Urban Zones
This course aims to examine contemporary aspects and problems related to urban structures and infrastructures, at the scale of both metropolitan cities and medium size settlements. Topics to be covered include urban management and development, structuring and infrastructuring, alliance between physical and socio-cultural

context, transportation, structuring in disaster zones and historic preservation. The course incorporates lectures and site visits for in situ examination of cases. Students participation is expected and the evaluation of their performance is based on regular and take-home exams as well as an extensive term project. *Credit units: 3 ECTS Credit Units: 6.*

LAUD 441 Planting Plans

Principles and procedures for selection and arrangement of plant materials for specific uses, including climate modification, spatial definition, circulation control, soil and water conservation, etc., as expressed by planting plans and specifications. The course focuses on the development of the technical aspects of planting design at the project level. It clarifies the role of planting design in the package of design and construction drawings. The course consists of lectures, seminars, discussions, videos, studio work and critics. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

LAUD 442 Interior Planting Design

This course focuses on interior plants and their environmental and physical requirements, design principles and considerations about using interior plants with other landscape and architectural elements, preparation of base and construction plans, and maintenance requirements and techniques. *Credit units: 3 ECTS Credit Units: 6.*

LAUD 461 Occupancy in Urban Areas

This course focuses on the relationship between people and the physical settings, particularly urban public spaces. Lectures on various aspects of occupancy in urban areas and field studies conducted to analyze cases are in different contexts constitute the course work. The content and the format make the course an appropriate one for joint arrangements with other universities at home and abroad. *Credit units: 3 ECTS Credit Units: 6.*

LAUD 462 Contemporary History of Landscape Architecture

The course aims to examine changing aspects of landscape architecture in 20th century and early 21st century by discussing the issue through the newly emerging urban concepts. Besides conceptual discussions, in order to understand the significance of landscape in the definition of contemporary cities, various urban projects that were developed in the world and also in Turkish cities will be analyzed and discussed in the scope of the course. *Credit units: 3 ECTS Credit Units: 6.*

LAUD 463 Design Scenarios for Everyday Spaces

The main objective of the course is to raise the questions of and the differences between “what is designed?” and “what is appropriated?” in the city. The focus of attention will be on the design processes rather than the finished products. During the course, students will reconsider the meanings, use, and designs of everyday spaces in our cities and learn to develop new ‘design scenarios’ for them. Particularly, the course will deal with facilities like urban vegetation and street furniture; built-forms like walls, facades, billboards, barriers, and gates opening onto public spaces; and a milieu of public spaces like small alleys, culde-scas, streets, squares, pocket parks, abandoned spots, pedestrian bridges and passages. *Credit units: 3 ECTS Credit Units: 6. Aut (C. İstek)*

LAUD 465 Cities as Informationscapes

In regards to the information they contain or may generate, we call our living or working environments (i.e. cities) as “informationscapes”. While this course will focus on the specific urban contexts, we will investigate how cities as informationscapes are populated not only by static elements of information such as “buildings and physical objects”, but also “new media forms”, dynamic elements such as people, living organism, or artifacts for the input and display of information. The aim of the course will be to produce the representation and communication of ideas and concepts related to our perceptions of these aspects of cities, as well as the different interactions and the labyrinthine narratives within the city. *Credit units: 3 ECTS Credit Units: 6.*

LAUD 471 Urban Sociology

The nature, causes and consequences of urbanization are studied, examining the social and demographic characteristics of urban populations and their spatial distributions in both developed and developing countries to demonstrate the relationship between the design of settlements and their social organization. *Credit units: 3 ECTS Credit Units: 4. Aut (S. Teber)*

LAUD 472 Recent Issues in Human Geography

The relations between society, space and social science in a changing world are studied. Recent approaches in analyzing the relationships between society and space in different time and space contexts are discussed with an emphasis on time-space geography, agency and structure relationships, local/global dynamics, images and symbols in different cultural contexts. *Credit units: 3 ECTS Credit Units: 6.*

LAUD 474 Space, Culture and Identity

This course emphasizes that the success of urban design and planning depends on the extent to which users’ cultural and spatial values are acknowledged. The interrelation between users’ cultural identity and location (who you are and where you are) is focused on. The objectives of the course are: (1) To provide theoretical background, (2) to study cultural meanings/uses attributed to space through a research project, and (3) to conclude policy implication from these projects. *Credit units: 3 ECTS Credit Units: 6.*

LAUD 475 Cinema and Space

The course dwells upon multiple readings of interior and exterior spaces within the framework of the theory of cinematic montage and cinematic imagery. Understanding and interpreting space concept requires a construction of an interdisciplinary vocabulary and a dialogical situation. Therefore, using and designing a space includes cognitive, moral and aesthetic judgments, and collective, personal and even popular representations. The assumption is that it is possible to form an analogy between cinema and space design, and between the eye and the camera moving in an urban milieu. If design is understood as a cinematographic process, it is seen that both creative acts are organized in time through space and perceived through time in space. Respectively, the notion of architectural and urban spaces, their syntactic characteristics, and analytical simulations form a common analogy with cinema in terms of their production and consumption. *Credit units: 3 ECTS Credit Units: 6.*

LAUD 481 Landscape Ecology

The objective is to explore the combination of ecosystems, its structure, function and changes. The course focuses on the distribution patterns of landscape elements of ecosystems, and the ecological changes in the landscape over time. The course consists of lectures, discussions, videos and site visits. *Credit units: 3 ECTS Credit Units: 6. Aut (K. Arapkirlioğlu)*

LAUD 482 Nature Conservation and Tourism

Classification of natural areas, national parks and equivalent reserves are discussed emphasizing outdoor recreation, concepts of soft tourism, green tourism, alternative tourism, ecotourism, and sustainable tourism; symbiotic relationships between nature conservation and tourism; holiday villages and campgrounds; nature-based outdoor recreation and tourism activities. *Credit units: 3 ECTS Credit Units: 6.*

LAUD 483 Environment Philosophy and Ethics

This course aims to restructure the meaning of environment and question human attitude towards nature and other living things. Related environmental topics and issues will be discussed in the light of environmental philosophy and its historical progress. The course will also discuss environmental ethics that deals with relations of human beings to environment and the conflicts that arise, as well as the role of ethics in guiding human behavior. The course aims to embrace students from a variety of disciplines to build a certain level of consciousness, responsibility and skills to understand and resolve environmental conflicts. This will be established through the review of selected case studies related to each student's disciplinary background. *Credit units: 3 ECTS Credit Units: 6.*

FACULTY OF BUSINESS ADMINISTRATION

Erdal Erel, Ph.D., Dean
Levent Akdeniz, Ph.D., Asst. Dean
Süheyla Özyıldırım, Ph.D., Asst. Dean

The Department offers undergraduate and graduate programs leading to B.S., M.B.A., M.S. and Ph.D. degrees.

The main concern of the programs is to develop the skills required to confront the challenges of a changing world. The successful managers of the future should be able to cope with the complexities of change and an economic environment which is best characterized by keen competition. Thus contemporary business education does not only include teaching the techniques of the profession, but aims at developing a vision, flexibility and adaptability to new situations.

The programs' emphasis is on analytical methods and problem solving rather than a mere description of existing practices. Participative learning is emphasized through case analyses, term projects, simulation and classroom discussions. Computer applications, quantitative analysis and behavioral sciences are integrated into the programs to provide for quantitative and qualitative aspects of management with an emphasis on the former. The graduates are equipped with knowledge, skills and analytical thinking necessary to enhance the effectiveness and efficiency of the enterprises that they will serve.

ACADEMIC STAFF

Levent Akdeniz, Associate Professor
Ph.D., Economics, University of Houston, 1996. Corporate finance, computational economics, numerical methods.

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Ph.D., Accounting and Finance, Middle East Technical University, 2009. International Accounting Standards, International Financial Reporting, Accounting Education.

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Ph.D., Finance, University of Massachusetts, Amherst, 1995. Investments, asset allocation, futures and options markets, risk management.

Kürşat Aydoğan, Professor
Ph.D., Finance, Syracuse University, 1986. Investments, corporate finance, international finance.

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Ph.D., Social Psychology, Middle East Technical University, 2002. Organizational behavior, socio-cultural value orientations, individualism-collectivism.

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Ph.D., Operations Management, University of Washington, 1996. Manufacturing/operations strategy, health-care management, inventory theory, quality control, revenue management.

Ümit Berkman, Professor
Ph.D., Public Administration, Syracuse University, 1975. Organization and management theory, comparative administrative systems, organization development.

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Ph.D., Strategic Management, Florida State University, 2003. International expansion, product diversification, planning and control, innovation and competitive strategies.

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Ph.D., Operations Management, The University of Texas at Dallas, 2007. Inventory sharing management, coordinated pricing and inventory decisions, supply chain scheduling, new product development.

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Ph.D., Marketing, University of Nebraska, 2002. Public policy and marketing, relationship marketing, advertising.

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Ph.D., Industrial Engineering and Operations Research, Virginia Polytechnic Institute and State University, 1987. Production control and planning, scheduling, design of manufacturing systems.

Güliz Ger, Professor
Ph.D., Marketing, Northwestern University, 1985. Consumer behavior, culture and consumption.

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Ph.D., Texas A&M University, College Station, Texas. Organizational behavior/human resource management.

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Ph.D., Michigan State University, 2005. Marketing research, marketing strategy, marketing management and global marketing.

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Ph.D., Decision Sciences, INSEAD, 2005. Risk management, decision analysis, revenue management.

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Ph.D., Marketing, The University of Sydney, 2007. Marketing with international business.

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Ph.D., Housing Finance, Cornell University, 1995. Corporate finance, real estate finance, market microstructure.

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Ph.D., Decision Sciences, University of Minnesota, 1988. Judgemental forecasting, decision analysis.

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Ph.D., Organizational behavior, University of Kansas, 2005. Process-oriented and relational approaches to organization, spacing and organization, organizational and strategic change.

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Ph.D., Economics, Bilkent University, 1997. Banking Theory, Financial Intermedition.

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M.B.A., University of Virginia's Darden School of Business, 1994.

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Ph.D., Marketing, Pennsylvania State University, 1999. Consumer behavior, marketing management, advertising.

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Ph.D, Human Resource Management, De Montfort University, 2008. Human resources management.

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Ph.D., Management Science, Purdue University, 1998. Production/operations management.

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B.S., Management, Bilkent University, 1996. Accounting, auditing.

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Ph.D., Finance, Boston College, 2006. Corporate Finance, Mergers, Banking Regulation, Mergers, Endogeneity in event studies.

Lale Tomruk, Instructor
Ph.D., Hacettepe University, 2005. International business, business policy.

Frederick Woolley, Senior Lecturer
Ed.D., Management and Organizations, University of Toronto, 1983. Management and organizations.

Cemal Deniz Yenigün, Visiting Assistant Professor
Ph.D., Statistics, Bowling Green State University, 2007. Categorical Data Analysis, Testing independence, survival analysis.

PART-TIME ACADEMIC STAFF

Metin Akman, B.A., Middle East technical University, 1989.
Jacques Couvas, M.B.A., Open University, 2000. L.L.M., University of Leicestez, 2003.
Fulya İnal, Ph.D., Civil Engineering, Organization and Management, University of Zagreb, 2005.
Ekrem Pakdemirli, Ph.D., Imperial College, 1967.
Jonas Prager, Ph.D., Columbia University, 1964.
Emin Veral, M.S., Cornell University, 1956.

DEPARTMENT OF MANAGEMENT

E. Erel (Chair), L. Akdeniz, N. Akman, A. Altay-Salih, K. Aydoğan, Z. Aygün Karakitapoğlu, E. Berk, Ü. Berkman, N. Çapar, N. Çömez, A. Ekici, G. Ger, C. I. Göğüş, D. Kandemir, A. Kocabıyıkoğlu, O. Kravets, Z. Önder, D. Önkal, Ö. Örge, S. Özyıldırım, M. Protano, Ö. Sandıkcı, K. Z. Sayım, D. Serel, B. Sultanoğlu, A. B. Tanyeri, L. Tomruk, F. Woolley, C. D. Yenigün.

Part-time: M. Akman, J. Couvas, F. İnal, E. Pakdemirli, J. Prager, E. Veral.

The aim of the Department of Management is to prepare managers for the global business arena with emphasis on computer-based analytical problem solving techniques for decision making and a strong quantitative approach for managing resources.

UNDERGRADUATE PROGRAM

The undergraduate curriculum exposes the student to basic social sciences through courses in economics, psychology, sociology and history. Courses in mathematics and statistics are included to provide the background necessary for technical skills. Basic courses in the functional areas of business are offered in first, second, and third years. In addition, the curriculum provides elective courses in those functional areas so that students can focus on an area of their choice. Majors will provide students with guidance in selecting MAN electives, and will be declared at the beginning of Term 2 of Year 3. Doing a major will enable the students to get specialized in a one of the below subjects: Entrepreneurship and Family Business, Finance and Quantitative Analysis, Global Business Rules, Marketing and Innovation Management, Value Chain Management, Business and Management.

UNDERGRADUATE CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
ECON 101	Introduction to Economics I	3 / 6
ENG 101	English and Composition I	3 / 6
GE 100	Orientation	1 / 1
MAN 101	Introduction to Business I	3 / 6
MATH 105	Introduction to Calculus I	4 / 7
SOC 101	Introduction to Sociology	3 / 5
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
ECON 102	Introduction to Economics II	3 / 6
ENG 102	English and Composition II	3 / 6
MAN 102	Introduction to Business II	3 / 6
MATH 106	Introduction to Calculus II	4 / 7
PSYC 100	Introduction to Psychology	3 / 6
TURK 102	Turkish II	2 / 1

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
ECON 221	Introduction to Probability and Statistics I	3 / 6
HISTR 201	History of Turkish Republic I	2 / 1
HUM 111	Cultures Civilizations and Ideas I	3 / 4
MAN 213	Principles of Financial Accounting	4 / 6
MATH 227	Introduction to Linear Algebra	3 / 6

Spring Semester		Credits / ECTS Credits
ECON 222	Introduction to Probability and Statistics II	3 / 6
ENG 206	Business Communications	2 / 5
HISTR 202	History of Turkish Republic II	2 / 1

HUM 112	Cultures Civilizations and Ideas II	3 / 4
MAN 256	Introduction to Management Science	3 / 6
MAN 262	Organizational Behavior	3 / 6

ENTREPRENEURSHIP AND FAMILY BUSINESS

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
MAN 300	Business Law	3 / 6
MAN 321	Corporate Finance	3 / 6
MAN 335	Fundamentals of Marketing	3 / 6
MAN 341	Production Management	3 / 6
MAN 361	Organization Theory	3 / 6

Spring Semester		Credits / ECTS Credits
MAN 302	Business Forecasting	3 / 6
MAN 305	Business Dynamics in Family Context	3 / 6
MAN 312	Managerial Accounting	3 / 6
MAN 417	Entrepreneural Marketing	3 / 6
	Major Elective(1)	3 / 6

FOURTH YEAR

Autumn Semester		Credits / ECTS Credits
MAN 403	International Business	3 / 6
MAN 408	Fundamentals of Entrepreneurships Management	3 / 6
MAN 462	Human Resources Management	3 / 6
	Major Elective(1)	3 / 6
	Elective(1)	3 / 6

Spring Semester		Credits / ECTS Credits
MAN 406	Business Strategy	3 / 6
MAN 407	Business Plan Development	3 / 6
MAN 410	Innovation Management	3 / 6
	Major Elective(1)	3 / 6
	Elective(1)	3 / 6

ENTREPRENEURSHIP AND FAMILY BUSINESS ELECTIVES

MAN 303	Business Ethics and Social Responsibility	3 / 6
MAN 306	Market Research	3 / 6
MAN 432	Consumer Behavior	3 / 6
MAN 439	New Product Development	3 / 6
MAN 442	Service Operations Management	3 / 6
MAN 447	Project Management	3 / 6
MAN 451	Decision Analysis	3 / 6
MAN 464	Change Management	3 / 6
MAN 471	Motivation and Leadership	3 / 6

FINANCE AND QUANTITATIVE ANALYSIS

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
MAN 300	Business Law	3 / 6
MAN 321	Corporate Finance	3 / 6
MAN 335	Fundamentals of Marketing	3 / 6
MAN 341	Production Management	3 / 6
MAN 361	Organization Theory	3 / 6

Spring Semester		Credits / ECTS Credits
MAN 302	Business Forecasting	3 / 6
MAN 306	Market Research	3 / 6

MAN 307	Financial Management	3 / 6
MAN 312	Managerial Accounting	3 / 6
	Major Elective(1)	3 / 6

FOURTH YEAR

Autumn Semester		Credits / ECTS Credits
MAN 401	Managerial Economics	3 / 6
MAN 403	International Business	3 / 6
MAN 451	Decision Analysis	3 / 6
	Major Elective(1)	3 / 6
	Elective(1)	3 / 6

Spring Semester		Credits / ECTS Credits
MAN 404	Investment Analysis	3 / 6
MAN 406	Business Strategy	3 / 6
MAN 416	Financial Statement Analysis	3 / 6
	Major Elective(1)	3 / 6
	Elective(1)	3 / 6

FINANCE AND QUANTITATIVE ANALYSIS ELECTIVES

ECON 301	Econometrics I	3 / 6
ECON 302	Econometrics II	3 / 6
ECON 322	Monetary Economics	3 / 6
ECON 426	Applied Economic Analysis	3 / 6
MAN 322	Money and Banking	3 / 6
MAN 414	Auditing	3 / 6
MAN 421	Capital Markets and Institutions	3 / 6
MAN 422	International Finance	3 / 6
MAN 424	Risk Management	3 / 6
MAN 429	Financial Regulations	3 / 6
MAN 444	Special Topics in Finance	3 / 6
MAN 477	Financial Intermediation	3 / 6
MAN 485	Real Estate Finance	3 / 6

GLOBAL BUSINESS MANAGEMENT

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
MAN 300	Business Law	3 / 6
MAN 321	Corporate Finance	3 / 6
MAN 335	Fundamentals of Marketing	3 / 6
MAN 341	Production Management	3 / 6
MAN 361	Organization Theory	3 / 6

Spring Semester		Credits / ECTS Credits
MAN 306	Market Research	3 / 6
MAN 312	Managerial Accounting	3 / 6
MAN 407	Business Plan Development	3 / 6
	Major Elective(1)	3 / 6
	Elective(1)	3 / 6

FOURTH YEAR

Autumn Semester		Credits / ECTS Credits
MAN 403	International Business	3 / 6
MAN 433	Global Marketing and Emerging Markets	3 / 6
MAN 439	New Product Development	3 / 6

MAN 474	European Union and Turkey: Trade and Policies	3 / 6
	Major Elective(1)	3 / 6

Spring Semester Credits / ECTS Credits

MAN 406	Business Strategy	3 / 6
MAN 422	International Finance	3 / 6
MAN 467	Cross-Cultural Management	3 / 6
	Major Elective(1)	3 / 6
	Elective(1)	3 / 6

GLOBAL BUSINESS MANAGEMENT ELECTIVES

ECON 331	International Economics I	3 / 6
ECON 332	International Economics II	3 / 6
LAW 303	Public International Law	3 / 5
LAW 304	Private International Law	3 / 4
LAW 406	International Business law	3 / 4
MAN 302	Business Forecasting	3 / 6
MAN 417	Entrepreneural Marketing	3 / 6
MAN 421	Capital Markets and Institutions	3 / 6
MAN 424	Risk Management	3 / 6
MAN 430	Anthropological Marketing	3 / 6
MAN 432	Consumer Behavior	3 / 6
MAN 434	Integrated Marketing Communications	3 / 6
MAN 436	Services Marketing	3 / 6
MAN 446	Supply Chain Management	3 / 6
MAN 451	Decision Analysis	3 / 6
POLS 325	Transnational Cultures	3 / 6
POLS 450	Globalization and Political Space	3 / 6

MARKETING AND INNOVATION MANAGEMENT

THIRD YEAR

Autumn Semester Credits / ECTS Credits

MAN 300	Business Law	3 / 6
MAN 321	Corporate Finance	3 / 6
MAN 335	Fundamentals of Marketing	3 / 6
MAN 341	Production Management	3 / 6
MAN 361	Organization Theory	3 / 6

Spring Semester Credits / ECTS Credits

MAN 302	Business Forecasting	3 / 6
MAN 306	Market Research	3 / 6
MAN 312	Managerial Accounting	3 / 6
MAN 410	Innovation Management	3 / 6
	Major Elective(1)	3 / 6

FOURTH YEAR

Autumn Semester Credits / ECTS Credits

MAN 403	International Business	3 / 6
MAN 432	Consumer Behavior	3 / 6
MAN 439	New Product Development	3 / 6
	Major Elective(1)	3 / 6
	Elective(1)	3 / 6

Spring Semester Credits / ECTS Credits

MAN 406	Business Strategy	3 / 6
MAN 407	Business Plan Development	3 / 6
	Major Elective(2)	6 / 12
	Elective(1)	3 / 6

MARKETING AND INNOVATION MANAGEMENT ELECTIVES

MAN 307	Financial Management	3 / 6
MAN 401	Managerial Economics	3 / 6
MAN 417	Entrepreneural Marketing	3 / 6
MAN 430	Anthropological Marketing	3 / 6
MAN 433	Global Marketing and Emerging Markets	3 / 6
MAN 434	Integrated Marketing Communications	3 / 6
MAN 436	Services Marketing	3 / 6
MAN 440	Revenue Management	3 / 6
MAN 447	Project Management	3 / 6
MAN 451	Decision Analysis	3 / 6
MAN 479	Sales Management	3 / 6

VALUE CHAIN MANAGEMENT

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
MAN 300	Business Law	3 / 6
MAN 321	Corporate Finance	3 / 6
MAN 335	Fundamentals of Marketing	3 / 6
MAN 341	Production Management	3 / 6
MAN 361	Organization Theory	3 / 6

Spring Semester		Credits / ECTS Credits
MAN 302	Business Forecasting	3 / 6
MAN 306	Market Research	3 / 6
MAN 307	Financial Management	3 / 6
MAN 312	Managerial Accounting	3 / 6
	Major Elective(1)	3 / 6

FOURTH YEAR

Autumn Semester		Credits / ECTS Credits
MAN 403	International Business	3 / 6
MAN 451	Decision Analysis	3 / 6
	Major Elective(2)	6 / 12
	Elective(1)	3 / 6

Spring Semester		Credits / ECTS Credits
MAN 342	Operations Management II	3 / 6
MAN 406	Business Strategy	3 / 6
MAN 446	Supply Chain Management	3 / 6
	Major Elective(1)	3 / 6
	Elective(1)	3 / 6

VALUE CHAIN MANAGEMENT ELECTIVES

MAN 352	Management Information Systems	3 / 6
MAN 404	Investment Analysis	3 / 6
MAN 407	Business Plan Development	3 / 6
MAN 424	Risk Management	3 / 6
MAN 439	New Product Development	3 / 6
MAN 440	Revenue Management	3 / 6
MAN 442	Service Operations Management	3 / 6
MAN 443	Operations Strategy	3 / 6
MAN 445	Total Quality Management	3 / 6
MAN 447	Project Management	3 / 6
MAN 490	Business Case Analysis	3 / 6

BUSINESS AND MANAGEMENT

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
MAN 300	Business Law	3 / 6
MAN 321	Corporate Finance	3 / 6
MAN 335	Fundamentals of Marketing	3 / 6
MAN 341	Production Management	3 / 6
MAN 361	Organization Theory	3 / 6

Spring Semester		Credits / ECTS Credits
MAN 302	Business Forecasting	3 / 6
MAN 306	Market Research	3 / 6
MAN 312	Managerial Accounting	3 / 6
MAN 342	Operations Management II	3 / 6
	Elective(1)	3 / 6

FOURTH YEAR

Autumn Semester		Credits / ECTS Credits
MAN 401	Managerial Economics	3 / 6
MAN 403	International Business	3 / 6
MAN 451	Decision Analysis	3 / 6
	Electives(2)	6 / 12

Spring Semester		Credits / ECTS Credits
MAN 406	Business Strategy	3 / 6
MAN 407	Business Plan Development	3 / 6
	Electives(3)	9 / 18

GRADUATE PROGRAM

Master of Business Administration (M.B.A.) Program

The MBA program aims to foster the education of proficient managers and executives who can effectively recognize and “manage” the challenges presented by a continuously changing business environment. The goal is to provide a strong foundation of administrative and conceptual skills to prospective managers who may assume responsibilities of planning, organizing, directing and controlling the operations of public and private organizations. The MBA degree can be viewed as extending and enhancing a wide variety of undergraduate experiences, including but not limited to the programs in engineering, economics and social sciences as well as in business. The program’s emphasis is on analytical methods and problem solving rather than a mere description of existing practices. Participative learning is emphasized through case analyses, term projects, simulation, and classroom discussions. Computer applications, quantitative analysis and behavioral sciences are integrated into the program to provide for quantitative and qualitative aspects of management. The graduates are equipped with the knowledge, skills and analytical thinking necessary to enhance the effectiveness and efficiency of the enterprises they will join.

Admission: Applicants to the program should have a Bachelor’s degree (B.S. or B.A.) and should be proficient in English. Applicants are evaluated on the basis of their GMAT scores, academic records, ALES (Akademik Personel ve Lisansüstü Eğitimi Giriş Sınavı - Academic Personnel and Postgraduate Education Entrance Examination) scores (required from all Turkish students with a GMAT less than 550), letters of recommendation, career goals and an interview.

Degree Requirements: Students admitted to the program will be required to complete a minimum of 60 credit hours of course with a minimum cumulative grade point average of 3.00/4.00.

CURRICULUM of the M.B.A. PROGRAM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
MBA 500	Bilcamp	1 / 1
MBA 503	Microeconomics	3 / 6
MBA 511	Accounting	3 / 6
MBA 551	Probability and Statistics	3 / 6
MBA 553	Data Models and Decisions	3 / 6
MBA 561	Management	3 / 6

Spring Semester		Credits / ECTS Credits
MBA 502	Turkish Business Context	3 / 6
MBA 522	Corporate Finance	3 / 6
MBA 532	Marketing Management	3 / 6
MBA 542	Production and Operations Management	3 / 6
MBA 552	Management Information Systems	2 / 4
MBA 562	Human Resource Management	2 / 4

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
MBA 591	Business Strategy	4 / 8
	Electives	10 / 20

Spring Semester		Credits / ECTS Credits
MBA 592	Business Practice	4 / 8
	Electives	10 / 20

ELECTIVES

MBA 512	Managerial Accounting	2 / 4
MBA 513	Financial Statement Analysis	2 / 4
MBA 517	Fixed Income Securities I	2 / 4
MBA 518	Fixed Income Securities II	2 / 4
MBA 519	Financial Institution and Markets	3 / 6
MBA 520	Risk Management I	2 / 4
MBA 521	Risk Management II	2 / 4
MBA 524	Investment Analysis	2 / 4
MBA 526	International Finance	3 / 6
MBA 527	Financial Intermediation	2 / 4
MBA 529	Real Estate Finance	2 / 4
MBA 530	Marketing Research I	2 / 4
MBA 531	Marketing Research II	2 / 4
MBA 533	Marketing Strategy	2 / 4
MBA 535	Consumer Behavior I	2 / 4
MBA 536	Consumer Behavior II	2 / 4
MBA 537	Brand Planning for New and Existing Products	2 / 4
MBA 538	Marketing Communications	2 / 4
MBA 540	Manufacturing Strategy	2 / 4
MBA 541	Procurement and Inventory Systems	2 / 4
MBA 543	Pricing Strategies and Tactics	2 / 4
MBA 544	Revenue Management	2 / 4
MBA 545	Service Operations Management	2 / 4
MBA 546	Supply Chain Management	2 / 4
MBA 548	Project Management	3 / 6
MBA 550	Service Operations Management II	2 / 4
MBA 563	Group Processes and Team Dynamics	3 / 6
MBA 565	Business Ethics	2 / 4
MBA 566	Change Management	3 / 6
MBA 568	Enterpreneurship and Innovation Management	3 / 6

MBA 569	Enterpreneurship and Innovation Management II	2 / 4
MBA 570	International Business I	2 / 4
MBA 573	International Business II	2 / 4
MBA 574	EU Integration	2 / 4
MBA 575	SME's and Cross Border Ventures	2 / 4
MBA 576	Business Plan Development	2 / 4
MBA 580	Sales Management	2 / 4
MBA 582	New Product Design and Marketing	2 / 4
MBA 603	Advanced Investments	3 / 6
MBA 631	Competitive Marketing Strategy	2 / 4
MBA 632	E Commerce and Internet Marketing	2 / 4
MBA 662	International Human Resource Management	2 / 4
MBA 671	Growth Through Globalization: Creating and Managing the International Enterprize	2 / 4
MBA 672	Leadership for International Managers	2 / 4
MBA 673	International Business Strategy	2 / 4
MBA 674	Global Supply Chain Strategy	2 / 4
MBA 675	Enterprise Resource Planning (ERP) Systems: Strategy and Practice	2 / 4
MBA 676	Globalization Branding and Emerging Markets	2 / 4
MBA 677	Negotiating Skills for International Executives	2 / 4

MASTER OF SCIENCE and Ph.D. PROGRAMS

The Faculty of Business Administration at Bilkent University offers the Masters of Science and the Doctor of Philosophy degrees for those interested in advanced study of the theory and practice of management in three areas **Finance**, **Marketing**, and **DROM** (Decision, Risk and Operations Management.)

The mission of the Bilkent MS/PhD Program in Business Administration is to prepare individuals for research and teaching careers. A high faculty-to-student ratio and active involvement in research throughout the program foster close interaction between students and faculty and accelerate the transition from students to academic. Programs of study designed for the particular needs and research interests of each individual enable the students to master the behavioral, social, economic and mathematical sciences through courses from various departments in Bilkent University. An active exchange program with universities abroad provides additional opportunities for coursework and collaborative research. Visiting scholars and graduate students from abroad add to the diversity of our community.

The research conducted by our faculty covers a broad range of areas of expertise and we welcome graduate students with degrees in a wide range of fields (anthropology, business administration, computing science, economics, engineering, ethnography, mathematics, physics, psychology, statistics etc.).

The MS in Business Administration degree is designed to prepare students for doctoral study. The PhD in Business Administration degree is designed to prepare students for a career in research and teaching. Qualified applicants without a graduate degree are encouraged to apply for the MS degree.

Master of Science

Admission: Applicants must have a bachelor's degree in business administration, economics, engineering or a related field. They must be fluent in written and oral English, and possess strong quantitative and qualitative skills. All applicants are required to submit GMAT or GRE scores and provide recommendation letters. ALES scores are needed as well for Turkish applicants. Proficiency in written and oral English must also be documented. (Also refer to the "Graduate Admissions" section in the introduction of this catalog for the general graduate admission requirements and www.man.bilkent.edu.tr for the particular requirements of the Master of Science programs in business administration.)

Requirements: Students have to complete a minimum of 27 credit hours of course work, as tentatively indicated below, write and defend a master's thesis and maintain a cumulative GPA of at least 3.00/4.00. The maximum duration of M.S. study is four semesters.

Prior to starting the program in the Autumn semester of the first year, students may take a deficiency program during the summer. The courses they take during the summer depend on their background.

Doctor of Philosophy

Admission: Applicants must be fluent in written and oral English, and possess strong quantitative and qualitative skills. Candidates should submit GMAT or GRE scores and provide recommendation letters. ALES scores are needed as well for Turkish applicants. Proficiency in written and oral English must also be documented. (Also refer to the "Graduate Admissions" section in the introduction of this catalog for the general graduate admission requirements and www.man.bilkent.edu.tr for the particular requirements of the Ph.D. program in business administration.)

Requirements: The Ph.D. program consists of a course work of at least 24 credit hours, as tentatively indicated below, a major field examination, preparation and defense of a dissertation based on original research. The student should maintain a cumulative GPA of 3.00/4.00 throughout the period of study. Course work is tailored according to the field chosen and the specific research needs of the student. No matter what the chosen field of study is, every Ph.D. student should complete a graduate course in each functional area; namely, finance, marketing, accounting, production/operations management, and organization theory/behavior. An M.B.A. degree usually satisfies this requirement.

M.S. and Ph.D. degrees are offered in the following three tracks: Finance, Marketing, and Decision, Risk and Operations Management.

M.S. Program in Decision, Risk and Operations Management

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
ECON 501	Economics I	3 / 6
IE 523	Probabilistic Analysis	3 / 7.5
MAN 557	Decision Science	3 / 8

Spring Semester		Credits / ECTS Credits
ECON 510	Probability and Statistics II	4 / 6
ECON 516	Mathematics for Economists II	3 / 6
IE 521	Stochastic Processes	3 / 7.5
MAN 542	Production and Operations Management	3 / 8

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
IE 513	Linear Programming	3 / 7.5
MAN 599	Master's Thesis Project	- / 22
MAN 607	Philosophy and Epistemology of Scientific Inquiry	3 / 8

Spring Semester		Credits / ECTS Credits
MAN 599	Master's Thesis Project	- / 22
MAN 605	Qualitative Research	3 / 8

M.S. Program in Finance(Those with BS degree)

FIRST YEAR

Summer Semester		Credits / ECTS Credits
ECON 500	Mathematics Review Course	3 / 6

Autumn Semester		Credits / ECTS Credits
ECON 509	Probability and Statistics I	4 / 6
IE 500	Mathematics of Operations Research	3 / 7.5
MBA 503	Microeconomics	3 / 6
MBA 522	Corporate Finance	3 / 6
Spring Semester		Credits / ECTS Credits
ECON 510	Probability and Statistics II	4 / 6
MAN 525	Financial Economics	3 / 7.5
	MAN Finance Electives(2)	6 / 12

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
MAN 599	Master's Thesis Project	- / 22
	MAN Finance Elective(1)	3 / 6
Spring Semester		Credits / ECTS Credits
MAN 599	Master's Thesis Project	- / 22

M.S. Program in Marketing

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
MAN 555	Probability and Statistics	3 / 7.5
MAN 604	Quantitative Business Research	3 / 7.5
	MAN Marketing Elective(1)	3 / 6
Spring Semester		Credits / ECTS Credits
MAN 605	Qualitative Research	3 / 8
MAN 634	Advanced Consumer Behavior Theory I	3 / 7.5
MAN 635	Consumer Culture Theory	3 / 7.5
Summer Semester		Credits / ECTS Credits
MAN 631	Marketing Theory	3 / 6
	MBA Elective(1)	3 / 6

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
MAN 599	Master's Thesis Project	- / 22
Spring Semester		Credits / ECTS Credits
MAN 599	Master's Thesis Project	- / 22
MAN 633	Seminar in Marketing Strategy	3 / 6

COURSE DESCRIPTIONS

UNDERGRADUATE COURSES

MAN 101 Introduction to Business I
This course introduces students to business education. Students will learn about the functional areas of business and how they fit together. The emphasis will be divided between computer skills (primarily Excel) and soft skills (e.g. teamwork). The course will consist of two parts: in-class and computer labs. the in-class part will feature case discussions and guest speakers who will share their experiences with students. Much of the learning will occur in the labs where students will work on cases and assignments. The course features a group project where students will prepare and present a business plan (Part 1). Topics to be covered include exploratory data analysis, group skills, time management, research, ethics, web page design, cost analysis (sunk, fixed, and variable costs), discounting of cash flows, and technological forecasting. The course will use technology extensively (e.g. real-time modeling, extensive course web, computer assignments, and on-line exams). *Credit units: 3 ECTS Credit Units: 6. Aut (N. Çapar, K. Z. Sayım, L. Tomruk)*

MAN 102 Introduction to Business II
This course introduces students to business education. Students will learn about the functional areas of business and how they fit together. The emphasis will be divided between computer skills (primarily VBA) and soft skills

(e.g. presentation). The course will consist of two parts: in-class and computer labs. The in-class part will feature case discussions and guest speakers who will share their experiences with students. Much of the learning will occur in the labs where students will work on cases and assignments. The course features a group project where students will prepare and present a business plan (Part 2). Topics to be covered include presentation skills and visual displays, stock market, relational databases, distribution planning, production planning, decision analysis, and leadership skills. The course will use technology extensively (e.g. real-time modeling, extensive course web, computer assignments, and on-line exams). *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 101.*

MAN 213 Principles of Financial Accounting

An introductory accounting course, that covers the accounting environment, basic mechanics of record keeping and reporting of financial statement information. Specifically, the topics covered include the generally accepted accounting principles, the accounting cycle, preparation and reporting of financial statements (balance sheet, income statement, cash flow statement, and statement of shareholders' equity) together with the discussion of individual accounts that are included in those financial statements (i.e. current assets; long-term assets and accounting for depreciation; liabilities and shareholders' equity). *Credit units: 4 ECTS Credit Units: 6. Aut (N. Akman, B. Sultanoğlu)*

MAN 216 Elements of Finance

An introductory course on the building blocks of financial decision making. Topics include financial system, its functions, institutions and instruments, risk and return, time value of money, valuation of securities, and elements of international finance. *Credit units: 3 ECTS Credit Units: 6.*

MAN 256 Introduction to Management Science

A general overview of operations research with selected applications from management systems and interdisciplinary areas. The methodology of mathematical modeling and its relation to problems in industrial, commercial and public systems. Introduction to linear programming: the simplex method, duality, sensitivity analysis and related topics. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MATH 227. Aut (D. Serel)*

MAN 262 Organizational Behavior

Individual behavior, interpersonal relationships and intergroup relations in organizational settings; conceptual tools for analyzing and understanding behavior; improvement of individual, group and organizational performance and the manager's role. *Credit units: 3 ECTS Credit Units: 6.*

MAN 300 Business Law

An introduction to the legal environment of business including contracts, negotiable instruments, organization, real and personal property. Emphasis is on fundamental legal principles, terminology and analysis of the legal process. Legal problems pertaining to contracts and related topics, business association and the impact of law on economic enterprise are reviewed. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ENG 206 or MAN 102. Aut (Ç. Manavgat)*

MAN 302 Business Forecasting

This course aims to provide the concepts and principles of a variety of forecasting models. Main emphasis is on the establishment of a process for effective forecasting. Within this framework, various smoothing techniques, regression analysis, ARIMA models, and judgmental forecasting issues are discussed in detail. *Credit units: 3 ECTS Credit Units: 6.*

MAN 303 Business Ethics and Social Responsibility

The course examines issues in business ethics within the context of society, government and business where different stakeholders pursue their interests. In this dynamic environment managers and firms have to consider the social responsibility of business and have to face ethical issues, complexities and dilemmas in making the "right" (sometimes the "more right") decisions and implementing them. Furthermore, the course aims to increase the ethical awareness of students and to provide them with knowledge, skills and tools to manage ethical problems within the organization and with the stakeholders in the environment. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 101 or MAN 102 or MAN 262. Aut (Ü. Berkman)*

MAN 305 Business Dynamics in Family Context

Family businesses are the most prevalent form of organization in the world today, comprising more than 90 % of all businesses. Given the dominance of the family business model in today's global economy it is important that for all to understand the unique culture, values and perspective that family ownership brings to business relationships, partnerships and strategic alliances. This course examines the key business, personal, and interpersonal issues relevant to the management and continuity of these firms. Among the topics covered are nature, importance and uniqueness of family businesses, trust and ownership issues, succession and continuity of family businesses, strategy and professionalism of and recent trends and issues in the world as they relate to family businesses. This course is aimed at students who will enter into the management of family businesses, either their own family's or someone else's, and/or students who will do business with family firms, consult to them, and work with them in banking, outsourcing, etc. *Credit units: 3 ECTS Credit Units: 6.*

MAN 306 Market Research
Regardless of the type of the organization, managers in all functions and at all levels need systematic and dependable information about their operations. More specifically, managers need information about their employees, customers, suppliers, competitors, and macro variables of their environment. In an ever changing and volatile business environment, the task of market research is to provide managers with accurate, reliable, relevant, valid and timely information. In this course, the students will be expose to various research methods that are currently being used in the industry in order to find solutions for problems that various organizations are facing. By the completion of this course, the students should be able to understand the organizational value and context of information gathering, know when to collect primary and secondary data, determine the appropriate data analysis technique, and persuasively communicate/report research results. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 222 and MAN 262. Aut (D. Kandemir)*

MAN 307 Financial Management
An intermediate level course on the theory and practice of corporate finance. After taking this course the students will posses an understanding of the fundamental concepts of the modern theory of finance. More specifically they will understand the challenges related to the investment, financing and reorganization decisions faced by the corporate financial managers. The topics include, capital budgeting, capital structure, dividend policy, the process of going public, mergers and acquisitions. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 321.*

MAN 312 Managerial Accounting
The aim of the course is to introduce the students to the main issues in management accounting. Special emphasis will be put on decision making at different levels of management, and on data and reports to facilitate the decision making process. Topics covered include: cost volume profit analysis, cost behavior, costing systems, budgeting, unit cost calculations, pricing, variance analysis, responsibility accounting and performance evaluation. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 213.*

MAN 321 Corporate Finance
An introductory course in business finance with emphasis on investment and financing decisions of the firm. Topics include ratio analysis, profit planning, capital budgeting, capital structure, cost of capital, dividend policy, working capital management and international finance. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 102 and MAN 213. Aut (Z. Önder, A. B. Tanyeri)*

MAN 322 Money and Banking
Explanation of the nature and functions of money and credit. An analysis of the structure and operations of the commercial and central banking systems. Formation, execution and effectiveness of monetary policy. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 102 and ECON 222.*

MAN 332 Marketing Strategy
Investigation of marketing strategy formulation and decision making. Cases are used to assess the marketing strategies and practices of private or public organizations and to apply the concepts being examined. The focus is on analyses of market forces and opportunities, and determination and integration of marketing objectives, strategies and plans. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 335.*

MAN 333 Marketing Principles
An analytical study of marketing as a major business function, a consumer orientation throughout the organization, as well as integrated communications. Topics include an overview of the marketing system, the marketing concept, market research, market analysis, marketing strategies (segmentation, targeting, positioning), and marketing programs. An examination of how effective marketing strategy and program decisions is based on an analysis of buyer behavior, market structure and competition. The emphasis is on marketing programs as integrated marketing communications. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

MAN 335 Fundamentals of Marketing
The course introduces the students to the fundamental concepts, tools and activities that comprise the marketing function. It overviews the development of marketing thought as well as contemporary issues in marketing. Topics include the marketing concept and orientation, segmentation and positioning, buyer behavior analysis, and marketing mix-product, price, promotion, distribution-decisions. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 101 and ECON 102 and (MAN 102 or ENG 206). Aut (A. Ekici)*

MAN 336 Marketing Management
Building on the fundamentals of marketing, the course addresses effective management of the challenges facing marketing managers in contemporary world. By focusing on topics such as product development, quality management, symbolic communication, and consumer analysis, the objective of the course is to develop students' analytical and creative skills for designing and implementing the best combination of marketing actions. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 335.*

MAN 341 Production Management
Examination of the nature and content of methods of quantitative analysis employed in production management decision making; design of production systems; plant location and layout; scheduling of operations; inventory systems; quality control techniques. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 256. Aut (E. Berk, N. Çömez)*

MAN 342 Operations Management II
This course focuses on tactical and operational level production management decisions. Tentative topic list includes: aggregate production planning, planning for mass production, planning and control of batch production, deterministic and stochastic inventory models, Materials Requirements Planning, Supply Chain Management, scheduling and sequencing, maintenance and manpower planning, project management, and waiting lines/queueing. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 341.*

MAN 352 Management Information Systems
Information requirements of business organizations; principles, concepts, design for managerial purposes; use and implications of computer technology for management decisions and processes. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 101.*

MAN 361 Organization Theory
Introduction to organization theory; the concept of organization, types of organizations, the functions and role of the manager within business organizations. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 262. Aut (C. I. Göğüş)*

MAN 401 Managerial Economics
Applications of the basic concepts of micro-economic theory in the solution of business problems. The study of demand, production, cost and pricing are emphasized. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: senior standing. Aut (S. Özyıldırım)*

MAN 403 International Business
International Business differs in important ways from business conducted within national borders. It presents additional critical challenges for managers interested in trade or investments in foreign countries, but it also offers new opportunities in foreign markets. This course emphasizes the use of analytical tools and develops a framework for analyzing the decisions that must be made by organizations interested in doing business internationally. In turn, this framework provides the basis for formulating strategies, structures, and processes that will enable such organizations to succeed in the international business environment. Concepts and knowledge from strategy, international finance, international trade and investment, cross-cultural issues, international politics and law, marketing, human resource management, and other related areas will be combined and focused on how to succeed international business. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: senior standing. Aut (F. Woolley)*

MAN 404 Investment Analysis
Conceptual and analytical frameworks for formulating investment policies and security analysis. Development of portfolio theory and construction of portfolio strategies for individuals and institutions. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 321.*

MAN 405 Independent Study
Independent research or study under the guidance of a faculty member. *Credit units: 3 ECTS Credit Units: 6.*

MAN 406 Business Strategy
This course focuses on firms' strategies in today's highly competitive environment. In a complex world of rapid technological changes, constantly changing markets, increasing demand for social responsibility and ethics, companies are forced to adopt and implement new business strategies. Strategic management is viewed as a basic skill for all managers rather than the speciality of a particular function or organizational level. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 321 and MAN 341 and MAN 335. Aut (N. Çapar)*

MAN 407 Business Plan Development
This course focuses on business plans as a necessary element of starting a business and also prepares the students to participate in business planning in large institutions. The course will go through the process of preparing successful business plans including determining the contents of a plan and reviewing an actual plan. The course will be designed to help the students to incorporate the contents of the core management courses. Upon the completion of the course the students are expected to analyze and prepare the components of a business plan. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 321 and MAN 335.*

MAN 408 Fundamentals of Entrepreneurships Management
As a field of activity that involves creation of new business entities, entrepreneurship plays a key role in providing dynamism and growth to local, regional and national economies. Serving as an introduction to entrepreneurship, this course provides a comprehensive survey of the nature and dynamics of a wide spectrum of entrepreneurial activities at the individual and firm levels. Among these activities are marketplace opportunity recognition,

business vision creation, resource acquisition and configuration, and start-up foundation and management for sustainable value creation and delivery. By taking this course, students will both gain knowledge of contemporary theoretical advances made in entrepreneurship research and use this scholarly body of work to approach and analyze actual entrepreneurial practice. As a result, students will be able to recognize and conceptualize entrepreneurship as distinct economic activity; identify and evaluate various phases and activities in entrepreneurial process; and, be able to envision and prepare a plan of action for launching entrepreneurial initiatives. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 321 and MAN 335. Aut (Ö. Örge)*

MAN 410 Innovation Management

Despite the increasing importance of innovation to competitive advantage of organizations in todays' world, few companies master the ability to identify, create and exploit opportunities for innovation on a systematic basis. In this course, all aspects of managing innovation; from recognizing the need and desire to be creative and innovative, using imagination to add value, developing structures, systems and incentives that encourage and implement innovation, will be discussed. The course will center on three themes: ideation/creativity generation techniques, innovation (models, dimensions, degrees and sources of innovation) and strategic management of innovation. In line with these topics, real company cases will be presented and discussed so that students will better understand the significance of leadership and corporate entrepreneurship in managing innovation. *Credit units: 3 ECTS Credit Units: 6.*

MAN 414 Auditing

The primary objective of the course is to distinguish between accounting and auditing through familiarizing the students with the basic auditing concepts. Topics such as types of audits and auditors, audit reports for financial statements, professional ethics, evidence accumulation and verification procedures, internal control and auditing engagements are discussed. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 213. Aut (Staff)*

MAN 415 Intermediate Accounting

This course is the first professional level course for undergraduate students who want to prepare for a career in accounting or financial management. It covers concepts, requirements, and standards of external financial reporting, and methods of presentation. The focus is on international concepts of external financial accountability and not the specific standards of any specific country. Students must have had a previous course in financial reporting with a grade of at least a C, or equivalent. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 213 .*

MAN 416 Financial Statement Analysis

This course aims to develop an ability to analyze financial information as an aid to financial decision making. The emphasis will be on the usefulness of information for various groups, such as investor's of the firm, security analysts and creditors. Basic financial statement analysis tools, such as ratio analysis, cross-sectional and time-series analysis, statistical forecasting models will be covered. Part of this course will be devoted to the research and empirical evidence on the impact of financial statement information on asset pricing, efficiency of the capital markets, debt ratings and corporate restructuring. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 222 and MAN 321.*

MAN 417 Entrepreneural Marketing

Entrepreneurial Marketing (EM) integrates critical aspects of marketing and entrepreneurship into an effective approach to marketing for small resource-constrained businesses and entrepreneurial ventures operating in emergent markets. The course focuses on marketing strategies that would enable resource leveraging (doing more with less), proactive orientation and customer value creation. In turn, this focus requires a non-formulaic way of thinking and acting, thus EM differs from conventional marketing as it returns to the disciplines roots as a creative pursuit. The imagination, vision, cleverness, and originality associated with entrepreneurial behavior lie at the core of this approach to marketing and these attributes are applied to the full range of marketing activities, from segmentation to the management of the marketing mix. The course brings together theoretical perspectives and practical sensibilities with the goal of developing your skills in conception, development, and execution of a marketing strategy under conditions of severe resource limitations. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 335 and MAN 431.*

MAN 420 EU Integration

Future managers and business administrators need to be 'amateur experts' in both EU law making and economic harmonization issues. While understanding today's economic realities in the European Union, it is at the same time necessary for Turkish graduates to know how European laws are made as well as studying regulatory affairs, both at home and abroad, as they affect Turkish family SME up to multi-national corporations. Topics include: The EU Institutions and their functionality in the EU law making process - EU case law - Public procurement and access to public contracts - The 35 acquis communautaire chapters - Economic policies in New Member States ? Franco German vs. Anglo Saxon models - Cleavages and issues in Turkey and the EU. Guest Speakers: ABGS Ankara and IEIS Istanbul. *Credit units: 3 ECTS Credit Units: 6.*

MAN 421 Capital Markets and Institutions
This course gives an introduction to the analysis of the participants, relationships, instruments and institutions of money and capital markets. Topics covered also include problems and trends in global and domestic financial markets. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 102 and MAN 321.*

MAN 422 International Finance
Financial management of foreign operations of the firm. Financial constraints imposed by the international environment and their effect on the financial function of the firm. Also included are the functioning of foreign exchange markets, international money and capital markets. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: consent of instructor.*

MAN 423 Financial Modeling
The purpose of this course is to enable students to use computers and selected software when solving business financial problems. Spreadsheet and simulation programs are the primary tools of the course. Students will work on exercises that cover various aspects of corporate finance and investments. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 221 and MAN 321.*

MAN 424 Risk Management
This course aims to introduce the risk management and the derivatives markets. The concept of risk management and the question of why risk management is vital for modem financial institutions will be explored. The topics will include forwards, futures, swaps, options, hedging and portfolio insurance, value at risk. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

MAN 429 Financial Regulations
Every modern financial system operates according to legislated rules that are interpreted by regulatory bodies. These impediments to financial system freedom are based upon a conceptual understanding of regulation's function as well as the practical lessons of many countries over many decades. This course in financial regulation is designed to explore the general issues that exist in modern financial systems, especially banking, and to demonstrate how they fashion the regulatory landscape in a variety of countries. The U.S. and Turkish banking systems will receive the bulk of the course's attention, although examples will also be taken from the EU and the developing world. In addition to general issues, among the specific topics covered are entry and exit regulations, competition and failure, deposit insurance, bank capital, and non-banking activities. *Credit units: 3 ECTS Credit Units: 6.*

MAN 430 Anthropological Marketing
Students learn how to do qualitative research in order to understand markets and consumers. Quoting from a textbook (Mariampolski), "ethnography, with its focus on observed everyday behavior, is quickly becoming the method of choice to identify unmet needs, stimulate novel insights, and create strategies for developing new ideas." The students do research, employing ethical and effective field practices, as well as use the research for marketing and business decisions. The research assignments will also enhance writing and presentation skills. *Credit units: 3 ECTS Credit Units: 6.*

MAN 431 Marketing Research
Development of market research objectives and processes. Introduction to market research approaches including qualitative survey and experimentation, and design of the research methodology. Also a short overview of methods of measuring consumer reactions to product characteristics, effectiveness of advertising, and other promotional devices. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 335 or consent of instructor.*

MAN 432 Consumer Behavior
A study of the nature and determinants of consumer behavior. Examines how individuals process information and make decisions; the influence of psychosocial factors such as personality, small groups, demographic variables, social class and culture on the formation of consumers' attitudes and purchasing behavior. To enhance understanding and prediction of market place behavior and demand analysis, emphasizes applications to the development of marketing policy planning and strategy. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 335 or consent of instructor. Aut (O. Kravets)*

MAN 433 Global Marketing and Emerging Markets
Application of marketing concepts and methods to the international marketplace. Problems and decisions involved in marketing across national boundaries are discussed. While focusing on the export marketing, some of the other topics covered include the international environment, export market selection, export market entry strategies, export marketing mix decisions, financing and methods of payment, and the export order and physical distribution. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 335. Aut (Ö. Sandıkcı)*

MAN 434 Integrated Marketing Communications
This course introduces students to various tools such as advertising, sales promotions, and sponsorships, that marketers use while communicating with their customers. The emphasis rests on strategic planning and development of marketing communications campaigns, their integration and evaluation. The course combines theory and practice and aims to develop analytical skills necessary for effectively assessing and managing

communication needs of companies operating in today's competitive business environment. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 335.*

MAN 436 Services Marketing

The aim of this course is to provide strategic insights to the marketing managers of service firms. To realize the previously given objective, the course focuses on the unique characteristics of service products that differentiate them from manufactured goods and classifies services according to many different variables such as the nature of the service act, method of service delivery. Then, alternative strategies that can be executed to achieve organizational objectives by the marketing managers of different types of service firms are discussed in detail. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 335.*

MAN 437 Retail Management

Learning retailing terminology and discussing today's changing retailing concepts in light of retailing studies and knowledge are the main goals of this course. The retailer is one of the most important distribution channel member and the only member with the ability to change the effects of the manufacturer's push and pull strategies, and thus the total channel members' interactions is the main focus in the first part of the course. Retail stores are also places where consumers first face the manufacturers' products. Therefore, retail store management and the factors that influence in-store activities constitute the second part of the course. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 335.*

MAN 438 E-Commerce

The primary objective of this course is to prepare students to be strategic decision makers in organizations that are being impacted by the emerging digital technologies. The emphasis is to understand key E-Commerce tolls and develop skills using Internet applications. Topics include e-commerce infrastructure, starting an online business, strategizing, understanding traffic to web sites and building brands. Thus, a major aspect of this course will be study of the Internet, its implications and its uses with concentration on understanding the managerial implications of E-Commerce. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 335.*

MAN 439 New Product Development

In this course, focus is on the tools and techniques associated with analyzing market opportunities and then designing, testing, and introducing new products and services. Both quantitative and qualitative approaches are covered. In particular, the course covers the new product development process, market entry strategies, how to generate new product ideas, mapping customer perceptions, segmentation, product positioning, forecasting market demand, and product design. The course emphasizes how to incorporate consumers, customers and competitors into all of these aspects of the company's new product development. It is intended for students who are interested in working on new product innovations, both in entrepreneurial firms and in established companies. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 335. Aut (M. Protano)*

MAN 440 Revenue Management

Revenue management is concerned with two types of demand decision: quality (how to allocate capacity to different market segments, when to withhold a product from sale etc.) and price (how to set prices, how to price across product categories, over time etc.). This course aims to introduce students to the tools and conceptual frameworks of revenue management and its applications in diverse industries such as tourism, hospitality, manufacturing and fashion. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 256.*

MAN 442 Service Operations Management

SOM is designed to develop an understanding of those aspects of management of particular importance to service-producing as opposed to goods-producing firms, and to encourage analytical thinking about all services that affect our lives. Topics such as service quality, service guarantees, design of service delivery systems, supply and demand management, management of waiting lines, and productivity improvement are discussed. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 341.*

MAN 443 Operations Strategy

This is an undergraduate elective course designed to study the content and process of competitive impact of operational decisions. It utilizes the basic concepts developed in the operations management sequence, but focuses on the strategic aspects not covered in such introductory courses. The course begins with a general overview of operations strategy at the theoretical level. A selected number of empirical studies expose the students to the issues of measuring operations performance and identifying operations strategies. The practice exercises are intended to expose students to a range of concepts, tools and techniques in simulated environments for addressing issues such as the design and evolution of operating networks, the selection and development of process technologies, and the creation of operating systems that effectively connect operations with customers, distribution channels, and suppliers. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 341.*

MAN 444 Special Topics in Finance

The most obvious manifestation of global financial instability is the current banking crisis that began in the U.S. but spread swiftly to Europe, other developed nations, and some developing economies. The creation of exotic financial instruments, the presence of unregulated participants in global markets such as hedge and private equity funds, the failure of rating agencies to properly evaluate novel financial instruments, and the search for

higher returns without properly accounting for risk were some of the evident contributors to the crisis, resulting in severe write-offs and even the failure of some of the most visible and highly respected institutions in the financial universe. This course will begin with an extensive and intensive examination of the 2007 crisis of the late '90's and the Turkish crisis of '94. Furthermore, the absence of international financial architecture to prevent global crises, the inability or unwillingness of national regulatory bodies to intervene proactively, and the actions of regulators to mitigate national financial problems will then be examined. *Credit units: 3 ECTS Credit Units: 6. Aut (J. Prager)*

MAN 445 Total Quality Management

Quality is an integral part of doing business in today's world. Every organization must meet the challenge of providing goods and services that exceed the customer's expectations. This course is designed to teach students the basic quality concepts and techniques of total quality management, quality culture, quality improvement, quality costs, quality systems, statistical process control, reliability and liability. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 222.*

MAN 446 Supply Chain Management

This course covers the essential elements of Supply Chain Management, which consist of controlling and coordinating all the activities that take place from the raw material purchasing to the end customer satisfaction; such as order processing, purchasing, material storage and handling, production scheduling, packaging, transportation and setting customer service standards. How these activities are successfully modeled, planned, and controlled in manufacturing and service industries are addressed. The decisions and strategies regarding transport and inventory, which are the most important parts of Business Logistics for a firm, are highlighted. The course is augmented with case studies to facilitate discussion and to gain an understanding of basic principles. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 341.*

MAN 447 Project Management

The role of projects in organization is getting more important as they become the major tool for reaching strategic goals. This course provides an integrative view of project management. Topics include project selection, project organization, budgeting and cost estimation, progress and performance measurement and evaluation, and project auditing. Project planning and control techniques, such as CPM and PERT, are also covered. *Credit units: 3 ECTS Credit Units: 6. Aut (F. İnal)*

MAN 451 Decision Analysis

Examines decision making under uncertainty. Introduction to statistical decision theory and game theory. Utilities and probabilities, optimal decision and information rules, and risk aversion. *Credit units: 3 ECTS Credit Units: 6. Aut (A. Kocabıyıkoğlu)*

MAN 457 Information Systems Planning

An Internet Protocol (IP) based network architecture project course. Interdisciplinary teams composed of four senior students from the Engineering and Management faculties develop technical business proposals for a new network service provider entering the market. Business case includes a cost-effective network design and planning based on through analysis of market needs. Students learn about the data communication industry, comprehend different network architectures, understand venture capital business, and experience working in an interdisciplinary environment. At the end of the semester, each group is required to developed a business case built on engineering and business analysis of the market and involved technologies. *Credit units: 3 ECTS Credit Units: 6.*

MAN 460 Organizational Symbolism and Culture

Cultural and symbolic processes are an essential part of organizing practices in today's business life. Serving as a foundation to understand these processes, this course is an introduction to the analysis of organizational culture in contemporary business organizations. The course examines the nature of organizational cultures; how they evolve into being and get legitimized; how they are managed and sustained; and, the processes through which they change over time. In the course, these cultural processes are analyzed from multiple theoretical perspectives. This analysis is also put into practice through an application component in which students engage in hands-on cultural analysis of an actual organization. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 262 and MAN 361.*

MAN 461 Organization Development

Analysis of recent literature on organizations, organizational structure, organizational behavior, organizational change and design; the interaction of design strategies in terms of planned change and development. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: consent of instructor.*

MAN 462 Human Resources Management

In this course, an academic understanding of human resource management (HRM) is aimed to be given to students who have little or no prior knowledge of the area. The development of HRM as an academic field is critically explored in its historical context, emphassing the differences between personnel management and more contemporary approaches such as HRM. Various functions and dimensions of HRM are defined and discussed, by using case studies and real examples both from Turkey and other countries. Current issues around HRM are

also explored. The course eventually aims to simulate answers to the following questions: firstly, why HRM is one of the most significant management functions, and secondly, who does HRM in organizations. This course will be suitable for senior students who want to extend their background in HRM before actually going into the business world, whether or not they plan to work as specialists in this area. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 262.*

MAN 464 Change Management

Edward Deming said in an interview that "we do not have to change, because staying in business is not compulsory"!! Charles Darwin wrote that "it is not necessarily the strongest or the most intelligent who survive, but those who adapt and change." This course presents organizational change as an absolute necessity for all organizations that wish to become or remain competitive in the 21st Century. It explores the forces causing the need for change, the current models utilized for managing change, and the reasons why over 60% of all changes efforts fail. Case studies, team projects, and individual research will constitute a major portion of this course. Emphasis will be placed on the practicalities of managing change as well as on the supporting research. *Credit units: 3 ECTS Credit Units: 6.*

MAN 466 Management Skills

The central function of all managers is to direct, coordinate and control the efforts of others in order to achieve organizational goals. The quality of the interface between managers and the "others" in the organization is critical not only to organizational success, but also to individual managerial success. The quality of the interface varies according to the knowledge, skills, abilities, and attitudes brought to it by managers. This course seeks to develop appropriate managerial knowledge and attitudes concerning the "interface" by examining the theoretical functions of critical managerial skills, and to provide opportunities to develop basic competencies in selected skill areas. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 361.*

MAN 467 Cross-Cultural Management

This course is designed for persons who expect to do business in an unfamiliar country or interact with people from other cultures. It recognizes the importance of becoming consciously aware of the fundamental cultural differences that determine everyday life as well as business practice. It is based on the literature of cultural anthropology and applies it to such practical matters as negotiation, the role of deadlines and a culture's sense of time, the structure of organizations, business ethics and corruption, stress management, and business etiquette. Specific countries as well as general principles are discussed. Student groups will investigate a culture of their choice and present their findings to the class. Their written reports will be collected into a Cultural Handbook that will be distributed to the class. *Credit units: 3 ECTS Credit Units: 6.*

MAN 471 Motivation and Leadership

The main objective of this course is to introduce the basic concepts and theoretical perspectives on motivation and leadership that are useful for understanding human behavior in organizations. It offers an extensive examination of the nature of leadership and motivation in organizations with an emphasis on both theoretical and practical understanding. At the end of this course, students should have a better conceptual sense of leadership and motivation, and important insights into themselves as potential leaders and motivators. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 262. Aut (Z. Aygün Karakitapoğlu)*

MAN 473 SME's and Cross-Border Ventures

The course is designed for students who are interested in learning more about the linkage between entrepreneurship end small and medium sized enterprises as well as about the management of people and thus, change. In many countries, SMEs form the backbone of economic activities (including Turkey and United Kingdom). Entrepreneurship, leadership, cross-border ventures, research and development, national and European funding, coaching, human resources management, business analysis and plans including SWOT are some of the areas covered. The course aims at addressing the problem of how to bridge the gap between academic research and practical business administration for future managers and related roles/functions. Obstacles and opportunities for Turkish SMEs in connection with Turkey's position as future EU member state as well as a field-trip and one guest lecture form an integral part of the module. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 361.*

MAN 474 European Union and Turkey: Trade and Policies

This is an interdisciplinary course introducing the students to the European Union and Turkey-EU relations. After a review of EU history and institutional and legal framework, emphases will be on external and internal trade law and implementation of the Customs Union Decision between Turkey and the EU. Full membership criteria are also discussed. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

MAN 475 Business Negotiations

Negotiation is a life skill. Every day we negotiate with colleagues, suppliers or customers. Negotiation skills can have a serious impact on profits, project deadlines, your reputation with your colleagues and your ability to implement change successfully. This course will help students to: Recognise the strengths and weaknesses of their negotiation style; Plan and prepare effectively for a negotiation; Cope with difficult negotiations; Know how to trade concessions conditionally, and adapt their style in differing situations. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ENG 206.*

MAN 476 Group Processes and Team Dynamics
This student-centered course is designed to introduce students to the structures and processes that affect team performance as well as some of the common pitfalls associated with working in teams. Topics include team building, team development, problem solving, communication, decision-making in teams and designing effective teams. Exercises, assessment tools and group activities will provide students with the opportunity to gain insight and practice team-based skills. Case illustrations will also help students to discover the challenges in teamwork. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 361.*

MAN 477 Financial Intermediation
The goal of the course is to provide theoretical and practical understanding of the financial intermediation especially commercial banking. The main topics are: the economic role of financial intermediation in producing and monitoring of borrowers; risk faced by financial intermediary's managers and methods through which these risks are managed; the rationale for regulation. The problem of adverse selection and moral hazard will be introduced in order to understand efficient functioning of the financial intermediaries. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 321 and MAN 322.*

MAN 479 Sales Management
Sales managers are responsible for the strategy (planning), people and sales process (implementation) and performance (customer acquisition and retention). sales managers must be able to develop the most effective human interactions and relationship nurturing among many stakeholders: salespeople, the firm's other functional managers and especially prospects and customers. In this course a wide range of topics will be explored such as: Personal Selling, Sales Agents, CRM/Sales Technology, Sales Compensation, Sales Forecasting, Sales Organization, Sales Promotions and Sales Strategy. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 335.*

MAN 480 International Human Resource Management
This course aims to explore human resource management (HRM) within a comparative and international context. While international dimensions of HRM is critically discussed with participants who have a basic level of knowledge in HRM, policies and practices of multinational corporations (MNCs), particularly those from the USA, will be emphasised. The most significant substantive HRM issues, i.e. recruitment and selection, performance management systems, training and development, and labour relations will be covered within this framework through readings and using case studies. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 262.*

MAN 481 Financial Economics
This course covers the theoretical foundations of modern financial economics. the focus is on financial markets and the valuation of financial claims treated in those markets, under discrete time models. Topics analyzed include models of consumption and investment decisions under uncertainty; risk aversion; stochastic dominance; men variance theory; equilibrium models of asset pricing (CAPM, ICAMP, APT); linear multifactor models; and incomplete markets. *Credit units: 3 ECTS Credit Units: 6.*

MAN 482 The Global Economy
Globalization became an all purpose catchword in public and scholarly debate as we began a new century. Governments attribute their country's economic problems to global forces that are beyond their control; business leaders justify downsizing of companies as necessary to prepare for globalization and advocates for local cultures blame the disappearance of tradition and culture on uncontrollable globalization. The objective of this course is to examine the economic, political and cultural aspects of globalization. In doing so, we will try to answer several questions related to the globalization phenomenon: What does globalization involve?, Is globalization new?, Is globalization driven by the expanding market?, Does globalization make the world more homogeneous?, Does globalization determine local events?, and Is globalization harmful? The goal is to assist the students in understanding the patterns and problems of globalization, which is likely to be a dominant concern of the twenty-first century. *Credit units: 3 ECTS Credit Units: 6.*

MAN 483 Entrepreneurial Management
The course aims to give additional tools and knowledge to graduating students to create their own business, or to acquire share of already running business or to become top executives who shape the future of companies in which they work. Lectures will be augmented by case discussions. Groups of students will do a term project in which an entrepreneurial example will be evaluated in detail. Throughout the semester, prominent businessmen and top executives will be invited to the class to share their experience through active participation of the students. *Credit units: 3 ECTS Credit Units: 6.*

MAN 485 Real Estate Finance
This course deals with the central issues in real estate finance and investment. Typical policies and procedures used in financing of residential, industrial, and commercial properties are discussed. Topics include methods of measuring rates of return, feasibility and appraisal processes, risk analysis, equity and debt financing vehicles. Real estate investment trusts and mortgage backed securities are also covered. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 321.*

MAN 490 Business Case Analysis
Business case analyses and competitions provide opportunities to synthesize codified knowledge, to develop the skills of decision making in the face of ambiguity, to acquire a global view of management , to assess personal strengths and competencies, and thereby, prepare for a professional managerial career. This course aims to develop, in simulated settings, the skills of extracting information from data, identifying and contextualizing management problems within the frameworks of management theories, proposing solutions to multi-dimensional management problems and communicating ideas effectively. Teamwork, time management, written and oral presentation skills are to be stressed. The course also intends to prepare Bilkent business administration students for national and international case competitions. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 321 and MAN 335 and MAN 401.*

GRADUATE COURSES

MAN 509 International Business
This course will provide an understanding of international business as an essential part of Globalization. The international business environment will be evaluated in economic, cultural, political, and legal aspects to explore how international businesses are initiated and conducted. Economic Integration among nations will be discussed with emphasis on Europe. Methods of entry into foreign markets via licensing, franchising, joint ventures, coventures, and foreign direct investment will be reviewed providing actual real life examples. *Credit units: 3 ECTS Credit Units: 6.*

MAN 525 Financial Economics
This course covers the theoretical foundations of modern financial economics. The focus is on financial markets and the valuation of financial claims traded in those markets, under discrete time models. Topics analyzed include models of consumption and investment decisions under uncertainty; risk aversion; stochastic dominance; mean variance theory; equilibrium models of asset pricing (CAPM, ICAPM, APT); linear multifactor models; and incomplete markets. *Credit units: 3 ECTS Credit Units: 7.5.*

MAN 528 Stochastic Models in Finance
The objective of the course is to introduce the basic ideas and methods of stochastic calculus and its applications in finance. First, topics such as stochastic processes, stochastic differential equations and stochastic control are discussed and their use it financial modeling are illustrated in numerous applications. The models to be studied include optimum consumption and portfolio selection problem, arbitrage pricing model, intertemporal capital asset pricing model, option pricing model, futures pricing model, term structures of interest rates and the capital structure of the firm. The course introduces the recent developments in asset pricing as well as providing the essential methods to understand the theoretical foundation of securities and evaluations under uncertainty. *Credit units: 3 ECTS Credit Units: 6.*

MAN 529 Special Topics in Finance
This course is designed to deal with the complex phenomenon of the globalization of economic activity. The approach in this course is that globalization is primarily the outcome of the complex interaction between transnational corporation and nation states within the context of a volatile technological environment. This course looks not only at the general processes of change but also at their specific expression in different places and in different industries, both manufacturing and services. Much use is made of graphical materials and information technology with maps, Internet, World Wide Web, etc. in order to capture in a more accessible manner the far reaching changes which are occurring in the global economy. *Credit units: 3 ECTS Credit Units: 6.*

MAN 531 Global Perspectives
The objective of this course is to examine some economic and political aspects of globalization. To this end, we will study indicators of globalization, theories explaining the internationalization of economic activities, the role of technological change in globalization, the organizational structure of transnational corporations which are key actors in this process, and problems of adjustment to global shifts. We will study several sectors such as textiles, automobiles, electronics and services including financial services. We will also discuss some political features of globalization, such as the role of nation-states in shaping the world economy, the interaction between nation-states and transnational corporations and the emergence of regional blocs. *Credit units: 3 ECTS Credit Units: 6.*

MAN 535 Special Topics in Marketing
The purpose of this course is to provide students with detailed understanding about the marketing mix variables, namely, product, price, distribution, and promotion. The course may be designed to take either a specific approach related to one variable (e.g. retailing management as a part of distribution decisions) or an integrated approach. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 532.*

MAN 536 International Marketing Management
This course provides the students with an understanding of marketing planning and strategy from international, multinational and global perspectives. The world should be viewed as a marketplace with a resulting need for familiarity with various environmental similarities and differences. These may necessitate adaptation and/or standardization of marketing programs, strategies and plans from nation to nation. A major focus of the course is on strategic marketing management techniques, issues, strategies and problems within an international marketing framework. *Credit units: 3 ECTS Credit Units: 6.*

MAN 538 Advertising Management
This course deals with the strategic management of communications. Advertising is treated as a major form of communication and the role and nature of other communication and promotion activities are also discussed. The objective of the course is to provide analytical skills useful in strategic planning and evaluation of advertisements. An understanding of the advertising industry and agency/client relationship is also provided with the aid of cases, illustrations, and guest speakers. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 532.*

MAN 539 Consumer Behavior
This course deals with the understanding of the behavior of people as consumers and the strategic implications of this understanding for marketing managers. Consumer analysis is one of the critical components of marketing analysis in examining the problems and reaching effective decisions. Principles from various social sciences are integrated to analyze the consumer judgement process. Marketing applications of the various concepts are illustrated using cases. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 532.*

MAN 540 Special Topics in Quantitative Methods
Credit units: 3 ECTS Credit Units: 6.

MAN 551 Decision Analysis
Decision analysis is an interdisciplinary field that derives from economics, psychology and quantitative modeling. This course is designed as an introduction to the basic concepts, principles and methods of decision analysis. The first part of the focuses on the prescriptive approach to decision making, topics covered include decision trees, value of information and utility theory. The second part of the course focuses on behavioral decision theory, which seeks to analyze how people actually make decisions. Topics covered include the heuristics and biases program of Kahneman and Tversky, consumer decision making and group decision making. *Credit units: 3 ECTS Credit Units: 6.*

MAN 555 Probability and Statistics
This course reviews the basic principles of probability and statistics prior to their development in more specialized quantitative research methods. It also provides a short introduction to some simple methods of data presentation and exploration, and some standard statistical tests. Topics include probability rules, distributions, densities, random variables, limit theorems, sampling distributions, estimations and basics of hypothesis testing. *Credit units: 3 ECTS Credit Units: 7.5. Aut (C. D. Yenigün)*

MAN 557 Decision Science
An overview of management science/operations research with selected applications from management systems and interdisciplinary areas. Formulation of problems from the private and public sectors using the mathematical modeling of linear programming. Development of the simplex algorithm, duality theory and economic interpretations. Introduction to Integer programming, network models, transportation and assignment problems, special-purpose algorithms. Students will have opportunities to formulate and solve models developed from case studies and use various computer programs. *Credit units: 3 ECTS Credit Units: 8.*

MAN 577 Financial Intermediation
The goal of the course is to provide theoretical and practical understanding of the financial intermediation especially commercial banking. The main topics are: the economic role of financial intermediation in producing and monitoring of borrowers; risks faced by financial intermediary's managers and methods through which these risks are managed; the rationale for regulation. The problem of adverse selection and moral hazard will be introduced in order to understand efficient functioning of the financial intermediaries. *Credit units: 3 ECTS Credit Units: 6.*

MAN 591 Independent Study II
Credit units: 3 ECTS Credit Units: 6.

MAN 593 Research Paper I
Credit units: None ECTS Credit Units: 3.

MAN 594 Research Paper II
Credit units: None ECTS Credit Units: 3.

MAN 595 Heuristic Optimization
This course introduces he students to a number of heuristic optimization methods. These methods are widely used by decision makers for solving hard optimization problems like those arising in planning, scheduling, and scarce resource allocation. Procedures to be covered include constructive methods, optimization-based heuristics, local search methods, classical meta heuristics such as tabu search, greedy randomized adaptive search procedures, genetic algorithms, as well most recent approaches including ant colony algorithms and particle swarm optimization. The course addresses all students who wish to study techniques with high practical value rather than theory. We will not spend much time on the theory, but instead gather experience through practical experimentations. *Credit units: 3 ECTS Credit Units: 7.5.*

MAN 599 Master's Thesis Project

Credit units: None ECTS Credit Units: 22. Aut (Z. Önder)

MAN 601 Research Methodology I

The objectives of the course are to (1) familiarize students with different modeling approaches through a selected set of articles, (2) provide an opportunity to each student to work individually on a research topic that might eventually lead to a dissertation topic, (3) improve writing skills and styles essential for publication, and (4) develop a scientific personality to be able to analyze, synthesize, and criticize the writings of others. Report writing assignments are frequent and, for most students, demanding. *Credit units: 4 ECTS Credit Units: 8.*

MAN 602 Research Methodology II

This course concentrates on certain quantitative and qualitative research methods that are essential for conducting the research projects formulated during Research Methodology I. In contrast to Research Methodology I, although a continuation of it, Research Methodology II is actively research oriented and each student is required to write a dissertation research. Development of writing skills and styles is essential. *Credit units: 4 ECTS Credit Units: 7.*

MAN 603 Computerized Research Methods

Advanced research requires innovative uses of the existing quantitative and research tools or development of new ones. This implies sophisticated ways of use of computers. The objective of this course is to familiarize the students with certain computer programming approaches to handle different data management problems, switching computer working environments, adjusting new models to existing computer codes or vice versa. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MAN 602 or consent of the instructor.*

MAN 604 Quantitative Business Research

The course covers various aspects of survey designs and analysis issues including sampling questionnaire design and construction, interviewing techniques and analytical strategies of survey data, a general survey of social science research techniques. Experimental and non-experimental research designs, measurement theory, reliability and validity, and an overview of statistical evaluation procedures are discussed. *Credit units: 3 ECTS Credit Units: 7.5.*

MAN 605 Qualitative Research

This course aims to introduce students to the philosophical foundations, design, conduct, and presentation of qualitative research. Issues of quality and methods of data collection, analysis, and interpretation will be emphasized. The course focuses on enabling students to experience the research process in the course of learning how to plan, execute, and evaluate qualitative research. Assignments and a term project provide experience and practice in data collection, analysis, and presentation. In this way, the role of various creative skills, including oral and written skills, in gathering, interpreting, and reporting on qualitative data are also emphasized. The seminar aims to provide an opportunity for learning from each other and by interacting with others in the class while students present materials and critically evaluate and discuss the readings. Students are encouraged to develop research relevant to dissertation or other projects of interest. *Credit units: 3 ECTS Credit Units: 8. Aut (G. Ger)*

MAN 607 Philosophy and Epistemology of Scientific Inquiry

This seminar aims to introduce students to the philosophical and epistemological foundations of science and scientific inquiry, fundamental issues distinguishing positivist versus post positivist approaches to research, and the types and issues of research design Following a study of philosophy of science, epistemological issues, and alternative approaches, methodology and design (surveys, experiments, interpretive research) issues are discussed. Assignments, presentations, and term papers provide exposure to fundamental issues as well as practice in critical reading and thinking about a) scientific inquiry, b) evaluation ("goodness") of research, and c) research methodology. The seminar provides an opportunity for thinking through and presenting well-developed thoughts about issues of science and research and learning from each other while students present and discuss the readings. *Credit units: 3 ECTS Credit Units: 8.*

MAN 608 Qualitative Business Research Methods I

This course aims to introduce students to the philosophical foundations and design of qualitative research. Issues of quality and methods of data collection, analysis, and interpretation will be emphasized. The seminar aims to provide an opportunity for learning from each other and by interacting with others in the class while students present materials and critically evaluate and discuss the readings. Students are encouraged to develop research relevant to dissertation or other projects of interest. *Credit units: 1 ECTS Credit Units: 2.*

MAN 609 Qualitative Business Research Methods II

This course aims to introduce students to the philosophical foundations, design, conduct, and presentation of qualitative research. Issues of quality and methods of data collection, analysis, and interpretation will be emphasized. The course focuses on enabling students to experience the research process in the course of learning how to plan, execute, and evaluate qualitative research. Assignments and a term project provide experience and practice in data collection, analysis, and presentation. In this way, the role of various creative skills, including oral and written skills, in gathering, interpreting, and reporting on qualitative data are also emphasized. The seminar aims to provide an opportunity for learning from each other and by interacting with

others in the class while students present materials and critically evaluate and discuss the readings. Students are encouraged to develop research relevant to dissertation or other projects of interest. *Credit units: 2 ECTS Credit Units: 6.*

MAN 620 Financial Econometrics
This course covers methodological concepts to test the empirical relevance of theoretical models in finance. It will focus on the statistical properties of asset returns, tests for market efficiency and asset return predictability, the testing of asset pricing theory, and the estimation of time-varying volatility as well as the analysis of financial high-frequency data and market microstructure. *Credit units: 3 ECTS Credit Units: 7.5.*

MAN 621 Advanced Corporate Finance
The objective of this course is to discuss issues and models concerning corporate finance and the role of banks. Topics include the theory of the firm, capital structure, separation of ownership and control, causes and consequences of particular structures of corporate ownership, performance and ownership structure, analysis of the principal-agent problem, agency costs and capital structures, the role of debts, models of debt, banks, design of bank loans, bankruptcy, post-bankruptcy and management turnover. *Credit units: 3 ECTS Credit Units: 6.*

MAN 622 Introduction to Econometrics
This course covers the basics of modern Econometrics and its most relevant tools to empirical research in Management. Topics covered include: the classical linear regression model (OLS); introduction to large sample theory; generalized method of moments (GMM); multiple equation GMM; introduction to panel data and time-series analysis; Monte-Carlo and Bootstrap methods of simulation; and introduction to models of changing volatility. *Credit units: 3 ECTS Credit Units: 7.5.*

MAN 623 Mathematics of Finance
This course covers discrete and continuous models for asset pricing, including topics such as binary tree models, Ito calculus, and martingale representation theorem, as well as selected topics from interest rate models and portfolio optimization. *Credit units: 4 ECTS Credit Units: 7.5.*

MAN 625 Debt Pricing
The objective of this course is to introduce some of the basic tools of debt and credit pricing while familiarizing the students with the institutional aspects of the dept and credit markets, and their derivatives. This is an introductory course with an emphasis on breath rather than depth. Since the debt and credit markets are intertwined, the markets considered include government, agency, sovereign ("developed" and emerging market), corporate, mortgage pass-through and collateralized mortgage obligations), asset-backed (auto loans, home equity loans, credit card receivables, etc.) dept as well as interest rate and credit derivatives markets. After a review of the institutional aspects of these markets, following a crash course on basic probability and stochastic calculus, one and multi-factor interest rate models including the Vasicek, Cox-Ingersol-Ross, Exponential Affine and Heath-jarrow-Morton models are examined. The interest rate derivatives considered include bond options, option embedded bonds, mortgage bonds, floating rate bonds, caps, floors, swaps, swaptions and the like. In the last part of the course, time permitting, pricing of the credit risky securities are studied. Starting with the seminal work of Merton, the structural and reduced-form credit risk models, including those of Lando, and Duffie and Singleton, are introduced, and pricing of defaultable debt as well as credit default swaps are discussed. *Credit units: 4 ECTS Credit Units: 7.5.*

MAN 626 Market Microstructure
The objective of this course is to acquaint students with the research in the area of market microstructure. The focus is mainly on theoretical work, hence it will concentrate on analyzing the major models and their applications. Interesting research problems in financial markets are introduced. The major models include inventory models, information/based models and strategic microstructure models with informed and uninformed traders. In addition, the empirical application of these models are discussed. *Credit units: 3 ECTS Credit Units: 6.*

MAN 627 Seminars in Corporate Finance
It is a doctoral seminar course covering major theories and empirical studies that have been developed in the area of corporate finance. The aim is to teach a class that will generate research ideas. *Credit units: 3 ECTS Credit Units: 7.5.*

MAN 628 Seminars in Investment Theory
It is a doctoral seminar course covering major theories and empirical studies that have been developed in the area of investment theory. The aim is to teach a class that will generate research ideas. *Credit units: 3 ECTS Credit Units: 7.5.*

MAN 631 Marketing Theory
This course aims to develop fundamental knowledge of and about marketing as a field of study and provoke critical thinking about the field. Readings and discussions examine the historical development of marketing thought and theory, as well as contemporary issues, alternative perspectives, and critical insights. The course considers the philosophical foundations of marketing practice and marketing thought and issues of scholarship and science in marketing. The course is interactive and involves critical discussion of the readings during both lectures and student presentations. Students search for possible dissertation topics and develop a preliminary dissertation proposal. *Credit units: 3 ECTS Credit Units: 6.*

MAN 632 Globalization Consumption and Development
The course examines the interface and interplay of marketing and its local and global environment-society, politics, ethics, culture, economy, technology, nature. The emphasis is on the role and consequences of marketing systems in different types of economies and societies, especially in marketizing economies or societies in transition in the global system. Role of marketing in development, sustainability, quality of life, and well-being is considered. Marketing is examined in the context of the contemporary issues and conditions of global media and culture, globalism and localism, consumption, poverty, minorities, ethnic groups, and consumer movements and organizations. Green and socially responsible marketing and ethical, legal, and ecological dimensions of marketing are also discussed. The course is interactive and involves critical discussion of the readings during both lectures and student presentations. Student search for possible dissertation topics and develop a preliminary dissertation proposal. *Credit units: 3 ECTS Credit Units: 6.*

MAN 633 Seminar in Marketing Strategy
This course is designed to provide doctoral students with a foundation in marketing strategy research. This course will identify, review, and critique a variety of theoretical perspectives that can be applied to areas including firm capabilities, marketing channels, strategic alliances, and firm boundaries. *Credit units: 3 ECTS Credit Units: 6.*

MAN 634 Advanced Consumer Behavior Theory I
This course deals with the understanding of the behavior, attitudes, preferences and decision making processes of people as consumers and psychological theories underlying consumer behavior. Some strategic implications of consumer preference formation, judgment and decision making are also addressed. Understanding consumers is a critical component of marketing to implement efficient marketing strategies. Principles from psychology as well as other social sciences are integrated to analyze consumer behavior. *Credit units: 3 ECTS Credit Units: 7.5. Aut (Ö. Sandıkcı)*

MAN 635 Consumer Culture Theory
This course aims to familiarize students with the main topics of interest within the field of consumer culture theory. Using key readings from consumer behavior literature as well as related readings from anthropology, sociology, cultural studies, and urban studies, the course spans different research traditions in studying consumers and consuming, and builds a knowledge base in theories of consumption. *Credit units: 3 ECTS Credit Units: 7.5.*

MAN 636 Theoretical Perspectives on Consumer Behavior Theory
This course details with the understanding of the behavior, attitudes, preference and decision making processes of people as consumers and the psychological theories underlying consumer behavior. Some strategic implications of consumer preference formation, judgment and decision making are also addressed. Understanding consumers is a critical component of marketing to implement efficient marketing strategies. Principles from psychology as well as other social sciences are integrated to analyze consumer behavior. *Credit units: 3 ECTS Credit Units: 7.5.*

MAN 639 Special Topics in Marketing
Credit units: 3 ECTS Credit Units: 6.

MAN 644 Inventory Theory
This course studies inventory systems and focuses on the traditional inventory theoretical models in order to provide a solid foundation for students to better understand and appreciate the existing body of research and be able to draw upon earlier works in the scholarly endeavors. This course is conducted partly in a lecture format and partly through class discussion of seminal articles. Topics include deterministic and stochastic models, selection of optimal inventory policies for single item dynamic inventory systems with concave and convex cost functions, known and uncertain requirements, sensitivity of single location models to lead time variability and delivery or yield uncertainty under given classes of control policies. Single location inventory systems with perishable goods, heuristic algorithms and myopic policies for multi-item dynamic inventory systems and multi-echelon models. *Credit units: 3 ECTS Credit Units: 6.*

MAN 645 Advanced Seminar Investment
The goal of this seminar course is to provide exposure to the recent literature on empirical asset pricing. There will be a brief presentation on the empirical methods employed in empirical asset pricing. Among the topics covered are the conditional CAPM and conditional Consumption-CAPM; Consumption-CAPM with habits and time-varying risk aversion; the Intertemporal CAPM; Consumption-CAPM with durable goods and housing; Consumption-CAPM with heterogeneous investors; long-run risks; portfolio choice and; present-value relations. *Credit units: 3 ECTS Credit Units: 7.5.*

MAN 651 Decision Analysis
Decision analysis aims to provide structure and guidance in thinking systematically about complex problems. Main purpose is to improve the quality of the resulting decisions. Primary questions of interest are (1) how do individuals and groups make decisions; (2) how good are these decisions; and (3) is there room for improvement, and if so, how can this improvement be achieved. Accordingly, decision analysis may be viewed as consisting

of a framework and a tool kit for dealing with these questions. Main topics to be focused in this course include structuring of decisions, modeling of uncertainty and preferences, heuristics and biases in decision making, deficiencies in human judgment, and the role of feedback. *Credit units: 3 ECTS Credit Units: 6.*

MAN 655 Advanced Statistics
The purpose of this course is to provide the principles and methods of a number techniques for the analysis of multivariate data. The emphasis will be on practical aspects of data analysis, specifically: the ability to relate particular analysis techniques to research problems and designs (preferably connected to research ideas or problems intended for the doctoral dissertation); conducting appropriate analyses using SPSS; and interpreting and validating the results of these analyses. *Credit units: 3 ECTS Credit Units: 6.*

MAN 656 Advanced Multivariate Statistics
The objective of this course is to introduce tools for multivariate analysis including multivariate ANOVA, principle components analysis, discriminant analysis, cluster analysis, factor analysis, structural equations modeling, canonical correlations and multidimentional scaling. *Credit units: 3 ECTS Credit Units: 6.*

MAN 661 Organization Theory
This course treats organization theory as a part of sociological theory. Although there are numerous topics in the general area of organizations, organizational theory can be defined as the study of institutionalized social practices. Within this frame of reference, the course introduces different theories and concerns in the field of organizational theory by focusing on their metatheoretical presuppositions, that is, their epistemologies, ontologies, theories of action and theories of explanation. *Credit units: 3 ECTS Credit Units: 6.*

MAN 662 Organizational Behavior
This course is designed for students in the doctoral program of the Department of Management as an introduction to the field. The purpose of the course is to provide a survey of major topics in micro-organizational behavior. The topics include motivation, leadership, interpersonal influence, group dynamics and organizational culture. The course also involves a critical discussion of the strengths and weaknesses of theoretical and empirical research on the topics. *Credit units: 3 ECTS Credit Units: 6.*

MAN 681 Readings in Operations Management I
This is a doctoral level reading/seminar course which intends to familiarize students with current research in Operations Management, in terms of models and methodologies, through guided reading and discussion of recent works. Each selected work will provide both a basis for introducing the seminal works in the area and/or employed methodologies and an opportunity for the participants to generate new ideas and research problems. The objective of the course is to supplement the transfer of codified knowledge in a classroom setting with exposure to the mindset of scholarly research. The rigorous discussion and exchange of ideas are intended to help students formulate their own research agenda. *Credit units: 3 ECTS Credit Units: 4.*

MAN 682 Readings in Operations Management II
Continuation of MAN 681. *Credit units: 3 ECTS Credit Units: 4, Prerequisite: MAN 681.*

MAN 683 Directed Readings in Management I
This is doctoral level reading/seminar course which intends to familiarize students with current research in various fields of management, in terms of models and methodologies, through guided reading and discussion of recent works. Each selected work will provide both a basis for introducing the seminal works in the area and/or employed methodologies and an opportunity for the participants to generate new ideas and research problems. The objective of the course is to supplement the transfer of codified knowledge in a classroom setting with exposure to the mindset of scholarly research. The rigorous discussion and exchange of ideas are intended to help students formulate their own research agenda. *Credit units: 3 ECTS Credit Units: 6.*

MAN 684 Directed Readings in Management II
Continuation of MAN 683. *Credit units: 3 ECTS Credit Units: 6.*

MAN 699 Ph.D. Dissertation
Credit units: None ECTS Credit Units: None. Aut (Z. Önder)

MBA 500 Bilcamp
This is an extended MBA orientation. It will be used to review some background that is important for the program, as well as team building. It will be run as a one-credit orientation course during the week before classes start in September. Possible skills components to be included are calculus review, basic statistics, intermediate excel (modeling), presentation skills, group skills (team work), research skills, leadershipskills and emotional intelligence. *Credit units: 1 ECTS Credit Units: 1. Aut (S. Özyıldırım)*

MBA 502 Turkish Business Context
This course aims at providing students with a basic understanding of the interaction between Turkish economic institutions and Turkish economy. Topics to be covered are; Recent history of the Turkish economy; Current economic issues in Turkish economy; Money supply and demand; the role of commercial banks in the economy and their regulation by monetary authorities with specific reference to the Turkish Banking industry; Central

banking and conduct of monetary policy; The balance of payments, foreign exchange markets and exchange rates, trade and financial flows; Behavior and term structure of interest rates. *Credit units: 3 ECTS Credit Units: 6.*

MBA 503 Microeconomics
This course is designed to introduce the theory and practice of Microeconomics for MBA students. The topics covered include fundamental issues in Microeconomics. Theory of the consumer and the firm are the primary areas of the course. In addition, market structure, choice under uncertainty and some topics in financial economics will be covered. *Credit units: 3 ECTS Credit Units: 6. Aut (L. Akdeniz)*

MBA 511 Accounting
The need for accounting records and reports and the basic principles underlying the accounting cycle and preparation of financial statements. Emphasis is given to accounting as an aid to managerial decision making. In addition, topics such as budgeting, funds flow and the basics of cost accounting are discussed. *Credit units: 3 ECTS Credit Units: 6. Aut (N. Akman)*

MBA 512 Managerial Accounting
The primary objective of this course is to teach the skills, tools and managerial insights for intelligent and ethical decision making. The course focuses on the information development and analysis, presenting and communicating information to make it useful, and bring in accounting, financial and business information into the decision process. As students learn the fundamental concepts of management accounting, an attempt is made to identify problems with current accounting and managerial conventions. *Credit units: 2 ECTS Credit Units: 4.*

MBA 513 Financial Statement Analysis
This course aims at providing the student with the tools of financial and credit analysis. Analysis of the relation between financial accounting data and firm performance is emphasized. Characteristics of accounting ratios and their relations to market and industry factors, time series behavior of earnings and forecasting models are also investigated. *Credit units: 2 ECTS Credit Units: 4.*

MBA 517 Fixed Income Securities I
The course examines the theory and practice of fixed income securities and markets. It covers topics such as Bond prices, discount factor and arbitrage; spot rates, forward rates and yield to maturity; curve fitting and one-factor measures of price sensitivity; price sensitivity based on parallel yield shifts; the science of term structure models; short-rate process and the shape of the term structure; the art of term structure models: drift, volatility and distribution; multi-factor term structure models; trading with term structure models; A standardised reference framework is used for each concept examination of market and institutional data, model formulation, its analytical specification and solution and, finally, numerical computation and applications. The more practical facet to the course is to expose students to current bond management practices and real-world fixed income securities. Numerous examples will be used to raise students' awareness of the problems faced by bond managers and fixed -income analysts in today's financial service industry. *Credit units: 2 ECTS Credit Units: 4. Aut (Staff)*

MBA 518 Fixed Income Securities II
The continuation of MBA 517 Fixed Income Securities I. *Credit units: 2 ECTS Credit Units: 4. Aut (Staff)*

MBA 519 Financial Institution and Markets
This course aims to investigate the history, structure and functions of financial institutions (banks, insurance companies, mutual funds, etc.) as well as central banking. It analyzes money, financial intermediaries, markets and recent banking legislation. Topics include why banks and other financial institutions exist, how asset prices are determined, what is the risk and term structure of interest rates and what is efficient market hypothesis. All major markets and their respective financial instruments are studied to develop the necessary quantitative toolset for sensible decision making in an increasingly global economy. *Credit units: 3 ECTS Credit Units: 6.*

MBA 520 Risk Management I
This course aims to introduce the risk management and the derivatives markets. The concept of risk management and the question of why risk management is vital for modem financial institutions will be explored. The topics will include forwards, futures swaps, options, hedging and portfolio insurance, value at risk. *Credit units: 2 ECTS Credit Units: 4.*

MBA 521 Risk Management II
Continuation of MBA 520. *Credit units: 2 ECTS Credit Units: 4.*

MBA 522 Corporate Finance
A course in the theory of corporate finance with emphasis on investment and financing decisions of the firm. Topics include valuation, capital budgeting, capital structure, cost of capital, dividend policy, financial statement analysis, profit planning, financial forecasting, and working capital management. *Credit units: 3 ECTS Credit Units: 6. Aut (K. Aydoğan)*

MBA 524 Investment Analysis
Risk and return characteristics of various investment instruments such as common stocks, bonds, convertibles and options are considered. Modern portfolio theory is discussed and related concepts are used in constructing

portfolios for individual and institutional investors. Alternative portfolio management strategies and financial analysis and valuation of corporate securities are also covered. *Credit units: 2 ECTS Credit Units: 4.*

MBA 526 International Finance
This course introduces the environment, theory and practice of international finance. The major topics covered are: the foreign exchange market and price elasticities of trade, the Keynesian Model of Income and the trade balance, the Monetary approach to the balance of payments, introduction to capital mobility: The Mundell-Fleming model. In the second part of the course international monetary system, the European monetary system, financial liberalization and stabilization in LDC's are covered. *Credit units: 3 ECTS Credit Units: 6.*

MBA 527 Financial Intermediation
The goal of the course is to provide theoretical and practical understanding of the financial intermediation especially commercial banking. The main topics are: the economic role of financial intermediation in producing and monitoring of borrowers; risks faced by financial intermediary's managers and methods through which these risks are managed; the rationale for regulation. The problem of adverse selection and moral hazard will be introduced in order to understand efficient functioning of the financial intermediaries. *Credit units: 2 ECTS Credit Units: 4.*

MBA 529 Real Estate Finance
The basic aims of this course are to apply basic financial economics theory to the real estate financial markets and decisions and to understand how changes in economic and financial environment affect real estate decision making. Topics include fixed adjustable rate mortgages, other creative real estate financing methods, individuals' mortgage choice and refinancing decisions, secondary mortgage and mortgage-backed securities. *Credit units: 2 ECTS Credit Units: 4.*

MBA 530 Marketing Research I
This course primarily focuses on the foundations of the qualitative research. Qualitative research involves collecting, analyzing, interpreting, and reporting data by observing what people do and say. More specifically, this course discusses qualitative research design, sampling issues, data collection techniques such as in depth interviewing, focus groups, observations, case studies, and constructive techniques, and analysis techniques such as content analysis. *Credit units: 2 ECTS Credit Units: 4.*

MBA 531 Marketing Research II
After a brief review of the examination of marketing information needs and resources including the collection and dissemination of primary and secondary data, this course focuses on quantitative research in marketing. More specifically, this course discusses problem definition, research design, sampling techniques, data collection and analysis. An overview of methods of measuring consumer reactions to project characteristics, effectiveness of advertising, and other promotional devices are also discussed. *Credit units: 2 ECTS Credit Units: 4.*

MBA 532 Marketing Management
Survey of the marketing concept, consumer behavior, segmentation, marketing research, competitive analysis, and marketing decisions involving products, price, distribution and promotion. Analytical, strategic and decision making aspects are emphasized. Cases are used for application of the principles discussed. *Credit units: 3 ECTS Credit Units: 6.*

MBA 533 Marketing Strategy
The objective of this course is to provide students with the conceptual background and analytical tools that are used in solving strategic marketing problems in a contemporary economy. Text and assigned readings furnish the conceptual background for effective analysis of marketing problems; the cases utilize practical application tools for making strategic marketing decisions. *Credit units: 2 ECTS Credit Units: 4.*

MBA 535 Consumer Behavior I
This course deals with micro aspects of consumer behavior and its implications for marketing strategy. It begins with a discussion of consumer needs and motivations, exploring both the rational and emotional bases of consumer actions. It then focuses on the individual consumer and examines how consumers learn, store and recall information about products, form attitudes and make decisions about consumption activities. *Credit units: 2 ECTS Credit Units: 4.*

MBA 536 Consumer Behavior II
This course deal with macro aspects of consumer behavior and its implications for marketing strategy. It focuses on how the consumer functions as a part of a larger social structure including social class, subcultures and age groups. It examines the relationship between consumption and the expression of cultural values and lifestyles and the effects of globalization on consumption. *Credit units: 2 ECTS Credit Units: 4.*

MBA 537 Brand Planning for New and Existing Products
Brand Planning provides the framework to build a brand-equity driven sustainable business. Brand equity is one of the most valued assets a firm can leverage with a proven link to higher stock market valuations and returns. The course will start with the customer and will explore what it takes to build a long-term customer experience and mutually rewarding relationship. After assessing the global competitive marketplace, and the course will move on to defining the business, creating a vision, positioning, setting objectives, developing a

competitive marketing strategy and the marketing mix program. The knowledge effects will be measured and analyzed: brand awareness, disposition, propensity, expectations, attitudes and behavior, and the resulting level of brand equity will be discovered. And the plan needed to give the brand everlasting life through a superior value proposition over the current product life cycle and new cycles created from innovative progress will be determined. The course is organized around multiple methods of learning including text readings, case analyses and market-based visitor presentations. *Credit units: 2 ECTS Credit Units: 4. Aut (M. Protano)*

MBA 538 Marketing Communications

This course deals with the strategic management of marketing communications. It aims to familiarize students with different marketing communications tools, such as advertising, sales promotions, electronic marketing, sponsorship programs, and event marketing that marketers use when reaching to their customers. The focus rests on developing analytical skills needed for planning, integrating, and evaluating communications campaigns. The course combines theory with examples, cases, and projects. *Credit units: 2 ECTS Credit Units: 4.*

MBA 540 Manufacturing Strategy

Investigation of manufacturing strategy formulation and decision making. Marketing-manufacturing interface, process profiling, product profiling, focused manufacturing, infrastructure development will be studied. Cases are used to demonstrate the manufacturing strategies applied in private and public sector. *Credit units: 2 ECTS Credit Units: 4.*

MBA 541 Procurement and Inventory Systems

Deterministic and probabilistic models and algorithms for single-item single-source inventory systems are covered. Topics such as price increases, product quality, pull control and Kanban systems, JIT methods are discussed. Extension to systems with multi-item and multi-source characteristics. *Credit units: 2 ECTS Credit Units: 4.*

MBA 542 Production and Operations Management

Principles and decision analysis related to the effective utilization of the factors of production in manufacturing and non-manufacturing activities. The design, operation and control of production systems using mathematical, computational and other modern analytical techniques. *Credit units: 3 ECTS Credit Units: 6.*

MBA 543 Pricing Strategies and Tactics

Pricing is one of the most important and challenging business decisions with short run and long run implications. This course is designed to provide the students with the necessary tools and techniques to make effective pricing decisions, such as economics of pricing, differentiated pricing, dynamic pricing, markdown pricing and customer perspectives of pricing practices. Applications of pricing and revenue optimization techniques in a variety of industries such as media broadcasting, electricity pricing, and event ticketing will also be covered. *Credit units: 2 ECTS Credit Units: 4.*

MBA 544 Revenue Management

Revenue management integrates pricing with sales and inventory management strategies, and can be used in managing demand decisions such as allocating capacity to different market segments, and pricing products across categories and over time. This course aims to introduce students to the basic tools and techniques of revenue management as well as its applications in industries such as airlines, hospitality and fashion retail. *Credit units: 2 ECTS Credit Units: 4.*

MBA 545 Service Operations Management

Service Operations Management is designed to develop an understanding of management of service industries. In that respected, the role of services in an economy and the distinctive characteristics of service operations will be discussed. In addition, the strategic service concept, competitive service strategies, the role of information, service delivery systems and management of day to day operations will be studied. Strategies to achieve world-class service will also be addressed. *Credit units: 2 ECTS Credit Units: 4.*

MBA 546 Supply Chain Management

This course covers the essential elements of Supply Chain Management, which consist of controlling and coordinating all the activities that take place from the raw material purchasing to the end customer satisfaction; such as order processing, purchasing, material storage and handling, production scheduling, packaging, transportation and setting customer service standards. How these activities are successfully modeled, planned, and controlled in manufacturing and service industries are addressed. The decisions and strategies regarding transport and inventory, which are the most important parts of Business Logistics for a firm, are highlighted. The course is augmented with case studies to facilitate discussion and to gain an understanding of basic principles. *Credit units: 2 ECTS Credit Units: 4. Aut (N. Çömez)*

MBA 548 Project Management

This course addresses the project management area from a management perspective. Topics include project selection, project organization, budgeting and cost estimation, and project auditing. Project planning and control techniques, such as CPM and PERT, are also covered. *Credit units: 3 ECTS Credit Units: 6.*

MBA 550 Service Operations Management II
Continuation of MBA 545. *Credit units: 2 ECTS Credit Units: 4.*

MBA 551 Probability and Statistics
Basic concepts in probability and statistical analysis. Topics include data analysis, Bayes theorem, discrete and continuous distributions, estimation, testing of hypotheses, analysis of variance, and regression analysis. *Credit units: 3 ECTS Credit Units: 6. Aut (C. D. Yenigün)*

MBA 552 Management Information Systems
The role of information in organizations and the role of information systems as a formal mechanism for the collection and exchange of data and information are studied. The strategic and economic impact of information systems on management processes are explored. Topics also include the nature and operation of basic hardware and software components, file and database management systems. Students gain extensive exposure to microcomputers and various application programs. *Credit units: 2 ECTS Credit Units: 4.*

MBA 553 Data Models and Decisions
This course introduces students the fundamental techniques of using data and management science tools and models to think structurally about decision problems, make more informed management decisions, and enhance decision-making skills. Topics include linear, discrete, and non-linear optimization and simulation modeling, as well as multi-criteria optimization. Spreadsheet models and spreadsheet-based software packages will be used extensively. *Credit units: 3 ECTS Credit Units: 6. Aut (E. Erel)*

MBA 561 Management
Managing successfully in the chaotic and dynamic world of 21st Century business demands a wide range of management skills and understanding. This course will emphasize these new skills and understandings in its three major components: (1) The Fundamentals of Modern Management: concepts, theories, and models of effective management. (2) Competing by Design: organizational structure as the critical tool for implementing corporate strategies. (3) The Management of Organizational Behavior in order to achieve a competitive advantage. Emphasis will be placed on the practicalities of managing successfully in the 21st Century, as well as on the supporting research. *Credit units: 3 ECTS Credit Units: 6. Aut (Ü. Berkman)*

MBA 562 Human Resource Management
Human resource management (HRM) is one of the major functional areas in management. It is now widely accepted that all managers need to be aware of HRM to successfully deal with various managerial issues. In this course, it is aimed to give MBA students with little or no prior knowledge of HRM an academic understanding the subject. The development of HRM as an academic field is critically explored in its historical context, with a special emphasis on the differences between personnel management and HRM. Various functions and dimensions of HRM (i.e. recruitment and selection, training and development, performance management, etc.) are defined and discussed, by using case studies and real examples both from Turkey as well as from abroad. Contemporary issues around HRM (e.g. discrimination and diversity, downsizing, industrial relations, etc.) are also explored. The course eventually aims to stimulate answers to the following questions: firstly, why and how is HRM one of the most significant management functions? and secondly, who does HRM in organizations? This course helps MBA students who want to extend their background in HRM, whether or not they plan to work as specialists in this area. *Credit units: 2 ECTS Credit Units: 4.*

MBA 563 Group Processes and Team Dynamics
This student-centered course is designed to introduce students to the structural characteristics of teams including types of teams, size, composition, team roles and norms. The emphasis will be on team building and development, team design and effectiveness. Exercises, assessment tools and group activities will provide students with the opportunity to gain insight and practice team-based skills. Case illustrations will further help students to discover the challenges in teamwork. *Credit units: 3 ECTS Credit Units: 6. Aut (Z. Aygün Karakitapoğlu)*

MBA 565 Business Ethics
In this course individual, organizational, and macrolevel issues in business ethics are examined. The course aims to increase ethical awareness and it is designed to assist the student as a potential businessperson to make more informed ethical decisions. To accomplish this objective, ethical issues and dilemmas that managers and organizations may face are discussed and both descriptive and normative models of unethical and ethical decision making in business are analyzed. *Credit units: 2 ECTS Credit Units: 4.*

MBA 566 Change Management
Edward Deming said in an interview that “we do not have to change, because staying in business is not compulsory”!! Charles Darwin wrote that “it is not necessarily the strongest or the most intelligent who survive, but those who adapt and change.” This course presents organizational change as an absolute necessity for all organizations that wish to become or remain competitive in the 21st Century. It explores the forces causing the need for change, the current models utilized for managing change, and the reasons why over 60% of all change efforts fail. Case studies, team projects, and individual research will constitute a major portion of this course. Emphasis will be placed on the practicalities of managing change as well as on the supporting research. *Credit units: 3 ECTS Credit Units: 6.*

MBA 568 Enterpreneurship and Innovation Management
This course covers approaches to the study of entrepreneurship and discusses challenges that companies face in identifying, creating and exploiting opportunities for innovation on a systematic basis. The objective of the course is to develop students' skills to manage and champion creativity and innovation in ventures and established companies. Within this context, family businesses and the private sector development and innovation in Turkey will also be explored. *Credit units: 3 ECTS Credit Units: 6. Aut (L. Tomruk)*

MBA 569 Enterpreneurship and Innovation Management II
This course discusses challenges that companies face in identifying, creating and exploiting opportunities for innovation on a systematic basis. The objective of the course is to develop students' skills to manage and champion creativity and innovation in ventures and established companies. All aspects of managing innovation; from recognizing the need and desire to be creative and innovative, using imagination to add value, developing structures, systems and incentives that encourage and implement innovation, are discussed. Within this context, family businesses and the private sector development and innovation in Turkey will also be explored. *Credit units: 2 ECTS Credit Units: 4.*

MBA 570 International Business I
This course will provide an understanding of international business as an essential part of globalization. The international business environment will be evaluated in economic, cultural, political, and legal aspects to explore how international businesses are initiated and conducted. Economic integration among nations will be discussed with emphasis on Europe. Methods of entry into foreign markets via licensing, franchising, joint ventures, coventures, and foreign direct investment will be reviewed providing actual real life examples. *Credit units: 2 ECTS Credit Units: 4.*

MBA 573 International Business II
Credit units: 2 ECTS Credit Units: 4.

MBA 574 EU Integration
The course is split into two equally important parts: an introduction to EU Law Making with special emphasis on EU case law and how business can influence the decision-making process as stakeholders; and an introduction to the need for the supremacy of economic harmonisation over political integration in the European Union of 25 after the initial defeat of the European Constitution. Topics include besides others: The EU institutions and their functionality in EU Law Making/EU case law/Public procurement and access to public contracts for EU business/The 35 acquis chapters/Economic policies in other New Member States/Welfare state vs. Anglo-Saxon liberalism/Cleavages and issues in both Turkey and the EU. *Credit units: 2 ECTS Credit Units: 4.*

MBA 575 SME's and Cross Border Ventures
The course is designed for students who are interested in learning more about the linkage between entrepreneurship and small and medium sized enterprises as well as about the management of people and thus, change. In many countries, SMEs form the backbone of economic activities (including Turkey and the United Kingdom). Entrepreneurship, leadership, cross-border ventures, research and development, national and European funding, coaching, human resources management, business analysis and plans including SWOT are some of the areas covered. The course aims at addressing the problem of how to bridge the gap between academic research and practical business administration for future managers and related roles/functions. Obstacles and opportunities for Turkish SMEs in connection with Turkey's position as future EU member state as well as a field-up and one guest lecture form an integral part of the module. *Credit units: 2 ECTS Credit Units: 4.*

MBA 576 Business Plan Development
This course concentrates on business plans as an essential part of starting a business and also demonstrates business plans including determination of the contents and will include the assessment of actual plans. The course will be designed to help the students to incorporate the contents of the core management courses. Upon the completion of the course the students are expected to analyze, prepare and evaluate the components of a business plan. *Credit units: 2 ECTS Credit Units: 4. Aut (M. Akman)*

MBA 580 Sales Management
This course focuses on the activities functions, challenges and opportunities of the sales force manager, analyzes the key elements of the sales strategy, and shows how an effective sales strategy supports the overall marketing effort. This course discusses design of sales organization structure, recruitment, selection, training, motivation, assessment and compensation of salespeople. *Credit units: 2 ECTS Credit Units: 4.*

MBA 582 New Product Design and Marketing
New products and services are vital to the success of all companies and their brands. However, innovation is risky and most new products fail in the marketplace. Ineffective marketing is the primary cause of new products failures whose financial impact to the economy is significant. Thus, expertise in the marketing and design of new products is a critical skill for all managers, inside and outside of the marketing department. In this course, we focus on the tools and techniques associated with analyzing market opportunities and then designing, testing and introducing new products and services. Both quantitative and qualitative approaches are covered. In particular during the course, we'll use real case studies and competitive team projects to understand and apply the new

product development process, market entry strategies, how to generate new products ideas, mapping customer perceptions, segmentation, product positioning, forecasting market demand, and product design. *Credit units: 2 ECTS Credit Units: 4. Aut (M. Protano)*

MBA 591 Business Strategy

A capstone course utilizing comprehensive cases as the means of integrating all aspects of strategic management. Synthesizes the previous training in functional areas to address the evaluation, formulation and implementation of corporate and business level strategies in relation to the firm's environment. *Credit units: 4 ECTS Credit Units: 8. Aut (J. Couvas)*

MBA 592 Business Practice

This course is an application course that requires students to complete a project for a company either a management consulting project or a business plan for a company. *Credit units: 4 ECTS Credit Units: 8. Aut (E. Erel)*

MBA 597 Business Strategy Simulation

This course intended for students, who participated in an exchange program, to complete their ECTS credits for the MBA 591 Business Strategy course. *Credit units: 1 ECTS Credit Units: 2.*

MBA 598 Independent Study

Independent research or study under the guidance of a faculty member *Credit units: 2 ECTS Credit Units: 4.*

MBA 599 Summer Training

The minimum time for this practice in an organization is six weeks (30 working days). The main objectives is to observe a company in an original setting and answer questions on the fundamental areas of Business Administration. A written report summarizing the training experience is required. *Credit units: 2 ECTS Credit Units: 4.*

MBA 600 MBA Project I

This course is designed to guide students to study a business related-research topic. Students must finish their proposal and literature review during this course. *Credit units: 3 ECTS Credit Units: 6.*

MBA 601 MBA Project II

A thesis will be an effort that results in a contribution to the industry, as an application of an existing theory or practice, or a synthesis of the literature. Graduation is subject to approval of the thesis by the thesis committee and completion of a successful defense. *Credit units: 3 ECTS Credit Units: 6.*

MBA 603 Advanced Investments

Advanced Investments is an advanced course in investments or asset pricing, intended for MBA students seeking to conduct future applied work in finance. Asset pricing is concerned about to describe and explain how asset prices are formed in financial markets. Among the topics covered are expected utility and risk aversion; mean-variance analysis; CAPM, APT and linear factor models; single-period and multiple-perion portfolio choice and consumption decisions; multiperiod asset pricing models; pricing of derivatives; and term-structure models. *Credit units: 3 ECTS Credit Units: 6.*

MBA 631 Competitive Marketing Strategy

Competitive Marketing Strategy is a rigorous course that focuses on the vital skills that all business managers need to know in order to create winning strategies as you face competitive forces at the product and service level. The premise of the course is that firms are successful when they implement strategies that create and capture value. Thus, the objectives of the course are to learn how to (a) analyze competition, category, company, customers and consumers in specific marketplace situations; (b) create strategies that maximize competitive advantages in gaining economic profit; and (c) formulate plans to implement those strategies. You'll not just be developing strategy; you will also learn to become a strategy critic when you serve on an executive board examining, questioning and voting on another student team's strategic plan for a case study. In addition, you will gain valuable experience as you fine-tune verbal and written presentation skills. The course consists of lectures and case presentations. Topics covered include both the process and content of strategic action and interaction; measuring and mapping value; strategic models; brands and other major sources of competitive advantage; methods for comparing competitive offers and strategies; scenario analysis; competitive signaling and competitive intelligence. *Credit units: 2 ECTS Credit Units: 4.*

MBA 632 E Commerce and Internet Marketing

E-commerce & Internet Marketing is a combined intensive course designed to prepare students to be strategic decision makers in firms (small or large) that are impacted by emerging digital technologies and interested in harnessing the power of the web to grow their business. The rise of the internet and its proliferation as a mass medium has transformed the traditional role of marketing. Business has become more interactive, individualized and efficient. And according to folk at the MIT Media Labs, "the best is yet to come." On the e-commerce side, we examine commercial opportunities created by information technology. We study the enabling infrastructure, its application to fundamental business processes, and strategies in pursuing electronic commerce initiatives. In order to grow and profit from an e-commerce business, we then focus on developing online marketing strategies and tactical plans in response to the evolving online buyer profiles, attitudes and behaviors. Students will be

exposed to the tools necessary to identify appropriate target segments, develop product opportunities, price in a real time environment, maximize access, build a brand and create long term profitable relationship equity. *Credit units: 2 ECTS Credit Units: 4.*

MBA 662 International Human Resource Management

This course aims to explore human resource management (HRM) within a comparative and international context. While international dimensions of HRM is critically discussed with participants who have a basic level of knowledge in HRM, policies and practices of multinational corporations (MNCs), particularly those from the USA, will be emphasized. The most significant substantive HRM issues, i.e. recruitment and selection, performance management systems, training and development, and labour relations will be covered within this framework through readings and using case studies. *Credit units: 2 ECTS Credit Units: 4.*

MBA 671 Growth Through Globalization: Creating and Managing the International Enterprize

The purpose of this course is to provide students with the knowledge and skills of how to apply management theory and practical tools used by managers in the process of the globalization of the enterprise, whether an MNC or SME, already established internationally or aspiring at entering foreign markets. The course covers the key aspects of international expansion, from opportunity evaluation to decision making in the selection of target countries; political analysis affecting forms of market-entry; quantitative and qualitative success factors; implementation project management in a multicultural and multiple stakeholder environment; day-to-day management challenges; and investment considerations. It also addresses particularities of competition in the global marketplace, strategic and operational focus similarities and differences between selected industry sectors, and highlights new possibilities for revenue growth through penetration of emerging markets. *Credit units: 2 ECTS Credit Units: 4.*

MBA 672 Leadership for International Managers

This course aims at providing students with the knowledge and skills for recognizing leadership patterns and developing competencies and attitudes that will enhance their own competitiveness in the corporate arena and contribute to developing their personal managerial styles. It combines management theory and practical tools used by managers to carve a leading role for their organizations ? Whether commercial enterprises or not-for-profit organizations ? in the global environment, taking into consideration the impact of cultural diversity and the increasing importance of the emerging markets on drawing and implementing international strategies successfully. *Credit units: 2 ECTS Credit Units: 4.*

MBA 673 International Business Strategy

Business conducted internationally entails the consideration of a far greater range of variables and associations than business conducted in the home country. Accordingly, in this course we study the environment, markets, institutions, challenges, strategy, and operations of international and cross-cultural business. We also examine the globalization of business and associated challenges posed for the competitiveness of the modern enterprise, as well as orientations, strategies, and tactics appropriate for international business success. Upon conclusion of this course, students should: (a) become sensitized to the urgency and challenges of international business for the contemporary enterprise; (b) have substantial understanding of fundamentals of international business with respect to major world markets, their environments and consumers; (c) understand basic managerial requirements for the successful performance of firms in international business; (d) be able to fit in quickly and perform in the international business operations of any firm. *Credit units: 2 ECTS Credit Units: 4.*

MBA 674 Global Supply Chain Strategy

Supply Chain management is about optimizing the flows of materials, information, and capital across supply chains formed by suppliers, procedures (including service providers), distributors, retailers, and consumers. The course starts with an introduction to supply chain management and reviews the key competitive priorities of quality, cost, speed, and the right product mix along with the supporting philosophies of just-in-time/lean, total quality management/six sigma, and theory of constraints. Key performance measures are identified, supply chains of different companies are discussed and some of the key areas to improve to support the competitive priorities and the performance measures are addressed. These areas include supply chain alignment, cost-cutting partnerships, strategic sourcing decisions, achieving innovation and resilience across the supply chain, reduction of cycle-times, speedy delivery to the markets, and balancing the global risks and returns across supply chains *Credit units: 2 ECTS Credit Units: 4.*

MBA 675 Enterprise Resource Planning (ERP) Systems: Strategy and Practice

This is a managerial overview course for Enterprise Resource Planning Systems implementations. With this course, the students are expected to become familiar with the whole Enterprise Systems implementation life cycle from deciding to implement to post-implementation support. Some of the strategic issues that will be covered are implementation planning, organizational change management, knowledge management, business process reengineering, best practices, implementation methodologies and project management for ERP systems. This course is the first step to prepare the students to take part in ERP implementation project as a business user,

business manager, implementation team member or to consider other ERP related careers. The course will also give the ability to hear experiences of ERP professionals in the United States (through video presentations). *Credit units: 2 ECTS Credit Units: 4.*

MBA 676 Globalization Branding and Emerging Markets

This course focuses on the impact of globalization on the emerging markets and examines the marketing strategies of domestic and foreign firms operating in emerging economies. The course consists of three subsections: the consumptioncape and business environment of the emerging markets; the multinationals operating in the emerging markets; emerging giants - opportunities, risks, and strategic alternatives facing emerging market companies. All three sections are supported by cases. *Credit units: 2 ECTS Credit Units: 4.*

MBA 677 Negotiating Skills for International Executives

This course aims at providing the students with knowledge and skills to understand the dynamics of cross-cultural negotiations in the global business environment and apply in practice proven techniques in a variety of circumstances. After an initial skill assessment of the participants, theory and cases inspired from real-life situations alternate in order to immerse the participants and equip them with first hand experience. role playing, feed-back, self-evaluation, and multi-media aids are some of the pedagogical tools used. One-on-one, multiparty, cross-border, government, mediation, alternate conflict resolution approaches are addressed, to degrees tailored to the profile and needs of the students. The topic of negotiations in the work-place for personal achievement is also covered. Assignments are used for ongoing evaluation, and final examination is in the form of a short essay. *Credit units: 2 ECTS Credit Units: 4.*

FACULTY OF ECONOMICS, ADMINISTRATIVE AND SOCIAL SCIENCES

Metin Heper, Ph.D., Dean
Hatice Pınar Bilgin, Ph.D., Asst. Dean
M. Nedim Karakayalı, Ph.D., Asst. Dean

The Faculty of Economics, Administrative and Social Sciences comprises five academic departments:

- Economics
- History
- International Relations
- Political Science
- Psychology

The Departments of Economics, International Relations, and Political Science offer programs leading to Bachelor's, Master's, and Doctor of Philosophy degrees, while the Department of History has only a graduate program leading to M.A. and Ph.D. degrees. The Department of Psychology offers a Bachelor's degree program.

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Ph.D., History, Cambridge University, 1990. Modern European history.

Syed F. Mahmud, Visiting Associate Professor
Ph.D., Economics, McMaster University, 1986. Econometrics, applied econometrics, macro economics.

Sean McMeekin, Assistant Professor (on leave)
Ph.D., University of California, Berkeley, 2001. Soviet recent history.

Kıvılcım Metin, Associate Professor
Ph.D., Economics, St. Cross College, Oxford, 1992. Econometrics, macroeconomics.

Bilin Neyaptı, Associate Professor
Ph.D., Economics, University of Maryland, 1997. Macroeconomics, monetary economics, institutional economics.

Tarık Oğuzlu, Assistant Professor
Ph.D., International Relations, Bilkent University, 2003. Turkey's Relations with the European Union, NATO and the United States, European Union's Security, defence and Foreign Policies, Turkish-Greek Relations, Cyprus Dispute, Turkey's Foreign Policy towards Iraq and Iraqi Turkmens, International Relations Theory.

İlber Ortaylı, Visiting Professor (on leave)
Ph.D., Political Science, University of Ankara, 1974. Ottoman social history, Russo-Turkish relations.

Çağla Ökten, Associate Professor
Ph.D., Economics, Northwestern University, 1999. Industrial organization, economics of competition and anti-trust, applied microeconomics.

Ergun Özbudun, Professor
Ph.D., (LL.D.), Public Law, Ankara University, 1962. Constitutional law, Turkish politics, political parties, electoral studies.

Saime Özçürümez Bölükbaşı, Visiting Assistant Professor
Ph.D., Political Science, McGill University, 2005. Comparative politics, European Union law, minority rights.

Oktay Özel, Assistant Professor
Ph.D., History, University of Manchester, 1993. Ottoman socio-economic history, demographic changes, methods and problems in historical writings.

Emre Özgen, Assistant Professor
Ph.D., Psychology, University of Surrey, 2000. Cognitive psychology, color perception, perceptual learning, vision research.

Ümit Özlale, Assistant Professor
Ph.D., Economics, Boston College, 2001. Monetary economics, applied macroeconomics.
Evgeni Radushev, Visiting Assistant Professor
Ph.D., History, Bulgarian Academy of Sciences, 1982. Ottoman diplomatics and paleography, Ottoman socio-economic, political and ethnocultural history.
Hüseyin Çağrı Sağlam, Assistant Professor
Ph.D., Economics, Université Catholique de Louvain, 2003. Macroeconomics.
Jeremy Salt, Visiting Associate Professor
Ph.D., Middle Eastern History, Melbourne University, 1980. Middle Eastern studies.
Zeki Sarıgil, Assistant Professor
Ph.D., Political Science, University of Pittsburgh, 2007. Turkish Politics, comparative Politics.
Selin Sayek Böke, Assistant Professor
Ph.D., Economics, Duke University, 1999. Macroeconomics, International economics.
Duygu Sezer, Professor
Ph.D., International Relations, Ankara University, 1971. International Security, European Integration, Globalization, Russian Studies, Middle Eastern Peace Process.
Norman Stone, Professor
M.A., History, Cambridge University, 1965. Central European and Russian history, military history, economic systems.
Nil Seda Şatana, Assistant Professor
Ph.D., International Relations and Comparative Politics, University at Buffalo (SUNY), 2006. Inter state conflict, civil-military relations, terrorism.
Zerrin Tandoğan, Instructor
Ph.D., Anthropology, Hacettepe University, 1991. Social anthropology, international migration, multi-cultural relations, research ethics.
Fatma Taşkın, Associate Professor
Ph.D., Economics, Boston College, 1987. International economics, macroeconomics.
Ali Tekin, Assistant Professor
Ph.D., International Relations, University of Pittsburgh, 1997. International relations, global political economy, European union, Turkish political economy.
Ann-Marie Thornton, Instructor
M.Phil., French Literature, University of Exeter, 1994. Eighteenth-century France, the Enlightenment. Anglo-Saxon, Norse and Celtic.
David E. Thornton, Assistant Professor
Ph.D., University of Cambridge, 1991. Medieval history of the British Isles.
Sübidey Togan, Professor
Ph.D., Economics, Johns Hopkins University, 1972. International economics.
Kerstin Tomenendal, Instructor
Ph.D., Vienna University, 2004. Contemporary History.
Dimitris Tsarouhas, Assistant Professor
Ph.D., Political Science, University of Sheffield, 2005. European Integration, Political Economy, EU-Turkey Relations.
Gülgün Tuna, Senior Lecturer
Ph.D., International Relations, Florida State University, 1988. Global ecological problems, North-South relations, Peace Studies.
Fikret Üçcan, Instructor
Ph.D., Gazi University, 2007. Political Science.
Paul Williams, Assistant Professor
Ph.D., Political Science, University of California, Los Angeles, 1997. International relations theory, international political economy, global environmental politics.

Oliver A.C. Wright, Instructor
Ph.D., Psychology, University of Surrey, 2006. Cognitive psychology, cognitive development, colour perception.
Lerna Yanık, Assistant Professor
Ph.D., Government, Georgetown University, 2002. Turkish foreign policy in Eurasia, culture and international relations.
A. Erinç Yeldan, Professor
Ph.D., Economics, University of Minnesota, 1988. International economics, development macroeconomics, macroeconomic modeling.
Taner Yiğit, Assistant Professor
Ph.D., Economics, University of North Carolina, Chapel Hill, 1999. Macroeconometrics, monetary economics.
Osman Zaim, Associate Professor
Ph.D., Economics, Washington State University, 1989. Econometric model building, public finance, applied microeconomics.

PART-TIME ACADEMIC STAFF

Ömer Altay, Graduate Diploma, University of Essex, 1974.
İnci Apaydın, M.S., Operations Research, Middle East Technical University, 1989.
Hıdır Çolpan, M.A., Economics, University of Exeter, 1981.
Ferhat Emil, M.A., Economics, Northeastern University, 1984.
Behice Özlem Gökakın, Ph.D. Candidate, Department of International Relations, Bilkent University.
Vural Kural, M.A., Eastern Michigan University, 1989.
Bahar Onar, M.A., Rice University, 2003.
Mehmet Polat, M.S., Economics and Statistics, Middle East Technical University, 1978.

GENERAL SOCIAL SCIENCE COURSES

SOC 101 Introduction to Sociology

Introduces students to the subject matter, major concepts, and theoretical approaches of sociology. Includes readings in the works of both classical and modern theorists. Emphasis is on social organization and stratification, community, power, social change. *Credit units: 3 ECTS Credit Units: 5. Aut (D. Cindoğlu, A. Eren, N. Fehim-Kennedy, J. Gürzumar)*

SOC 203 Sociology of the Family

This course will be an analysis of the family as a social institution. Family organization, family structure, inheritance, sexual division of labor, and socialization within the family across various cultures will be the prime focus of study. The course will cover “traditional”, “modern”, and “alternative” family forms. The gendered role expectations present within marriage and family systems will be addressed, as well as, how current changes in social and economic contexts may lead to variations in family forms. Emphasis will be placed on how the emergence of women in the work force may be influencing the overall family system, especially with respect to men and children. *Credit units: 3 ECTS Credit Units: None.*

SOC 205 Socialization and Development

Using several theoretical perspectives, this course investigates the processes of socialization and personality formation through the life cycle. Emphasis is placed on the content, stages and agencies of socialization in a variety of social contexts. Discussion and analysis are based on social, social psychological and comparative data. A comprehensive coverage of cognitive development and social personality development for each stage of life will be undertaken. *Credit units: 3 ECTS Credit Units: 6.*

DEPARTMENT OF ECONOMICS

F. Taşkın (Chair), N. Alemdar, N. Arnwine, H. Berument, E. Durceylan Kaygusuz, A. Ertuğrul, R. Gürkaynak, K. Hasker, F. Hüseyin, Ş. Kalemli Özcan, M. Kara, T. Kara, S. Koray, S. F. Mahmud, K. Metin, B. Neyaptı, Ç. Ökten, Ü. Özlale, H. Ç. Sağlam, S. Sayek Böke, S. Togan, A. E. Yeldan, T. Yiğit, O. Zaim.

Part-time: Ö. Altay, İ. Apaydın, H. Çolpan, F. Emil, V. Kural, B. Onar, M. Polat.

Economics is the study of the behavior of economic units, institutions and systems and the choices that they make with respect to the allocation of scarce resources between production and consumption. It is concerned with a wide range of problems that directly affect society: the causes of unemployment and inflation, productivity and economic growth, foreign debt and trade links, and the role of government in market economies.

UNDERGRADUATE PROGRAM

The program leading to the Bachelor's degree in Economics combines training in technical economics with opportunities for a broad and balanced undergraduate education. The program aims to give the students a solid grounding in modern economic theory and accompanying skills necessary for independent and critical thinking which will allow them to acquire an understanding of the Turkish and the world economy. The aim is achieved through a flexible curriculum which is structured to provide the basic social science and quantitative toolbox necessary for all economists in the first two years, followed by a student-tailored curriculum in the last two years during which the students choose a track of study they prefer to complete under economics. These tracks cover all general economics fields including Academics Economics Track which aims to prepare students for a highly quantitative graduate study, Macroeconomics Track which emphasizes topics about the workings of the macroeconomy such as monetary and international economics, Microeconomics Track which focuses on the decision making of individuals and firms in depth, Managerial Economics Track which capturing the synergy issues between management and economics, and finally a General Economics Track which allows the students to explore cross tracks during their studies. All of these general tracks are supported by a range of free electives allowing students to becoming well-rounded social scientists and furthermore university graduates.

UNDERGRADUATE CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
CS 123	Introduction to Computing and Programming for Social Sciences	3 / -
ECON 101	Introduction to Economics I	3 / 6
ENG 101	English and Composition I	3 / 6
GE 100	Orientation	1 / 1
HCIV 101	History of Civilization I	3 / 6
MATH 105	Introduction to Calculus I	4 / 7
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
ECON 102	Introduction to Economics II	3 / 6
ENG 102	English and Composition II	3 / 6
HCIV 102	History of Civilization II	3 / 6
MATH 106	Introduction to Calculus II	4 / 7
TURK 102	Turkish II	2 / 1
	Elective (1)	3 / 6

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
ECON 203	Microeconomic Theory I	3 / 6
ECON 205	Macroeconomic Theory I	3 / 6

ECON 221	Introduction to Probability and Statistics I	3 / 6
ECON 225	Mathematics for Economists	3 / 6
HISTR 201	History of Turkish Republic I	2 / 1
	Elective (1)	3 / 6

Spring Semester Credits / ECTS Credits

ECON 204	Microeconomic Theory II	3 / 6
ECON 206	Macroeconomic Theory II	3 / 6
ECON 222	Introduction to Probability and Statistics II	3 / 6
HISTR 202	History of Turkish Republic II	2 / 1
	Electives (2)	6 / 12

THIRD YEAR

Autumn Semester Credits / ECTS Credits

ECON 301	Econometrics I	3 / 6
ECON 363	History of Economic Thought	3 / 6
	Track Course (1)	3 / 6
	Electives (2)	6 / 12

Spring Semester Credits / ECTS Credits

	Track Courses (2)	6 / 12
	Electives (3)	6 / 12

FOURTH YEAR

Autumn Semester Credits / ECTS Credits

	Track Courses (2)	6 / 12
	Electives (3)	6 / 12

Spring Semester Credits / ECTS Credits

	Track Course (1)	3 / 6
	Electives (4)	12 / 24

ELECTIVE COURSES

ECON 321	Financial Institutions and Markets	3 / 6
ECON 323	Economics of Monetary Union	3 / 6
ECON 361	Methodology and Evolution of Social Theory	3 / 6
ECON 403	Issues in Public Finance	3 / 6
ECON 405	Issues in Macro Economics	3 / 6
ECON 406	Issues in Macro Economics	3 / 6
ECON 407	Economics of Crises	3 / 6
ECON 408	Financial Economics	3 / 6
ECON 409	Contemporary Issues in Turkish Economy I	3 / 6
ECON 410	Contemporary Issues in Turkish Economy II	3 / 6
ECON 415	Mathematics for Economists I	3 / 6
ECON 416	Mathematics for Economists II	3 / 6
ECON 417	Environmental Economics I	3 / 6
ECON 421	General Equilibrium	3 / 6
ECON 423	Time Series Analysis in Economics and Finance I	3 / 6
ECON 424	Time Series Analysis in Economics and Finance II	3 / 6
ECON 426	Applied Economic Analysis	3 / 6
ECON 430	Economics of Regulation and Antitrust	3 / 6
ECON 432	Turkish and World Economy in the 20th Century	3 / -
ECON 433	Industrial Economics I	3 / 6
ECON 434	Industrial Economics II	3 / 6
ECON 435	International Political Economy	3 / 6
ECON 437	Positive Political Economy	3 / 6
ECON 438	Economics of Competition	3 / 6
ECON 439	Game Theory I	3 / 6
ECON 440	Game Theory II	3 / 6
ECON 443	Advanced Economic Theory	3 / 6
ECON 453	Theories of Economic Growth and Development I	3 / 6

ECON 454	Theories of Economic Growth and Development II	3 / 6
ECON 455	Institutions and Development	3 / 6
ECON 458	Labor Market Economics	3 / 6
ECON 471	Economics of Transition	3 / 6

TRACK REQUIREMENTS

Each student has to choose a track that comprises of six classes at the end of their fourth semester. The tracks are: Academic Economics Track, Macroeconomics Track, Microeconomics Track, Managerial Economics Track, and General Economics Track. The track courses contents are listed below:

Academic Economics Track

ECON 302 Econometrics II
ECON 439 Game Theory I
ECON 443 Advanced Economic Theory
MATH 225 Linear Algebra and Differential Equations
MATH 215 Mathematical Analysis
One of the following two courses:
* ECON 401 Seminar on Microeconomic Policy
* ECON 402 Seminar on Macroeconomic Policy

Macroeconomics Track

ECON 331 International Economics I
ECON 332 International Economics II
ECON 322 Monetary Economics
ECON 432 Turkish and World Economy in the 20th Century
ECON 443 Advanced Economic Theory
ECON 402 Seminar on Macroeconomic Policy

Microeconomics Track

ECON 351 Fiscal Economics I
ECON 433 Industrial Economics I
ECON 439 Game Theory I
ECON 430 Economics of Regulation and Antitrust
Any course from Faculty of Law
ECON 401 Seminar on Microeconomic Policy

Managerial Economics Track

MAN 213 Principles of Financial Accounting
MAN 321 Corporate Finance
Any course from Faculty of Law
ECON 432 Turkish and World Economy in the 20th Century
Any two of the following courses:
* MAN 262 Organizational Behavior
* MAN 335 Fundamentals of Marketing
* MAN 341 Production Management
* MAN 447 Project Management

General Economics Track

Any four 300 or above level course from the Department of Economics
Any two 200 or above level course from the Faculty of Management

ELECTIVE REQUIREMENTS

Regardless of the track a student has chosen, the elective composition of each student should adhere to the following quotas:

1. One 100 level social science elective.
2. Six 300-400 level electives (at least 2 are from Economics).
3. Two electives from any department, other than the Department of Economics, of the Faculty of Economics, Administrative and Social Sciences (FEASS) which are at least 200 level.
4. Seven general electives (2 of them non-FEASS courses).

GRADUATE PROGRAMS IN ECONOMICS

Graduate programs in economics aim to train students in such a way to enable them to carry out independent research. For this purpose, the programs are designed to ensure that the students get a solid background in both economic theory and the techniques used in empirical research. While the Department offers both M.A. and Ph.D. degrees, the M.A. degree is considered, in principle, as an intermediate step that is passed en route to the Ph.D. The core requirements common to both programs leave little room for choosing the courses to be taken in the first year, but the students are offered considerable flexibility as to their choice of the fields of specialization later on.

Students admitted to graduate studies in the department are expected to have a strong background in undergraduate level economics and some training in mathematics and statistics. Sufficient (though not necessarily a pre-condition) background would consist of an undergraduate degree in Economics, or a year-long calculus sequence that includes multivariate analysis, a course in linear algebra, and a course in probability and statistics. (Also refer to the “Graduate Admissions” section in the introduction of this catalog for the general graduate admission requirements.)

Master of Arts in Economics

The curriculum aims more toward preparing the students toward a Ph.D. degree. However, elective courses and a thesis study in the 2nd year gives the students the opportunity to over take practical training, preparing them for jobs in the government or private sector.

Prospective students must have completed Bilkent University’s requirements for a Bachelor of Arts degree in Economics or approximately equivalent training. Since students will be required to take some of the same courses as the Ph.D. candidates, similar preparation in mathematics and statistics is generally expected. Degree requirements for Master of Arts in Economics are:

1. The core curriculum for Master of Arts in Economics degree must be successfully completed. The courses in the core curriculum for Master of Arts in Economics include the graduate level Microeconomic Theory (ECON 503-504), Macroeconomic Theory (ECON 505-506), Mathematics for Economists (ECON 515-516), Probability and Statistics (ECON 509-510) sequences, and Pro-Thesis Seminar (ECON 590) and the Master’s Thesis (ECON 599) courses.
2. A Master’s thesis must be submitted and successfully defended.
3. A grade point average of at least 3.00 must be maintained for the duration of Master’s level work.

CURRICULUM OF MASTERS PROGRAM

Autumn Semester		Credits / ECTS Credits
ECON 503	Microeconomic Theory I	4 / 7
ECON 505	Macroeconomic Theory I	4 / 7
ECON 509	Probability and Statistics I	4 / 6
ECON 515	Mathematics for Economists I	3 / 6
ECON 599	Master's Thesis	- / -

Spring Semester		Credits / ECTS Credits
ECON 516	Mathematics for Economists II	3 / 6
ECON 590	Pro-Thesis Seminar	- / -
ECON 599	Master's Thesis	- / -

Doctor of Philosophy in Economics

The Ph.D. program in economics is a program requiring the attainment of scientific competence in conformity with international scientific standards. Admission to the doctoral program is by written application and an evaluation by the department. It is expected that admitted students will be adequately prepared in calculus, linear algebra, and statistics. (Also refer to the "Graduate Admissions" section in the introduction of this catalog for the general graduate admission requirements.)

All students take a common core curriculum at the outset and later branch out in the desired fields of specialization. The fields may be chosen from fiscal economics, international economics, macroeconomics, mathematical economics, monetary economics, and econometrics. Well-prepared students should anticipate spending approximately two years in course work and another two years in seminars, independent study, and dissertation research. While exceptional progress may make a three-year program feasible, some types of research programs will require at least five years to complete.

A candidate for the doctorate degree must:

1. Successfully complete the core curriculum for Ph.D. degree in Economics. The courses in the core curriculum for Ph.D. degree in Economics include the graduate level Microeconomic Theory (ECON 503-504), Macroeconomic Theory (ECON 505-506), Mathematics for Economists (ECON 515-516), Probability and Statistics (ECON 509-510) sequences and Pro-Thesis Seminar (ECON 590) and the Ph.D. Dissertation (ECON 699) courses.

2. Successfully complete the course requirements for Ph.D. degree by earning at least 24 credits from the courses listed under "Graduate Electives". (Some graduate courses offered by other departments may be counted towards this requirement.)

3. Show competence in two comprehensive examinations in macroeconomics and microeconomics within the first three semesters after being admitted to the Ph.D. program.

4. Submit a detailed thesis proposal while taking the ECON 699 course and give a seminar on this work.

5. Submit and successfully defend a dissertation that represents a contribution to knowledge in the field.

Candidates must be in residence for a minimum of three years including the period spent on the Master of Arts program.

CURRICULUM OF DOCTORATE PROGRAM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
ECON 699	Ph.D. Dissertation	- / -
	Graduate Electives (3)	9 / 18

Spring Semester		Credits / ECTS Credits
ECON 699	Ph.D. Dissertation	- / -
	Graduate Electives (3)	9 / 18

SECOND YEAR*

Autumn Semester		Credits / ECTS Credits
ECON 699	Ph.D. Dissertation	- / -
	Graduate Elective	3 / 6

Spring Semester		Credits / ECTS Credits
ECON 699	Ph.D. Dissertation	- / -
	Graduate Elective	3 / 6

During each semester of the second year at least three credit units of electives must be taken. The Ph.D. candidate may also take elective courses for credit in the third and fourth years of study. These electives may include courses from other departments or institutions as well as courses offered by the Department. There is no upper or lower limit on the number of such courses.

GRADUATE ELECTIVES*

Autumn Semester		Credits / ECTS Credits
ECON 513	Game Theory I	3 / 6
ECON 517	Mathematical Economics I	3 / 6
ECON 521	International Economics I	3 / 6
ECON 531	Economic History I	3 / 6
ECON 551	Studies in Growth and General Equilibrium Modeling I	3 / 6
ECON 561	Topics in Microeconomic Theory I	3 / 6
ECON 563	Topics in Macroeconomic Theory I	3 / 6
ECON 571	Fiscal Economics I	3 / 6
ECON 575	Monetary Economics I	3 / 6

Spring Semester		Credits / ECTS Credits
ECON 514	Game Theory II	3 / 6
ECON 518	Mathematical Economics II	3 / 6
ECON 522	International Economics II	3 / 6
ECON 532	Economic History II	3 / 6
ECON 536	Methodology and History of Economics	3 / 6
ECON 552	Studies in Growth and General Equilibrium Modeling II	3 / 6
ECON 562	Topics in Microeconomic Theory II	3 / 6
ECON 564	Topics in Macroeconomic Theory II	3 / 6
ECON 572	Fiscal Economics II	3 / 6
ECON 576	Monetary Economics II	3 / 6

*Some of these courses may be offered only every other year.

COURSE DESCRIPTIONS

UNDERGRADUATE COURSES

ECON 101 Introduction to Economics I
Introduces microeconomic concepts and analysis, supply and demand analysis, theories of the firm and of individual behavior, competition and monopoly, welfare economics. Application to problems of current economic policy. *Credit units: 3 ECTS Credit Units: 6. Aut (E. Durceylan Kaygusuz, M. Kara, Ç. Ökten, S. Sayek Böke, T. Yiğit)*

ECON 102 Introduction to Economics II
An overview of macroeconomic issues: the determination of output, employment, unemployment, interest rates, and inflation. Monetary and fiscal policies are discussed as well as international economic issues. Introduces basic models of macroeconomics and illustrates principles with the experience of Turkish and foreign economies. *Credit units: 3 ECTS Credit Units: 6. Aut (N. Arnwine, Ü. Özlale, A. E. Yeldan)*

ECON 103 Principles of Economics
Introduces the basic concepts of micro and macro economics, supply and demand analysis, and economic theories. The implications of economics in regards to social issues and the role of economics in the field of communication and advertising are discussed. *Credit units: 3 ECTS Credit Units: 6. Aut (M. Polat)*

ECON 105 Principles of Economics I
Introduction to basic microeconomic concepts. What is microeconomics all about? Economists' approach to current microeconomics issues at the individual household and firm level. Government's micro policies in providing incentive for production, consumption, and technology choice. Current debates on firm behavior, "new economy", and issues of privatization and efficient use of resources. Market organizations, welfare and the firm objectives. *Credit units: 3 ECTS Credit Units: 6. Aut (İ. N. Durubal) Spr (İ. N. Durubal)*

ECON 106 Principles of Economics II
An overview of macroeconomic issues. The concept of the gross national product and its determination. Theories of macroeconomic equilibrium and government policies to effect the gross national product, employment, investment, and foreign trade. Current issues on the "global economy", international economic organization and Turkey's role in a changing world macroeconomic environment. *Credit units: 3 ECTS Credit Units: 6.*

ECON 201 Economic Theory I
Basic theory of consumer behavior, production and costs, partial equilibrium, analysis of pricing in competitive and monopolistic markets, general equilibrium, welfare and capital. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 101.*

ECON 202 Economic Theory II
Theory of national income determination, static and dynamic; components of aggregate demand; analysis of aggregate supply. Theory of growth and inflation. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 102.*

ECON 203 Microeconomic Theory I
This course is the first part of an intermediate level microecenomics sequence. Consumer theory, theory of the firm, and partial equilibrium theory are studied in depth. Applications of the partial equilibrium model to public finance and trade are also covered. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 101 and MATH 106. Aut (K. Hasker, B. Onar, O. Zaim)*

ECON 204 Microeconomic Theory II
This course is the second part of on intermediate level microeconomics sequence. Topics covered are: general equilibrium, welfare economics, monopoly, imperfect competition, externalities and public goods, uncertainty and information, and game theory. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 203.*

ECON 205 Macroeconomic Theory I
This course is the first part of an intermediate level macroeconomics sequence. Besides the analysis of national income determination, inflation and unemployment, analysis of aggregate supply and growth theories will be introduced. Within the frameworks of basic business cycle models, demand side equilibrium, and the IS/LM models (including its open economy version) fiscal and monetary policy effectiveness will be studied. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 102 and MATH 105. Aut (N. Alemdar, N. Arnwine, H. Berument)*

ECON 206 Macroeconomic Theory II
This course is the second part of the intermediate macroeconomics sequence and it focuses on microfoundations in order to study macro models. Among the subjects are the consumption and investment theories, inflation and unemployment trade-off, and fiscal and monetary policy design and institutions with regards to open economy macroeconomics, exchange rate models and current account dynamics that are grounded in the intertemporal optimization problem of the representative agent will also be introduced. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 205.*

ECON 211 Economic History
A survey of world economic history designed to introduce students to the subject matter and methodology. Various aspects of European and Turkish experiences are emphasized. *Credit units: 3 ECTS Credit Units: 6.*

ECON 221 Introduction to Probability and Statistics I
Descriptive statistics. Fundamental concepts of probability. Combinatorial methods. Conditional probability. Random variables, univariate and bivariate distribution. Expectation, variance, covariance and correlation.

Some commonly used discrete and continuous probability distributions, the law of large numbers and the central limit theorem. *Credit units: 3 ECTS Credit Units: 6. Aut (İ. Apaydın, K. Metin, B. Neyaptı, Ü. Özlale)*

ECON 222 Introduction to Probability and Statistics II
Sampling and sampling distributions. Introduction to inference. Point and interval estimation. Hypothesis testing. Small sample distributions (t, X^2, F). Introduction to analysis of variance, regression and distribution free methods. Applications using statistical computer programs. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 221. Aut (T. Kara)*

ECON 225 Mathematics for Economists
Multivariate calculus, constraint optimization, Hessians, implicit function theorem, difference equations. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MATH 106. Aut (F. Hüseyin)*

ECON 301 Econometrics I
Introduction of linear multiple regression model, inference, hypothesis testing; and maximum-likehood methods. Illustration from economics and application of these concepts to economic problems will be emphasized. The course covers Gauss-Markov assumptions and violation of the assumptions such as heteroskedasticity, serial correlation and errors variables. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 101 and ECON 102 and ECON 222. Aut (H. Berument, F. Taşkın)*

ECON 302 Econometrics II
Identification and estimation of simultaneous equation models. Advanced topics such as Generalized Least Squares, instrumental variables, non-linear regression techniques and limited dependent variable models. An introduction to time-series analysis such as stationary and nonstationary processes, VARs, unit roots, and cointegration. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 301. Aut (Staff)*

ECON 308 Forecasting
Quantitative and statistical techniques for forecasting and decision sciences. *Credit units: 3 ECTS Credit Units: 6.*

ECON 321 Financial Institutions and Markets
Role and functioning of the capital and money markets as a device for the allocation of resources, the channeling of investable funds, and reallocation of risk. Function of financial intermediaries operating in these markets. International financial relations. Monetary history. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 201 or ECON 202 or ECON 204 or ECON 206.*

ECON 322 Monetary Economics
Basic models of money and monetary economics; the role of expectations; asset pricing models with special reference to equities and the term structure of interest; the Phillips curve; banking and financial intermediaries, monetary and fiscal policies. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 202.*

ECON 323 Economics of Monetary Union
Contemporary issues of monetary integration; the European Monetary Union experience; Euro zone; monetary and fiscal policies for monetary union targets; the Maastrich Criteria; Central Bank Independence and Price Stability. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 202 or ECON 206. Aut (Ö. Altay)*

ECON 331 International Economics I
Theory of international trade and applications in commercial policy. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 201. Aut (S. Togan)*

ECON 332 International Economics II
Adjustment in international economic relations with attention to foreign exchange markets, balance of payments, and the international monetary system. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 201 or ECON 202 or ECON 204 or ECON 206.*

ECON 351 Fiscal Economics I
First and second best fiscal theory. Incidence models. Economic response to taxation. Quantitative analysis of economic effects of fiscal instruments and fiscal changes. Government finance statistics; tax and expenditure structures; the budget and government financing; fiscal management in Turkey and abroad. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 201 or ECON 204. Aut (S. F. Mahmud)*

ECON 352 Fiscal Economics II
Continuation of the course ECON 351 with particular attention paid to the fiscal aspects of Macroeconomic Theory, Local governments and international issues such as tax harmonization. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 202 or ECON 206.*

ECON 361 Methodology and Evolution of Social Theory
The course introduces concepts of the evolution of social theorizing in economics; alternative paradigms of economics; basic approaches to research methodology with emphasis on philosophy and epistemology; critical thinking on the economic rationale. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 201 and ECON 202.*

ECON 363 History of Economic Thought
The main topic of this course is the developments in the theoretical aspects of economics, after the marginal utility revolution. The context starts from 1870's with the contributions of major economists to marginal utility theory and applications. It proceeds with general and partial equilibrium analyses. Finally, Keynesian income determination, Moneterism, New Classical economy and post-Keynesian approaches are examined. *Credit units: 3 ECTS Credit Units: 6. Aut (M. Kara)*

ECON 400 Analytical Writing for Economist
For students in the department of economics, writing analytical and effectively is important. Thinking, writing and presenting effectively are increasingly becoming the determinants of success in the professional world. The course aims at developing the analytical writing and presentation skills of the students and emphasizes the discussion, presentation and conveying of ideas in the field of economics. The coursework will consist of the writing exercises and presentations of discussions in economic topics and issues. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

ECON 401 Seminar in Microeconomic Policy
The course aims to develop the student's skills to undertake an independent research project in the area of microeconomics. The structure of the course is designed to improve student's presentation and writing skills. The course outline includes a comprehensive reading list in microeconomic theory and policy issues. he students are required to gain familiarity with the topics through weekly in-class discussions, presentations and written reports. Furthermore the students are required to demonstrate proficiency in a strand of literature chosen from the assigned reading list, formulate an academic hypothesis and complete a research report as part of the course requirements. *Credit units: 3 ECTS Credit Units: None.*

ECON 402 Seminar in Macroeconomic Policy
The course aims to develop the student's skills to undertake an independent research project in the area of microeconomics. The structure of the course is designed to improve student's presentation and writing skills. The course outline includes a comprehensive reading list in microeconomic theory and policy issues. he students are required to gain familiarity with the topics through weekly in-class discussions, presentations and written reports. Furthermore the students are required to demonstrate proficiency in a strand of literature chosen from the assigned reading list, formulate an academic hypothesis and complete a research report as part of the course requirements. *Credit units: 3 ECTS Credit Units: None.*

ECON 403 Issues in Public Finance
Introduces fundamentals of deficit financing. The role of the bureaucracy and its relations with the government is discussed with an emphasis on the role of the Treasury and its functioning. New orientalism in government financial management, government balance sheet approach, expenditure management and control issues are other topics that are covered in this course. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 202 or ECON 206.*

ECON 405 Issues in Macro Economics
Principles of mathematical induction and training in areas of mathematics such as optimization theory which have applicability to economic problems. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 202 or ECON 206.*

ECON 406 Issues in Macro Economics
This course is offered from the New York office of Bilkent via satellite connection. It covers contemporary theories of macroeconomics with special emphasis on current issues such as stabilization, unemployment, central bank independence and monetary control, and inflation targeting. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 202 or ECON 206. Aut (Staff)*

ECON 407 Economics of Crises
The course aims to acquaint the students with the economics of crises. It will review the recent developments in economic theory and the evidence from the crises in Asia, Brazil, Argentina and Turkey, emphasizing their differences from previous crises. It will discuss the importance of capital flows and the approaches to reforming the international financial system and will cover various methods of coping with, and the measures to forestall future crises. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 102.*

ECON 409 Contemporary Issues in Turkish Economy I
Contemporary problems confronting the Turkish economy, structural adjustment reforms and macroeconomic policies. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 102.*

ECON 410 Contemporary Issues in Turkish Economy II
Turkish Economy in the 1990's, financial liberalization, Turkey and the European Union. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 102.*

ECON 411 History of Economic Thought I
A selective historical survey of the development of economic analysis giving varying degrees of attention to the contributions of Aristotle, Aquinas, Mun, Hume, Smith, Malthus, Ricardo, Marx, Mill, Walras, Marshall, Keynes and Schumpeter. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 201 and ECON 202. Aut (A. Ertuğrul, M. Kara)*

ECON 412 History of Economic Thought II
Continuation of the History of Thought I, with emphasis on post-Neoclassical economics, the rise and fall of Keynesianism, the new classical macroeconomics, rational expectations and post-Keynesianism. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 201 and ECON 202.*

ECON 415 Mathematics for Economists I
This course will introduce the students to advanced mathematical techniques via discrete mathematics. The main topics covered are: proof techniques, recursive relations, difference equations, backward induction, dynamic programming and their applications. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 225.*

ECON 416 Mathematics for Economists II
Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 415.

ECON 417 Environmental Economics I
Analysis of environmental problems, cost-benefit analysis, techniques, costs of abatement. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 101.*

ECON 421 General Equilibrium
Theory of general competitive equilibrium from modern mathematical points of view. Topics include existence of equilibrium; fixed point theorems; computational techniques; and empirical general equilibrium models. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 201 and ECON 202.*

ECON 423 Time Series Analysis in Economics and Finance I
The course introduces students to the fundamentals of classical time series analysis in economics and finance. The topics covered in the course include classical issues of time series models, stationarity, ARIMA, Random Walk, Cointegration, VAR and ECM analysis, Causality, ARCH and GARCH models. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 302.*

ECON 424 Time Series Analysis in Economics and Finance II
This course is a continuation of Econ 423, the aim of the course is to introduce students to contemporary time series analysis with a special emphasis on high-frequency data applications. The topics covered are Linear Filters, Optimum Linear Filters, Wavelet transformation, Artificial Neural Networks, Multifractality and Scaling Analysis, Stochastic Volatility, Markow Chains, and Extreme Value Theory. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 302.*

ECON 426 Applied Economic Analysis
Develop skills in the empirical analysis of economic theory, models and data. Emphasis will be placed on applications of finance theory and economics of privatization to the Turkish economy. Topics may vary with the instructor. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 301 and (ECON 201 or ECON202).*

ECON 430 Economics of Regulation and Antitrust
The course deals with questions such as what particular market failures provide a rationale for government intervention? How can economic theory illuminate the character of market operation, the role for government action, and the appropriate form of government action. What do formal empirical analyses of economic behavior and the effects of government intervention indicate about the direction that this intervention should take? Where does the antitrust policy stand within this framework? To provide the most up to date answers to these questions, the course utilizes economic theory and empirical analysis that have been devised to further understanding of regulations and antitrust policies. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 201 or ECON 204.*

ECON 432 Turkish and World Economy in the 20th Century
Growth and developments in Turkey and the World from World War I to present. The application of economic analysis to historical issues. Topics: Great Depression, the interwar period, the developments in Soviet type economies since 1917, the Bretton Woods System, the collapse of the Bretton Woods System, the collapse of communism, Turkish economy during the Great Depression and thereafter. *Credit units: 3 ECTS Credit Units: None.*

ECON 433 Industrial Economics I
This course will survey the current thinking and issues in industrial organization and regulation. The objectives of the course are both to examine in some depth how firms behave in a market economy, and to review some basic forms of state intervention in modern capitalist economics. The course will provide some background on firm behavior and, the legal environment in which they operate, and will review the rational and experience of antitrust and competition policies. The second semester will concentrate on the regulation of private monopolies. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 201 or ECON 204. Aut (Ç. Ökten)*

ECON 434 Industrial Economics II
Continuation of ECON 433. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 201.*

ECON 435 International Political Economy
Major international institutions and agreements such as the International Monetary Fund, the World Bank Group, The General Agreement on Tariffs and Trade, the Commodity Agreements, the Organization for Economic Cooperation and Development, European Union and the European Free Trade Association. These institutions will be discussed with emphasis on their origin, organization, functions and operations, policies and the role they play on the world economic order. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 331 and ECON 332.*

ECON 437 Positive Political Economy
This course is a survey of current economic development models with special emphasis on recent developments in the global economy, the changing nature of work such as female labor force participation, flexible labor systems, employment, and industrial relations. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 201 and ECON 202.*

ECON 438 Economics of Competition
This course explores the economic rationale for, and consequences of competition policies, antitrust laws, antidumping actions, countervailing duty actions, safeguard measures. In addition to economic analysis landmark cases will be studied. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 331.*

ECON 439 Game Theory I
This course is an introduction to the theory of games. Games theory provides a set of analytical tools that can be used to model the interactions of decision-makers (consumers, firms, politicians, government, etc). The course introduces the basic theory of noncooperative game theory. A variety of applications will be discussed. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 201 or ECON 204. Aut (K. Hasker)*

ECON 440 Game Theory II
Continuation of ECON 439 with emphasis on cooperative game theory. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 225.*

ECON 443 Advanced Economic Theory
Special topics in micro and macroeconomics. Topics include inflation and unemployment, theories of macroeconomic policies, economic stabilization, theories of the consumer and the firm welfare and general equilibrium analysis. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: (ECON 201 and ECON 202) or (ECON 204 and ECON 206). Aut (N. Alemdar)*

ECON 453 Theories of Economic Growth and Development I
Introduction to modern theories of growth; the neoclassical growth model; the golden rule of accumulation; transitional dynamics and the steady state; exogenous versus endogenous growth modeling; sources of growth and the convergence of nations; empirics of growth. Introduction to endogenous growth. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: (ECON 201 and ECON 202) or (ECON 204 and ECON 206). Aut (A. E. Yeldan)*

ECON 454 Theories of Economic Growth and Development II
Modern theories of endogenous growth; convex growth; models based on R and D spillovers and other sources of externalities. Degree of openness and growth. Alternative theories of growth and development: neo-Keynesian growth and structuralist macroeconomics. Modern theories of the real business cycle literature. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 201 and ECON 202.*

ECON 455 Institutions and Development
A synopsis of earlier development theories. Analysis of the linkages between economic development and macroeconomic institutions in the framework of “New Institutional Economics”. Empirical analysis of institutional designs that are related to fiscal and monetary policy making are introduced. Specifically, economic effects of fiscal decentralization; budgetary rules and procedures; central bank independence and inflation targeting are examined. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: (ECON 202 or ECON 206) and ECON 222. Aut (B. Neyaptı)*

ECON 458 Labor Market Economics
The economics of the determination of earnings and the allocation of labor. The theory of labor supply and labor demand will be developed, and then applied to questions of income distribution, unions, government intervention in the labor market, and discrimination. If time allows, the relation between unemployment and inflation will be discussed. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: (ECON 201 and ECON 202) or (ECON 204 and ECON 206).*

ECON 471 Economics of Transition
The course covers overall global processes of transition from command systems to market systems. The policy debates and theoretical contributions surrounding the implementation of price reform and the design of new institutions are introduced. The changed role of the state and the birth of the new entrepreneurial class are investigated within the realm of the globalized world economy. The post-soviet countries and their experiences

on policy reform are contrasted. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: (ECON 201 and ECON 202) or (ECON 204 and ECON 206).*

GRADUATE COURSES

ECON 500 Mathematics Review Course
The course is designed to maintain and develop amiliarity with the mathematical tools used in the Masters and PhD Program in the department of Economics. This course is designed to help students master an important set of mathematical skills necessary to study economics. It will cover basic concepts from calculus, linear algebra, optimization, and mathematical analysis, which will be used in the first year courses. *Credit units: 3 ECTS Credit Units: 6.*

ECON 501 Economics I
A course designed for MBA students of the Faculty of Business Administration. The fundamentals of micro- and macroeconomics. Theory of the firm, demand theory, and market structures are among the micro topics. Macro subjects include national income, theory of income determination, money and banking, monetary policy, and international trade. *Credit units: 3 ECTS Credit Units: 6.*

ECON 502 Economics II
A course designed for MBA students of the Faculty of Business Administration. The fundamentals of micro- and macroeconomics. Theory of the firm, demand theory, and market structures are among the micro topics. Macro subjects include national income, theory of income determination, money and banking, monetary policy, and international trade. *Credit units: 3 ECTS Credit Units: 6.*

ECON 503 Microeconomic Theory I
Theory of production. Theory of consumption. General equilibrium. Fundamental welfare theorems, externalities, public goods, and second best analyses. *Credit units: 4 ECTS Credit Units: 7. Aut (F. Hüseyin)*

ECON 504 Microeconomic Theory II
Theory of general competitive equilibrium. Topics include existence of equilibrium, computational techniques, core of the economy, stability, uniqueness of equilibrium, and empirical general equilibrium models. *Credit units: 4 ECTS Credit Units: 7.*

ECON 505 Macroeconomic Theory I
A wide-ranging survey of modern macroeconomic theory with an emphasis on the necessary mathematical tools and the dynamic methods. Focuses on competitive equilibrium, optimality, dynamics of equilibria, economic fluctuations, long-run growth, technological progress, life-cycle aspects and economic policies. *Credit units: 4 ECTS Credit Units: 7. Aut (H. Ç. Sağlam)*

ECON 506 Macroeconomic Theory II
Stochastic models of economic fluctuations. Rational expectations. The effectiveness of monetary and fiscal instruments. Uses of general equilibrium econometric models for forecasting and policy simulations. Multi-country models and the international transmission mechanism. *Credit units: 4 ECTS Credit Units: 7.*

ECON 507 Economics for International and Public Affairs I
This course introduces basic concepts of microeconomic analysis relevant for international economics and public affairs. Theories of rational consumer behavior, the profit seeking firm, and market structures are introduced in a policy setting. Issues of corporate governance, pricing strategies and social welfare are analyzed within the realm of efficiency and optimality, in a rapidly changing and globalizing world. *Credit units: 3 ECTS Credit Units: 6. Aut (M. Polat)*

ECON 508 Economics for International and Public Affairs II
Basic concepts and theories of macroeconomic analysis are introduced. The determination of national income, employment, inflation, interest rate and the exchange rate. Monetary and fiscal policy instruments are introduced with special emphasis on their effects on international economic relations. The course further introduces modern paradigms of open economy macroeconomics, and illustrates current economic problems with the experiences of Turkish and foreign economies. *Credit units: 3 ECTS Credit Units: 6.*

ECON 509 Probability and Statistics I
Introduction to probability. Random variables and its distribution. Expectation, moments and moment generating functions. Conditional probability and expectations. Transformations of random variables, and order statistics. Stochastic convergence and central limit theorem. Sampling distribution. Point estimation, method of moments and maximum likelihood. Large and small sample properties. Sufficiency. Interval estimation. Testing of hypotheses - MP, UMP, UMPU, GLR, LM and Wald tests. *Credit units: 4 ECTS Credit Units: 6. Aut (T. Kara)*

ECON 510 Probability and Statistics II
Ordinary Least Squares: basic assumption, estimation and tests of hypotheses, the coefficient of determination, prediction, functional forms, the problem of choosing between them and specification tests, multicollinearity. Dummy Variables, testing structural change, estimating the prediction error variance and pooling cross-sectional and time-series data. Lagged dependent variables, binary dependent variables. Autocorrelation and heteroscedasticity. Simultaneous equations; identification and single-equation estimation techniques. *Credit units: 4 ECTS Credit Units: 6.*

ECON 511 Econometrics I
Theory and applications of time series models. Topics include ARMA and VARMA models, , Trend-Cycle decomposition, Unit roots, Cointegration, Structural change, GARCH, Regime switching and threshold models, Statespace form and Kalman filters, and specialized topics such as Fractional Integration and I(2) models. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 510. Aut (T. Yiğit)*

ECON 512 Econometrics II
Theory and application of existing micro-econometric techniques, econometrics of panel data, and Monte Carlo simulation. Topics include Discrete regression models, Censored and Truncated regression, Models with self-selectivity, Disequilibrium models, Count Data, Duration models, Static panel data analysis, Dynamic panel data analysis, Non-stationary panel methods: Panel unit roots and cointegration, PanelVAR, Monte Carlo and bootstrap. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 510.*

ECON 513 Game Theory I
Game theoretic approaches to economics, strategic decision-making, discussion of contemporary issues in economic design. *Credit units: 3 ECTS Credit Units: 6.*

ECON 514 Game Theory II
Continuation of ECON 513. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 504.*

ECON 515 Mathematics for Economists I
Use of various mathematical structures in economic theory. Order structures, metric structures, linear algebraic structures. Calculus for economists. Unconstrained optimization. Constrained optimization, Lagrangean and Kuhn-Tucker multipliers, linear programming. Difference and differential equations. Correspondences. Fixed point theorems. *Credit units: 3 ECTS Credit Units: 6. Aut (S. Koray)*

ECON 516 Mathematics for Economists II
The contraction mapping theorem. Theorem of the maximum. Dynamic programming under certainty. Measure theory and integration. Stochastic dynamic programming. Modes of convergence and laws of large numbers. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 515.*

ECON 517 Mathematical Economics I
Mathematical theory of general economic equilibrium. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 516. Aut (S. Koray)*

ECON 518 Mathematical Economics II
Dynamic aspects of equilibrium models. Game theory and the theory of industrial organization. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 517.*

ECON 521 International Economics I
Theory of international trade and applications in commercial policy. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 504.*

ECON 522 International Economics II
Adjustment in international economic relations with attention to foreign exchange markets, balance of payments, and the international monetary system. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 506 and ECON 521.*

ECON 531 Economic History I
A survey of world economic history designed to introduce the students to the subject matter and methodology of economic history. *Credit units: 3 ECTS Credit Units: 6.*

ECON 532 Economic History II
Continuation of ECON 531. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 531.*

ECON 536 Methodology and History of Economics
A selective historical survey of the developments of economic analysis giving varying degrees of attention to the contributions of Hume, Smith, Malthus, Ricardo, Marx, Mill, Walras, Marshall, Keynes and Schumpeter. *Credit units: 3 ECTS Credit Units: 6.*

ECON 551 Studies in Growth and General Equilibrium Modeling I
The course focuses on the general equilibrium properties of economies in dynamic movement. Theories of new growth and computation of transitional versus steady state dynamics are discussed and modeled using dynamic programming techniques. The Walrasian general equilibrium system is extended to study Grossman-Helpman-Romer type of endogenous growth based on R and D formation, and the economics of human capital -intensive, knowledge- driven endogenous growth. Dynamic Applied General Equilibrium is modeled to address contemporary issues on growth, accumulation and savings. *Credit units: 3 ECTS Credit Units: 6.*

ECON 552 Studies in Growth and General Equilibrium Modeling II
Continuation of ECON 551. This part of the course extends over multi-sector properties of the general equilibrium system. The Input-Output Methodology and Social Accounting Matrices are introduced and programming

techniques are discussed in a multi-sector, multi-agent optimizing framework. The intersectoral price system is studied with applications of applied general equilibrium modeling of trade instruments, measures of nominal versus effective rates of protection, microeconomic efficiency, and decomposition of the sources of growth and structural change. *Credit units: 3 ECTS Credit Units: 6.*

ECON 561 Topics in Microeconomic Theory I
The subject matter of this course will vary from year to year, according to the interests of the instructor. *Credit units: 3 ECTS Credit Units: 6.*

ECON 562 Topics in Microeconomic Theory II
The subject matter of this course will vary from year to year, according to the interest of the instructor. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 561.*

ECON 563 Topics in Macroeconomic Theory I
The subject matter of this course will vary from year to year, according to the interests of the instructor. *Credit units: 3 ECTS Credit Units: 6.*

ECON 564 Topics in Macroeconomic Theory II
Continuation of ECON 563. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 563.*

ECON 566 Advanced Topics in Financial Economics
This is an advanced international finance and macroeconomics course that uses a mix of theoretical, empirical and policy frameworks to analyze topical problems in international macroeconomics and finance. *Credit units: 3 ECTS Credit Units: None.*

ECON 571 Fiscal Economics I
First and second best fiscal theory (income distribution, public goods, externalities; deadweight burden, Ramsey Problem). Incidence models. Economic response to taxation. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 504.*

ECON 572 Fiscal Economics II
Quantitative analysis of economic effects of fiscal instruments and fiscal changes such as negative income tax, corporate income tax, integration, general fiscal incidence, expenditure taxation. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ECON 571.*

ECON 575 Monetary Economics I
The analysis of the empirical methods, such as optimal control theory and vector autoregression that widely used in monetary models and some basic models that explore the relationship between output, money and interest rates are studied. The role of exchange rates within the course of monetary policymaking is also analyzed in details. *Credit units: 3 ECTS Credit Units: 6. Aut (R. Gürkaynak)*

ECON 576 Monetary Economics II
This course is designed to explore the short-run monetary transmission mechanism, mainly within the context of dynamic stochastic general equilibrium models. Also “monetary policy rules”, which dominated the literature on monetary economics in the last decade are widely studied, with a clear emphasis on open economy models. *Credit units: 3 ECTS Credit Units: 6.*

ECON 590 Pro-Thesis Seminar
Independent work leading to the selection and elaboration of thesis topic. Presentation of research in departmental seminars. *Credit units: None ECTS Credit Units: None.*

ECON 591 Masters Pro-Thesis Seminar I
This is a course where students will attend a series of lectures presented by faculty members and/or invited academics and submit written reports on the papers presented. (Fall Semester) *Credit units: None ECTS Credit Units: None. Aut (Staff)*

ECON 592 Masters Pro-Thesis Seminar II
This is a course where students will attend a series of lectures presented by faculty members and/or invited academics and submit written reports on the papers presented. (Spring Semester) *Credit units: None ECTS Credit Units: None.*

ECON 593 Seminar in Economic Design I
This seminar will discuss topics in “Economic Design” which can be described as the art and science of inventing, analyzing and testing economic as well as social and political institutions and mechanisms aimed at achieving individual objectives and social goals. Constitutions, allocation and regulation mechanisms, tax and incentive schemes, contracts, voting procedures, markets and auctions exemplify legal-economic instruments that can be used in solving design problems. *Credit units: None ECTS Credit Units: None.*

ECON 594 Seminar in Economic Design II
Continuation of ECON 593. *Credit units: None ECTS Credit Units: None.*

ECON 599 Master’s Thesis
Credit units: None ECTS Credit Units: None. Aut (Staff)

ECON 691 Ph.D. Pro-Thesis Seminar I
This is a course where students will attend a series of lectures presented by faculty members and/or invited academics and submit written reports on the papers presented. The students working on their dissertation are expected to present the outcome of their research and submit a research paper of publishable quality. (Fall Semester) *Credit units: None ECTS Credit Units: None. Aut (Staff)*

ECON 692 Ph.D. Pro-Thesis Seminar II
This is a course where students will attend a series of lectures presented by faculty members and/or invited academics and submit written reports on the papers presented. The students working on their dissertation are expected to present the outcome of their research and submit a research paper of publishable quality. (Spring Semester) *Credit units: None ECTS Credit Units: None.*

ECON 699 Ph.D. Dissertation
Credit units: None ECTS Credit Units: None. Aut (Staff)

DEPARTMENT OF HISTORY

M. Kalpaklı (Acting Chair), A. Beyatlı, Ö. Ergenç, H. İnalcık, E. Kermeli, A. Kireçci, E. Kohn, P. Latimer, C. Leighton, O. Özel, E. Radushev, N. Stone, A. Thornton, D. E. Thornton, K. Tomenendal, F. Üçcan.

The Department of History functions mainly as a graduate department, offering M.A. and Ph.D. programs in the areas of Ottoman, American, and European histories. At the undergraduate level, the department offers both compulsory and elective courses in History of Civilization (HCIV 101/102) for the students of other departments and faculties, and provides preparatory courses for the entering graduate students entering the Department of History, some of which are also offered as electives for senior undergraduates of other departments.

GRADUATE PROGRAMS

The Department of History offers graduate programs in Ottoman, European and American history, leading to Master's and Ph.D. degrees. Emphasis is placed on preparing students to be able to undertake independent research in these particular fields. The graduate program involves a preparatory year designed to give students the background knowledge, skills and language proficiency which will enable them ultimately to make original research with primary source materials. Since profound historical research can only be carried out through the use of primary source materials, it is necessary for students to acquire the relevant linguistic and paleographic skills.

Master of Arts in History

The program is designed to concentrate on the areas of Ottoman History, European History and the History of the United States.

The preparatory year prior to the Master's program provides a background in Western and Turkish history. The first year in the Master's program features specialized courses in Ottoman History, European History, and the History of the United States. Students should by then have acquired a solid knowledge in history so as to be able to raise questions concerning more specific historical themes. During the second year the student begins to write his/her Master's thesis under the supervision of an advisor. During the Master's program the student is expected to submit papers at the end of each semester.

Admission: Graduates from all departments may apply to this program. An undergraduate degree in History is not a prerequisite for entering the M.A. program. All students entering the graduate program in history must take one year of preparatory courses before they begin to take Master's level courses of the department. Therefore, graduates from the Faculties of Management, Engineering or Science, as well as those from Humanities and Social Sciences Faculties who are interested in history are also eligible to apply for admission. Students admitted should have passed the English Language Test (level equivalent to internet based TOEFL 80). (Also refer to the "Graduate Admissions" section in the introduction of this catalog for the general graduate admission requirements.)

Degree Requirements:

1. Completion of at least 24 graduate-level credits after a preparatory year.
2. Students of Ottoman History must demonstrate competence in Ottoman Turkish and at least in one of the elective European and one of the Middle Eastern languages.
3. Students of European History and the History of the United States must demonstrate competence in at least two of the elective European languages.
4. A Master's thesis must be submitted and accepted.
5. A grade point average of at least 3.00 must be maintained for the totality of Master's level work.

CURRICULUM FOR THE M.A. PROGRAM

OTTOMAN HISTORY OPTION

PREPARATORY YEAR

Autumn Semester		Credits / ECTS Credits
HIST 401	Ottoman Turkish and Paleography I	4 / 8
HIST 411	Ottoman History: 1300-1600	3 / 6
HIST 413	Byzantine History I: 324-1025	3 / 6
HIST 417	Medieval Europe (500-1500)	3 / 6
HIST 431	History of the United States until the Reconstruction	3 / 6

Spring Semester		Credits / ECTS Credits
HIST 402	Ottoman Turkish and Paleography II	4 / 8
HIST 412	Ottoman History: 1600-1914	3 / 6
HIST 414	Byzantine History II: 1025-1453	3 / 6
HIST 418	Modern Europe (1453-1914)	3 / 6
HIST 432	History of the United States from the Reconstruction	3 / 6

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
HIST 501	Ottoman Paleography I	4 / 8
HIST 507	Methodology in History I	3 / 6

Spring Semester		Credits / ECTS Credits
HIST 502	Ottoman Paleography II	4 / 8
HIST 508	Methodology in History II	3 / 6

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
HIST 591	Seminar in Ottoman History I	- / -
HIST 599	Master's Thesis	- / -

Spring Semester		Credits / ECTS Credits
HIST 592	Seminar in Ottoman History II	- / -
HIST 599	Master's Thesis	- / -

EUROPEAN HISTORY OPTION

PREPARATORY YEAR

Autumn Semester		Credits / ECTS Credits
HIST 411	Ottoman History: 1300-1600	3 / 6
HIST 413	Byzantine History I: 324-1025	3 / 6
HIST 417	Medieval Europe (500-1500)	3 / 6
HIST 431	History of the United States until the Reconstruction	3 / 6
HIST 481	Latin for Medieval and Early Modern History I	3 / 6

Spring Semester		Credits / ECTS Credits
HIST 412	Ottoman History: 1600-1914	3 / 6
HIST 414	Byzantine History II: 1025-1453	3 / 6
HIST 418	Modern Europe (1453-1914)	3 / 6
HIST 432	History of the United States from the Reconstruction	3 / 6
HIST 482	Latin for Medieval and Early Modern History II	3 / -

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
HIST 507	Methodology in History I	3 / 6
HIST 523	England (1300-1600): History and Texts	3 / -
HIST 543	The British Isles in the Early Modern Period	3 / 6

Spring Semester		Credits / ECTS Credits
HIST 482	Latin for Medieval and Early Modern History II	3 / -
HIST 508	Methodology in History II	3 / 6

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
HIST 599	Master's Thesis	- / -

Spring Semester		Credits / ECTS Credits
HIST 599	Master's Thesis	- / -

AMERICAN HISTORY OPTION

PREPARATORY YEAR

Autumn Semester		Credits / ECTS Credits
HIST 403	The American Revolution in Comparative Perspective	3 / 6
HIST 411	Ottoman History: 1300-1600	3 / 6
HIST 417	Medieval Europe (500-1500)	3 / 6
HIST 419	Us Immigration History	3 / 6
HIST 431	History of the United States until the Reconstruction	3 / 6

Spring Semester		Credits / ECTS Credits
HIST 412	Ottoman History: 1600-1914	3 / 6
HIST 418	Modern Europe (1453-1914)	3 / 6
HIST 420	US Historiography	3 / 6
HIST 432	History of the United States from the Reconstruction	3 / 6

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
HIST 507	Methodology in History I	3 / 6
HIST 531	Social and Economic History of the United States I	3 / 6
HIST 577	US Military and Diplomatic History	3 / 6

Spring Semester		Credits / ECTS Credits
HIST 420	US Historiography	3 / 6
HIST 508	Methodology in History II	3 / 6
HIST 532	Social and Economic History of the United States II	3 / 6

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
HIST 599	Master's Thesis	- / -

Spring Semester		Credits / ECTS Credits
HIST 599	Master's Thesis	- / -

GRADUATE ELECTIVES

OTTOMAN HISTORY OPTION

Autumn Semester		Credits / ECTS Credits
HIST 517	Ottoman Millet System	3 / 6
HIST 523	England (1300-1600): History and Texts	3 / -
HIST 529	Bulgaria Under the Ottoman Rule: History and Sources	3 / 6
HIST 531	Social and Economic History of the United States I	3 / 6
HIST 535	Abdulhamid: Reformer or Reactionary	3 / 6
HIST 539	Models of Cooperation in Ottoman Society	3 / 6
HIST 541	Archival Research and Methodology for Late Ottoman History	3 / 6
HIST 543	The British Isles in the Early Modern Period	3 / 6
HIST 545	Themes in Historical Geography and Demography	3 / 6
HIST 557	Religion and Nationalism in 19th-Century Europe and the Balkans	3 / 6
HIST 570	Cultural History of the Ottoman Empire II	3 / -

HIST 577	US Military and Diplomatic History	3 / 6
HIST 597	Seminar in Ottoman History III	3 / -

Spring Semester Credits / ECTS Credits

HIST 314	Classical Arabic II	3 / 6
HIST 316	Advanced Classical Arabic II	3 / 6
HIST 506	Ottoman Rule in Southeast Europe II: 1600-1878	3 / 6
HIST 508	Methodology in History II	3 / 6
HIST 518	Introduction to Ottoman Diplomatics	3 / 6
HIST 520	Sources of Ottoman Social and Economic History II	3 / 6
HIST 530	Comparative History of Crusading and Holy War	3 / -
HIST 538	US in the Gilded Age and Progressive Era	3 / 6
HIST 554	Turkish War of National Liberation	3 / 6
HIST 612	Ottoman Imperial Socio-Economic History, 1453-1600	3 / -

EUROPEAN HISTORY OPTION

Autumn Semester Credits / ECTS Credits

HIST 517	Ottoman Millet System	3 / 6
HIST 523	England (1300-1600): History and Texts	3 / -
HIST 529	Bulgaria Under the Ottoman Rule: History and Sources	3 / 6
HIST 531	Social and Economic History of the United States I	3 / 6
HIST 535	Abdulhamid: Reformer or Reactionary	3 / 6
HIST 539	Models of Cooperation in Ottoman Society	3 / 6
HIST 541	Archival Research and Methodology for Late Ottoman History	3 / 6
HIST 543	The British Isles in the Early Modern Period	3 / 6
HIST 545	Themes in Historical Geography and Demography	3 / 6
HIST 557	Religion and Nationalism in 19th-Century Europe and the Balkans	3 / 6
HIST 570	Cultural History of the Ottoman Empire II	3 / -
HIST 577	US Military and Diplomatic History	3 / 6
HIST 597	Seminar in Ottoman History III	3 / -

Spring Semester Credits / ECTS Credits

HIST 314	Classical Arabic II	3 / 6
HIST 316	Advanced Classical Arabic II	3 / 6
HIST 506	Ottoman Rule in Southeast Europe II: 1600-1878	3 / 6
HIST 508	Methodology in History II	3 / 6
HIST 518	Introduction to Ottoman Diplomatics	3 / 6
HIST 520	Sources of Ottoman Social and Economic History II	3 / 6
HIST 530	Comparative History of Crusading and Holy War	3 / -
HIST 538	US in the Gilded Age and Progressive Era	3 / 6
HIST 554	Turkish War of National Liberation	3 / 6
HIST 582	Latin for Medieval and Early Modern History IV	3 / -
HIST 612	Ottoman Imperial Socio-Economic History, 1453-1600	3 / -

AMERICAN HISTORY OPTION

Autumn Semester Credits / ECTS Credits

HIST 517	Ottoman Millet System	3 / 6
HIST 523	England (1300-1600): History and Texts	3 / -
HIST 529	Bulgaria Under the Ottoman Rule: History and Sources	3 / 6
HIST 531	Social and Economic History of the United States I	3 / 6
HIST 535	Abdulhamid: Reformer or Reactionary	3 / 6
HIST 539	Models of Cooperation in Ottoman Society	3 / 6
HIST 541	Archival Research and Methodology for Late Ottoman History	3 / 6
HIST 543	The British Isles in the Early Modern Period	3 / 6
HIST 545	Themes in Historical Geography and Demography	3 / 6
HIST 557	Religion and Nationalism in 19th-Century Europe and the Balkans	3 / 6
HIST 570	Cultural History of the Ottoman Empire II	3 / -

HIST 577	US Military and Diplomatic History	3 / 6
HIST 597	Seminar in Ottoman History III	3 / -

Spring Semester Credits / ECTS Credits

HIST 314	Classical Arabic II	3 / 6
HIST 316	Advanced Classical Arabic II	3 / 6
HIST 506	Ottoman Rule in Southeast Europe II: 1600-1878	3 / 6
HIST 508	Methodology in History II	3 / 6
HIST 518	Introduction to Ottoman Diplomatics	3 / 6
HIST 520	Sources of Ottoman Social and Economic History II	3 / 6
HIST 530	Comparative History of Crusading and Holy War	3 / -
HIST 538	US in the Gilded Age and Progressive Era	3 / 6
HIST 554	Turkish War of National Liberation	3 / 6
HIST 582	Latin for Medieval and Early Modern History IV	3 / -
HIST 612	Ottoman Imperial Socio-Economic History, 1453-1600	3 / -

Doctor of Philosophy in History

To enter the Ph.D. program a candidate is required to have completed an M.A. program in History, and passed the entrance exam for his/her specific major area of the doctoral program. Applicants with M.A. degrees from other programs at Bilkent or other universities are also subject to the same requirements for admission into the doctoral program. (Also refer to the “Graduate Admissions” section in the introduction of this catalog for the general graduate admission requirements.)

Among the degree requirements is a minimum of 24 credit units of graduate level course work beyond the course work completed at the Master’s level, to be determined by the advisor and the departmental chair for each doctoral candidate. To meet the course requirements, the candidates may take the graduate level history courses that they have not previously taken and, if necessary, graduate level courses from other departments. For those who have taken graduate courses elsewhere, the department may apply for permission from the director of the graduate school (the Institute) to grant partial or full-credit for such courses. The candidate may also take language courses as recommended by his/her advisor. The candidate is expected to have participated in seminars offered on source materials.

Candidates in Ottoman history are required to undergo language examinations in one of the Western languages (French, German, Latin, Ancient Greek, Italian) and in one of the Middle Eastern languages (Arabic, Persian) in reading proficiency prior to the comprehensive exams.

After the completion of a minimum of 24 credits of course work, the candidate is eligible to take the written and oral comprehensive exams. The first part of these examinations evaluates the candidate’s expertise in the relevant field/period. The second part is tailored to each particular students’ research proposal for the dissertation. The candidate must prepare a doctoral dissertation embodying original research and must successfully defend it in a final exam before a committee of the faculty before the end of the fourth year of the doctoral program unless an extension is granted. The dissertation has to represent a substantial contribution to the historical knowledge in one of the particular fields of study.

GRADUATE ELECTIVES

Autumn Semester Credits / ECTS Credits

HIST 517	Ottoman Millet System	3 / 6
HIST 523	England (1300-1600): History and Texts	3 / -
HIST 529	Bulgaria Under the Ottoman Rule: History and Sources	3 / 6
HIST 531	Social and Economic History of the United States I	3 / 6
HIST 535	Abdulhamid: Reformer or Reactionary	3 / 6
HIST 539	Models of Cooperation in Ottoman Society	3 / 6
HIST 541	Archival Research and Methodology for Late Ottoman History	3 / 6
HIST 543	The British Isles in the Early Modern Period	3 / 6
HIST 545	Themes in Historical Geography and Demography	3 / 6
HIST 557	Religion and Nationalism in 19th-Century Europe and the Balkans	3 / 6

HIST 570	Cultural History of the Ottoman Empire II	3 / -
HIST 577	US Military and Diplomatic History	3 / 6
HIST 597	Seminar in Ottoman History III	3 / -

Spring Semester		Credits / ECTS Credits
HIST 314	Classical Arabic II	3 / 6
HIST 316	Advanced Classical Arabic II	3 / 6
HIST 506	Ottoman Rule in Southeast Europe II: 1600-1878	3 / 6
HIST 508	Methodology in History II	3 / 6
HIST 518	Introduction to Ottoman Diplomatics	3 / 6
HIST 520	Sources of Ottoman Social and Economic History II	3 / 6
HIST 530	Comparative History of Crusading and Holy War	3 / -
HIST 538	US in the Gilded Age and Progressive Era	3 / 6
HIST 554	Turkish War of National Liberation	3 / 6
HIST 612	Ottoman Imperial Socio-Economic History, 1453-1600	3 / -

COURSE DESCRIPTIONS

UNDERGRADUATE COURSES

HCIV 101 History of Civilization I
Provides background to the origins of early Western civilizations: deals with the nature and spread of the earliest civilizations in the Ancient Near East and the development of civilization in classical and medieval Europe, concerning their political, social, economic and religious life; focuses on the globalization process of the civilization to be culminated in Western Europe. *Credit units: 3 ECTS Credit Units: 6. Aut (A. Kireçci, C. Leighton, A. Thornton, K. Tomenendal)*

HCIV 102 History of Civilization II
Provides background to the origins of modern Western civilization: deals with the development of European society from around AD 1500 until the present, concerning the political, social economic and religious life of the West during that period. *Credit units: 3 ECTS Credit Units: 6.*

HCIV 103 History of Civilization for Law
Credit units: 3 ECTS Credit Units: 4. Aut (F. Üçcan)

HIST 111 Introduction to Ottoman Turkish I
This course gives an introduction to the reading and writing systems and grammar of Ottoman Turkish through close reading of graded selections taken from poems, essays, short stories and archival materials printed in the late Ottoman and early Republican era. *Credit units: 3 ECTS Credit Units: 6.*

HIST 113 Introduction to Ottoman Turkish III
The course is devoted to the reading and understanding of texts focusing on key issues in late Ottoman and early Republican Turkish history. The course goals are to develop reading skills on Ottoman Turkish and to examine important texts written between 1700 and 1928. *Credit units: 3 ECTS Credit Units: 6.*

HIST 114 Ottoman Turkish IV
This course emphasizes the different types of ottoman writing in the elaborate high style of classical Ottoman (15th to 20th century). Selections from manuscripts are used to enable students to read the types of texts they are likely to encounter in their historical research. Some documents will be selected from Ottoman archives. The documents will be in *Nasih*, *Rik'a*, *Divânî* scripts. *Credit units: 3 ECTS Credit Units: 6.*

HIST 313 Classical Arabic I
Basic grammar of Classical Arabic. The main tenses. *Credit units: 3 ECTS Credit Units: 6. Aut (A. Beyatlı)*

HIST 314 Classical Arabic II
Basic grammar of Classical Arabic. Irregular grammatical forms. Reading of simple religious and legal texts. *Credit units: 3 ECTS Credit Units: 6.*

HIST 315 Advanced Classical Arabic I
Reading and grammatical interpretation of Classical Arabic texts. *Credit units: 3 ECTS Credit Units: 6. Aut (A. Beyatlı)*

HIST 316 Advanced Classical Arabic II
Reading and grammatical interpretation of Classical Arabic texts. *Credit units: 3 ECTS Credit Units: 6.*

HIST 347 Ottoman Reform Movements I: Political and Social (1550-1839)
Survey course on the history of Ottoman Empire. Reform movements and thoughts between 1550-1839. Introduction into classical Ottoman political thought. Increasing consciousness of political and social crisis,

exemplified in the writings of Kınalızâde and Gelibolulu Mustafa Âli. Attempts to return to the past during the 17th century as seen in the Kadızâdeli movements and the reports of Koçi Bey. Early tendencies of partial westernization in the 18th century. TheNizâm-ı Cedid and the beginning of institutional modernization (1792-1807). Reaction against reform and Hâlet Efendi. Thecentralizing reforms of Mahmud I and local resistance (1808-1839). *Credit units: 3 ECTS Credit Units: 6.*

HIST 348 Ottoman Reform Movements II: Political and Social (1839-1914)
General evaluation of Ottoman socio-political through prior to 1839. Mustafa Reşid Pasha and the *Gülhane Hatt-ı Hümayunu*. Autocratic reformist approach of Sadık Rifat Pasha, Âlî Pasha and Cevdet Pasha. Reaction against autocracy and the ideas of Şinasi, Namık Kemal and Mahmud Nedim Pasha. The Ottoman Constitution of 1876. Socio-political thought of the Hamidian absolutism as reflected in the writings of Abdülhamid II, Ahmed Midhat Efendi andMusa Akyiğit. Young Turk movement and the oppositional ideas of AhmedRıza, Abdullah Cevdet and Prens Sabahaddin. Islamisim during the SecondConstitutional Period (Mehmed Akif, Babanzade Ahmed Naim, Şehbenderzâde Ahmed Hilmi). Westernism and Turkism as reflected inSatı Bey, Ziya Gökalp and Yusuf Akçura. *Credit units: 3 ECTS Credit Units: 6.*

HIST 354 Comparative Perspectives on Museum and Archives History and Practice
This course examines the development of museum and archives in the United States, the Ottoman Empire and the Republic of Turkey. It focuses on the historical background of these agencies and on issues relating to their management and mission. The course is open to students from Bilkent and Cate Western Reserve University in Cleveland Ohio. The Bilkent students will participate via a live interactive broadcast of the lecture from Case Western. Turkish and American students will work in pairs by internet on course projects. Provided grant funding is secured a mutual "site visit" from Cleveland to Ankara from Ankara to Cleveland will be offered at the end of the semester. *Credit units: 3 ECTS Credit Units: None.*

HIST 401 Ottoman Turkish and Paleography I
Course on Arabic script and Ottoman grammar. *Credit units: 4 ECTS Credit Units: 8. Aut (K. Emiroğlu)*

HIST 402 Ottoman Turkish and Paleography II
Course on Arabic script and Ottoman grammar. Reading exercises on printed Ottoman texts. *Credit units: 4 ECTS Credit Units: 8.*

HIST 403 The American Revolution in Comparative Perspective
This course examines the era of the American revolution, 1760s-1780s, to understand the causes, means, and consequences of America's war for independence. Companions to revolutions in Europe, Latin America, Africa, and the Middle East will be drawn. Students are expected to read, write, and discuss relevant literature on a weekly basis. *Credit units: 3 ECTS Credit Units: 6.*

HIST 404 Comparative Urban History in America and Eurasia
The urbanization of human life -the shift of population and of political, economic, and cultural power in most societies from the country to the town- counts as perhaps the most remarkable social phenomenon of recent centuries. This course offers a comparative perspective, with examples drawn from the Americas as well as Eurasia, on why cities emerge, how they operate, and how people build, live in, and perceive them, questions that go to the heart of what it means to be a person in recent times. *Credit units: 3 ECTS Credit Units: None.*

HIST 405 Islamic and Turkish History Until the Ottoman Empire
This survey course covers the origin and the land of the Turks as recorded in classical sources. The Pre-Islamic Turkish States such as the Huns, Gök Türks and Uygurs, and the Turkish States at the advent of Islam. The cultural background of the Turks. The sources of Islamic history and their methodological significance. Pre-Islamic Arabia. The prophet Muhammed's life and his achievements. The first four caliphs and the early Islamic conquest. Muawiyah and his successors. Umar b. Abdutarik and his reforms. The fall of the Ummayads. The coming of the Abbasids and their rise. The decay of the Abbasid caliphate and the rise of the Turks and minor dynasties. The achievements of the Buwayhids, Hamdanis and Fatimids. The crusaders in Syria and the Ayyubids. The coming of the Seljuks. The Turkish Principalities of Anatolia. *Credit units: 3 ECTS Credit Units: 6.*

HIST 411 Ottoman History: 1300-1600
Classical period of the Ottoman Empire. Economic, political and religious institutions. Ottoman economic system. Relations with its European neighbors. *Credit units: 3 ECTS Credit Units: 6. Aut (O. Özel)*

HIST 412 Ottoman History: 1600-1914
Ottoman Empire in decline. Political, economic and ideological developments at the capital as well as in the provinces. Nationalism among non-Muslims and Muslims. Administrative and political reforms during the eighteenth and nineteenth centuries. *Credit units: 3 ECTS Credit Units: 6.*

HIST 413 Byzantine History I: 324-1025
Foundation of the Eastern Roman Empire, development of Byzantine institutions, relations of the Byzantine Empire with the East and West. Cultural and religious developments. *Credit units: 3 ECTS Credit Units: 6. Aut (E. Kermeli)*

HIST 414 Byzantine History II: 1025-1453
Deterioration of the Byzantine land regime. Feudalization. Penetration of Turks into Anatolia and its impact on Byzantium. Latin conquest of Constantinople. Relationship between Byzantium and Anatolian Turkish principalities. Conquest of Constantinople. *Credit units: 3 ECTS Credit Units: 6.*

HIST 415 British History: 1485-1914
Development of the religious, social and economic structures of the states in the British Isles from the accession of the Tudor dynasty to the zenith of imperialism and industrialism in the early 20th century. *Credit units: 3 ECTS Credit Units: 6.*

HIST 416 Medieval British History
Formation of the medieval English state from its Anglo-Saxon beginnings to the 14th century, tracing the developments in central and local government, its politics, social structure and its interaction with the rest of the British Isles and the Continent. *Credit units: 3 ECTS Credit Units: 6. Aut (D. E. Thornton)*

HIST 417 Medieval Europe (500-1500)
This course traces the history of western Europe from the fall of the Roman Empire to the Renaissance, and deals with the main political, social and religious changes during that period. *Credit units: 3 ECTS Credit Units: 6. Aut (P. Latimer)*

HIST 418 Modern Europe (1453-1914)
The course seeks to deal, selectively with the historiography of major themes in the political, social intellectual and religious history of Europe from the Renaissance to the eve of the emergence of the national state system characteristic of the twentieth century. *Credit units: 3 ECTS Credit Units: 6.*

HIST 419 Us Immigration History
This course will provide an overview of immigration to the United States from the colonial period to the present. It will focus on governmental policy toward immigration as well as on the social history of immigrants and the communities they established. Particular attention will be given to the questions of assimilation and acculturation and to the role of immigration in shaping an “evolving” American identity. *Credit units: 3 ECTS Credit Units: 6.*

HIST 420 US Historiography
This course surveys the writing of American history from the patriotic/romantic historians of the early-nineteenth century through the progressive historians of the late-nineteenth and early-twentieth century, the consensus historians of the immediate post-World War II period, the new social historians who emerged in the 1960s, and on to the post-modernists of the late-twentieth and early-twenty-first century. Along the way we will learn how historians’ interpretations of the U.S. past change to reflect the times in which they (the historians) lived. *Credit units: 3 ECTS Credit Units: 6.*

HIST 424 America and the World since 1898
This course examines United States foreign relations from the late nineteenth century through twentieth centuries. Particular attention is given to diplomacy, military and economic history using primary and secondary sources. Aspects of American foreign policy decisions, patterns and themes will be covered. A variety of historiographical approaches will receive attention as well as differing ideas over the motives behind America’s dealings with foreign powers over time and by region. *Credit units: 3 ECTS Credit Units: 6.*

HIST 426 The History of the American South
Themes in the development of the Southern United States. Race, paternalism violence. Honour. Agrarianism. States rights. Populism. Also the problem of regional history. Time period covered is from the era of the old south of the early 19th century to the present. *Credit units: 3 ECTS Credit Units: 6.*

HIST 431 History of the United States until the Reconstruction
Basic history of the United States from the colonial period up to the Civil War, designed to orient students to more detailed information. Characteristic problems of early American political, economic and intellectual history during the nation-building process. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

HIST 432 History of the United States from the Reconstruction
Basic history of the United States from 1865 up to the modern times, designed to orient students to more detailed information. Characteristic problems of American political, economic and intellectual history in the process of its emergence as a world power. *Credit units: 3 ECTS Credit Units: 6.*

HIST 433 History of American Politics
Survey of the political history of the United States from the 18th century to the present, this course introduces students to organizing themes of U.S. political theory, electoral systems, politics in the legislature and the social bases of political power. *Credit units: 3 ECTS Credit Units: 6.*

HIST 434 US Social History

Survey of the development of American society and culture, focusing on the 19th and 20th centuries. The goal of the course is to sharpen students' understanding of the ways people lived in the United States and their responses to events - wars, economic change, demographic shifts - which were largely outside of their control. *Credit units: 3 ECTS Credit Units: 6.*

HIST 435 History of US Foreign Relations: the Cold War and Beyond

A survey of the major developments in American foreign relations from the end of World War II to the present. The course will include considerable emphasis on US-Middle East relations. *Credit units: 3 ECTS Credit Units: 6.*

HIST 461 An Introduction to the Economic History of Europe from the 16th to the 20th Century

After examining the special nature of 'economic history' and the relationship between economic and historical disciplines within it, the course will go on to look at major episodes within the economic history of Europe and the wider world, concentrating on developments from the sixteenth century to the twentieth. Among the subject covered will be the sixteenth-century price revolution, the impact of exploration, colonial settlement and trade beyond Europe, the seventeenth-century crisis, the onset of a commercial society, the industrial revolution, imperial economies of the nineteenth century, the impact of mass production, and the Great Depression of the 1930s. *Credit units: 3 ECTS Credit Units: 6.*

HIST 479 Comparative Perspective On Museum and Archives History and Practice

This course examines the development of museum and archives in the United States, the Ottoman Empire and the Republic of Turkey. It focuses on the historical background of these agencies and on issues relating to their management and mission. The course is open to students from Bilkent and case Western Reserve University in Cleveland, Ohio. Bilkent students will participate via a live interactive broadcast of the lecture from Case Western University. Turkish and American students will work in pairs by internet on course projects. Provided grant funding is secured a mutual "site visit" Cleveland to Ankara, Ankara to Cleveland will be offered at the end of the semester. *Credit units: 3 ECTS Credit Units: None.*

HIST 481 Latin for Medieval and Early Modern History I

Introduction of Medieval Latin to those graduate students who wish to specialize in Medieval as well as Early European History. Emphasis on both grammar and reading. *Credit units: 3 ECTS Credit Units: 6. Aut (P. Latimer)*

GRADUATE COURSES

HIST 500 Mystics and Their Patrons in the Ottoman Empire

The graduate seminar examines the Sufi convents in the Ottoman Empire in light of primary sources that include archival sources related to endowments, literary sources such as hagiographies and poetry, and religious treatises. As Sufism remains in the margins of Islamic historiography, only a small number of historians and architectural historians have treated the architecture of Sufi convents and relevant taxts in historical context. This situation is reflected in Ottoman studies as well. Through a historically sensitive examination of textual and architectural sources, this seminar aims to provide an overall understanding of Sufism as an important social force in Ottoman history. However, the readings will focus primarily on two Sufi brotherhoods that formed and maintained empire-wide networks from the late fifteenth century onwards, namely the Halvetis and the Bektashis. Focusing on the sixteenth century, we will discuss their diverse interactions with the Ottoman ruling elite, with the *ilmiyye*, with political actualities such as the Ottoman-Safavid conflict, and with intellectual and artistic traditions of the greater Islamic world. Students will be encouraged to discern the impact of these diverse interactions on the nature of the two networks, the patronage and architecture of their convents, and their literary output. *Credit units: 3 ECTS Credit Units: 6.*

HIST 501 Ottoman Paleography I

Advanced reading exercises on Ottoman documents. *Credit units: 4 ECTS Credit Units: 8. Aut (Ö. Ergenç)*

HIST 502 Ottoman Paleography II

Advanced reading exercises on Ottoman documents. *Credit units: 4 ECTS Credit Units: 8.*

HIST 504 Crisis Regionalism and Reform in the Ottoman Empire (1774-1839)

This seminar is a thorough study of a short but significant period of transition, crisis, and early reform in the Ottoman Empire. This seminar is a survey of political concepts and institutions of this transitional period. Its main aim is to discuss and understand the distinct political culture of the time between the Ottoman *ancien régime* and modern reformism. The seminar willexamine such themes as the beginning of the Eastern Question, regionalism and provincialism, janissary claims, the role of reading and listening public, the New Order (Selimism) and reformism, the coups and the role ofcrowd, premature constitutionalism, and popular sultanism(Mahmudism). Throughout the seminar, basic constitutional and politicaltexts (including some diplomatic treaties) of the period, such as the Treatyof Küçükk Kaynarca, *Hüccet-i Şer'iyye of* 1807, *Sened-i İttifak* (1808), Treaty of Bucharest (1812) and the *Gülhane Hatt-ı Humâyunu* of 1839 will be scrutinized with the contemporary historical narratives, such as *Târıh-i Asıf* , *Târıh-i Vâsıf* , *Şânizade Tarihi*, *Révolutions de Constantinople* by J. Saint-Denys, as well

as French, British, Austrian, and Russian diplomatic documents. The seminar will mainly focus on the primary sources. *Credit units: 3 ECTS Credit Units: 6.*

HIST 505 Ottoman Rule in Southeast Europe I: 1354-1600
Local Balkan monarchies (Bosnians, Bulgarians, Serbs) and the growing feudalization of the region. Ottoman expansion and the foundation of the First Ottoman Empire. Interregnum and the Second Ottoman Empire. Social and economic developments. Administration and land regime. Urban and rural structure. Vassal and tributary states. The unique case of Dubrovnik. *Credit units: 3 ECTS Credit Units: 6. Aut (E. Radushev)*

HIST 506 Ottoman Rule in Southeast Europe II: 1600-1878
Islamic culture and heterodox Islamic movements in Southeast Europe. Decline of the Ottoman Empire. Military and fiscal transformation and its impact on Ottoman Balkans. The Siege of Vienna in 1683 and the political and social effects of the Ottoman defeats. The rise of non-Muslim middle class and education. The struggle for independence of Balkan people and the "Eastern Question". *Credit units: 3 ECTS Credit Units: 6.*

HIST 507 Methodology in History I
Basic methods in historical research. The history of historiography. Main traditions and currents of historical thought. *Credit units: 3 ECTS Credit Units: 6. Aut (O. Özel)*

HIST 508 Methodology in History II
Main methods and approaches in historical research. Problems of historical research using primary sources. Source typology, and text criticism and analysis. *Credit units: 3 ECTS Credit Units: 6.*

HIST 509 Latin Palaeography for Medieval and Early Modern European History
The aim of this course is to introduce the main developments in European handwriting for the period 500 to 1600, and to enable history students to use Latin and vernacular manuscript sources as part of their research. In addition to different scripts, the course will also cover other palaeographical topics, such as abbreviations, as well as codicology and manuscript illumination. *Credit units: 3 ECTS Credit Units: 6.*

HIST 511 Ottoman Social and Economic History I
Ottoman Beylik as a frontier state. Hegemony in Anatolia and the Balkans. The Battle of Ankara and struggle for Revival. The conquest of Constantinople. The definitive foundation of the classical Ottoman Empire. Ottoman Empire as a world power. Internal disorders. Social, economic and religious institutions. *Credit units: 3 ECTS Credit Units: 6. Aut (Ö. Ergenç)*

HIST 512 Ottoman Social and Economic History II
The periods of transition and modernization of the Ottoman state and society. The detonation of the Ottoman classical socio-economic structure. The weakening of central authority. The ayans. Early attempts of modernization. Influence of the "Enlightenment" ideas on emergence of nationalist currents among non-Muslim communities. Tanzimat. *Credit units: 3 ECTS Credit Units: None.*

HIST 513 Intellectual Movements in the Tanzimat Period I
Study of the development of the Enlightenment notions of reason, material progress and civilization among the Ottoman bureaucratic elite. Ideas of Mustafa Reşid Paşa, Sadık Rifat Paşa and Cevdet Paşa. Islamist reaction against the Tanzimatelite, introducing the ideals of constitutionalism and popularsovereignty. Emergence of cultural enlightenment (Şinasi, Münif Paşa, A. Midhat, Ş. Şami). *Credit units: 3 ECTS Credit Units: 6.*

HIST 514 Islamic and Ottoman Law
The aim of this course is twofold. Firstly we will explore the development of *fıkh* (Islamic jurisprudence) and the tools used to construct legal principles. The development of different schools, the incorporation of hadith (prophetic traditions) into the body of law would be some of the aspects to discuss. The historical development of the position of the *Şeyhülislam*, the *müftis* and *kadis* under the Umayyads and Abbasids would be used as basis of comparison to the ottoman paradigm. Secondly the development of kanun would be discussed vis-a-vis classical hanafi doctrine. Finally specific areas of Ottoman law like family law, inheritance, torts against person and property, procedural law, commercial law, criminal law would be discussed using court cases and legal opinions of müftis. *Credit units: 3 ECTS Credit Units: 6. Aut (E. Kermeli)*

HIST 515 Aspects of Ottoman Social History I
Main foundations of the Ottoman Empire. Demographic movements, fiscal structure, administrative institutions, land and peasants, settlement patterns, internal and external trade. *Credit units: 3 ECTS Credit Units: 6.*

HIST 516 Aspects of Ottoman Social History II
Main foundations of the Ottoman Empire. Demographic movements, fiscal structure, administrative institutions, land and peasants, settlement patterns, internal and external trade. *Credit units: 3 ECTS Credit Units: 6.*

HIST 517 Ottoman Millet System
Legal and social status of non-Muslim communities in the Empire, their cultural life and ecclesiastic organizations. The evaluation of the Christian and Jewish communities after the decree of "Tanzimat" in 1839 and after the Congress and Convention of Paris in 1856 will be discussed in this course. *Credit units: 3 ECTS Credit Units: 6.*

HIST 518 Introduction to Ottoman Diplomatics
History and development of the field of archival research. Archives and archival sources in Turkey. Development of the field of Ottoman diplomatics. Types and classification of Ottoman documents. Internal structure of Ottoman official correspondence, decrees and diplomas prior to the Tanzimat period. Ottoman official documentation in the period of reform until the dissolution of the Ottoman Empire. *Credit units: 3 ECTS Credit Units: 6. Aut (Ö. Ergenç)*

HIST 519 Sources of Ottoman Social and Economic History I
The Ottoman land regime. Social and legal changes throughout the Ottoman period. Reading and analysis of sources such as *berats*, *mühümmes*, *sicils*, *tahrirs*, *temettüats* and *vakfiyyes*. *Credit units: 3 ECTS Credit Units: 6.*

HIST 520 Sources of Ottoman Social and Economic History II
The Ottoman land regime. Social and legal changes throughout the Ottoman period. Reading and analysis of sources such as *berats*, *mühümmes*, *sicils*, *tahrirs*, *temettüats* and *vakfiyyes* . *Credit units: 3 ECTS Credit Units: 6.*

HIST 524 US in the Vietnam Era
This course is designed to give students in the Master's program in American history an in-depth look at the history of Vietnam War. The course will focus on the period roughly 1945-1975. In addition to the war itself, other topics for discussion will include the Cold War, the Civil Rights movement, the counter culture and the legacy of the war in the 1990s. *Credit units: 3 ECTS Credit Units: 6.*

HIST 525 Transition from Late Byzantium to Early Ottoman
Comparison of the institutions of the Byzantine Empire and those of its successor state, the Ottoman Empire. Discussion of continuity and change. Examinations of institutions such as the palace, pious endowments, land regime, taxation, guilds, armed forces based on Byzantine and Ottoman documents. *Credit units: 3 ECTS Credit Units: 6.*

HIST 526 Advanced Ottoman Diplomatics
Historical development and characteristics of ottoman diplomatics, focusing particularly on the bureaucratic-institutional mechanisms that produced diverse genres in the ottoman central bureaucracy. Particular emphasis will be made on changing priorities of the central government over periods of time from the 'classical' period to the Tanzimat. *Credit units: 3 ECTS Credit Units: None.*

HIST 527 Feudalism: East and West I
Examination of the origins and development of the diverse modern concepts of 'Feudal' and 'Feudalism' from late medieval and early modern legal theory, through the Enlightenment and Marxism down to modern times. It will go on to deal with the elements of these concepts as historical phenomena in medieval and early modern Europe, and in the Byzantine and Ottoman Empires. *Credit units: 3 ECTS Credit Units: 6.*

HIST 528 Migrations Politics and Society in Late Ottoman History
The politics of migrations in the context of the chamging nature of international relations. Emphasis will be on aspects of mass migrations that took place during the second half of the 19th century, with particular reference to emerging nationalisms and power politics, within and over empires such as the ottoman empire. *Credit units: 3 ECTS Credit Units: None.*

HIST 529 Bulgaria Under the Ottoman Rule: History and Sources
Medieval Bulgarian state before the Ottomans. Ottoman conquest - from "Bulgarian Empire" to Ottoman Rumelia. Turkish colonization in Bulgaria: ahis, gazis, dervishes, and yürüks in the early colonization process. Demographic structure of Bulgarian lands under Ottoman rule. Ottoman towns and Turkish settlements in the rural area. Administrative division of Rumelia, communication system and trade routes. Conversion to Islam in urban and rural areas. Islimization process in Bulgarian lands as a contemporary myth. Ottoman culture in Bulgaria. Sources for the study of the Ottoman rule in Bulgarian lands. *Credit units: 3 ECTS Credit Units: 6.*

HIST 531 Social and Economic History of the United States I
Colonial period in American history. The U.S. in the nineteenth century. The expansion of the American Republic to continental empire. The Great Transformation - industrial, transportation and political revolutions. Expansion of the cotton South. The Civil War and Reconstruction. Westward expansion, the Gilded Age, industrialization, urbanization and their consequences. *Credit units: 3 ECTS Credit Units: 6.*

HIST 532 Social and Economic History of the United States II
The U.S. in the twentieth century. The creation of an urban nation. Progressivism, Hard Times and the New Deal. Liberalism and the New Deal order. Post-War America, affluence and anxiety, suburbanization and the Cold War at home. Movements for civil rights and the Vietnam War through the Reagan revolution. *Credit units: 3 ECTS Credit Units: 6.*

HIST 533 Religion: East and West (1350-1850)
The course offers a general understanding of European religious history from the late medieval period up to and including the earliest stages of secularization in the post-revolutionary/Tanzimat period. In dealing with western

and central European history, its chief concerns are the transition from medieval to modern religion, and the challenge of the Enlightenment and the responses to it. In dealing with eastern European and Ottoman history, it examines the continuation of the Byzantine religious tradition in eastern Europe and in the Ottoman dominions and discusses the historical relationship between Christianity and Islam. *Credit units: 3 ECTS Credit Units: 6. Aut (C. Leighton)*

HIST 534 Themes in the History of American Radicalism

This course establishes a conceptual framework, and then focuses on significant episodes in the history of American radicalism. Groups and movements studied include Puritanism, anti-federalism, abolitionism, secessionism, agrarianism, anarchism, socialism, suffragism, and black and ethnic separatism. Topics include the recurring or unique goals and strategies of radicals, the composition of radical groups, their relationship to mainstream society and the government, and their respective successes and failures. Students are asked to think critically and, where appropriate, from comparative or international points of view. Readings include primary and secondary sources. Open to graduate students and undergraduate students with department advisors' approval. *Credit units: 3 ECTS Credit Units: 6.*

HIST 535 Abdulhamid: Reformer or Reactionary

The development of Ottoman government and society during the reign of Sultan Abdülhamid II (1876-1909), with special attention to the role he played in completing the work of the Tanzimat reform movement carried out earlier in the 19th century, while at the same time suppressing many of the political and social ramifications of reform. *Credit units: 3 ECTS Credit Units: 6.*

HIST 537 US Civil War and the Reconstruction

An intensive examination of the United States from 1848 to 1877. Investigation of the causes of the Civil War; the military, social, and political history of the war; and the conflict over emancipation and Southern political power during the Reconstruction. *Credit units: 3 ECTS Credit Units: 6.*

HIST 538 US in the Gilded Age and Progressive Era

An intensive examination of the U.S. history in the period 1877-1920. Institutional, economic and intellectual developments. Analysis of historiographical discussions concerning the Gilded Age and Progressive Era. *Credit units: 3 ECTS Credit Units: 6.*

HIST 539 Models of Cooperation in Ottoman Society

The aim of this course is to provide an overview of conflict and co-existence within the multicultural Ottoman society. The organisation and administration of Christians after the Ottoman conquest and their interaction with the Muslims in the empire is to be discussed based on examples of cooperation and antagonism. The first part of the course will discuss the relation between Christians and Muslims in the fluid societal environment of the ottoman emirate and the second part will explore their interaction when the empire is established up until the 18th century. The course is to be a mixture of a lecture and a seminar. Students will be required to present a topic of interest each week to be followed by a discussion. Ottoman and Byzantine chronographies, hagiographies, imperial orders, patriarchical and private letters, folkloric songs, judicial opinions and court records are to be used. Byzantine Greek and Ottoman Turkish is not a prerequisite for the attendance of the course. *Credit units: 3 ECTS Credit Units: 6.*

HIST 540 Warfare and Violence in Stuart Britain 1603-1807

The course discuses in a Europe-Wide context, both violent disorder in general and warfare in particular (the war of the three kingdoms, the Dutch invasion of 1688 and the Jacobite wars) in the British isles in the seventeenth and eighteenth centruies, it also deals, with the British struggle against the French revolutionary and Napoleonic states. *Credit units: 3 ECTS Credit Units: 6.*

HIST 541 Archival Research and Methodology for Late Ottoman History

This is a thematic course focusing on archival research for 18th and 19th Century Ottoman History. Throughout the course, fundamental constitutional, diplomatic and administrative texts of the late Ottoman Empire will be throughly read, analyzed and interpreted. Fundamental categories of the Ottoman administrative texts, such as *ferman, ilam, arz hüccet* will be examined. Fundamental archival sources of the period, such as *ahkam, mühimme, baş muhasebe defters* and court records, will be discussed. Besides the Ottoman archives in Turkey, European archives will be introduced. At the end of the class, each student will be asked to write two five-page papers based on archival documents. *Credit units: 3 ECTS Credit Units: 6.*

HIST 542 American Foreign Relations From World War I to the Present

This class will explore American Foreign Relations during its rise to world power during the twentieth century. Themes will include: Post-World War I foreign relations and the question of "Isolationism"; the FDR era and World War II; the origins of the Cold war; the Korean War; the Eisenhower era; Kennedy and Cuba; Nixon and D Détente; Carter and Iran; Reagan and Gorbachev; the end of the Cold War... and beyond. *Credit units: 3 ECTS Credit Units: 6.*

HIST 543 The British Isles in the Early Modern Period
The course seeks to describe the distinctive mentalities and societies to be observed in the British Isles, in the post-medieval period and to consider the political, military and other consequences of this diversity. The topics are considered with reference to contemporary phenomena on the European mainland. *Credit units: 3 ECTS Credit Units: 6.*

HIST 545 Themes in Historical Geography and Demography
Examination of the bases of historical demographic research and the importance of geographical and topological information in the understanding of communities in Europe and the Ottoman Empire. *Credit units: 3 ECTS Credit Units: 6.*

HIST 546 Comparative Perspectives on Museum and Archives History and Practice
This course examines the development of museums and archives in the United States, the ottoman empire and the republic of Turkey. It focuses on the historical background of these agencies and on issues relating to their management and mission. The course is open to students from Bilkent and Case Western Reserve University in Cleveland Ohio. The Bilkent students will participate in a live interactive broadcast of the lecture from Case Western. Turkish and American students will work in pairs by internet on course projects. Provided grant funding is secured a mutual "site visit" from Cleveland to Ankara from Ankara to Cleveland will be offered at the end the semester. *Credit units: 3 ECTS Credit Units: None.*

HIST 549 Rebellions and Revolutions in Early Modern History
The concept of the General Crisis of the seventeenth century. Dissolution of feudal structures. Popular upheavals, revolutions and civil wars. Explanation of the importance of this concept for the political, religious, social and economic histories of European states as well as of the Ottoman Empire. *Credit units: 3 ECTS Credit Units: 6.*

HIST 550 Jewish History and Religion
This course will present a history of Judaism and its influence upon, and interactions with Christian and Islamic tradition and civilizations over the millennia. Students will be introduced to chronological events in Jewish history, to the basic texts of Judaism, to some central theological beliefs, to the cycle of festivals and the life cycle, and to some of the religious and mystical variations in Judaism through the ages. Most importantly, emphasis will be placed upon Jewish history in the context of medieval and modern international politics. *Credit units: 3 ECTS Credit Units: None.*

HIST 553 War, Technology and the American Military Experience 1605-1898
This seminar exposes students to the trends and themes that comprise American military thought and practice from the Colonial era to the eve of the Spanish-American War. It investigates various factors that shaped the American military experience, national defense strategies, doctrine, and the impact of technology upon armed conflict. The seminar strengthens graduate student critical thinking skills by allowing students to formulate their own ideas about the American military experience through a broad exposure to US military concepts and practices. *Credit units: 3 ECTS Credit Units: 6.*

HIST 554 Turkish War of National Liberation
The Turkish War of National Liberation, 1918-1923. A study of the means by which the Turks achieved their independence and established the Turkish Republic in the face of foreign occupation following World War I, with special emphasis on the political, economic and social movements in Turkey during the war, the structures, organizations and operations of the İstanbul and Ankara governments, as well as relations between them, the destruction and massacre inflicted by the invading armies, and the movement and settlement of Muslim and non-Muslim refugees during the war. *Credit units: 3 ECTS Credit Units: 6.*

HIST 555 Modernization of the Ottoman Empire During the 19.Century
Study of the Ottoman Tanzimat reform movement (1839-1876), its preliminaries during the reigns of sultans Selim III (1789-1807) and Mahmud II (1808-1839), its culmination during the reign of Sultan Abdülhamid II (1876-1908) and the Ottoman Constitutional Era (1908-1923). *Credit units: 3 ECTS Credit Units: 6. Aut (A. Kireçci)*

HIST 556 War, Technology and the American Military Experience: Since 1898
This course exposes students to the trends and themes that comprise American military thought and practice from the Spanish-American War to the present. It investigates various factors that shaped the American military experience, national defense strategies, doctrine and the impact of technology upon armed conflict. The course strengthens graduate student critical thinking skills by allowing students to formulate their own ideas about the American military experience through a broad exposure to U.S. military concepts and practices. *Credit units: 3 ECTS Credit Units: 6.*

HIST 558 US Politics and Culture Since 1945
From the red scale to vietnam, and from the Reagen revolution to the Clinton implacament, American Politics have been about more than just elections. Religion, culture, value and ideas combine to both reflect and shape the politics of the day. This class will look at American politics and culture since 1945 to the present, stressing the unique American influence that continue to shape politics today. *Credit units: 3 ECTS Credit Units: None. Aut (E. Kohn)*

HIST 559 Economic History, the Rise of Capitalism
Analysis of Western economic development from the mid-seventeenth century to the present. Topics include: mercantilism, the rise of capitalism, industrialization, slave economics, agrarian economics, depressions, technological innovation, and the global economy and de-industrialization. The contributions of intellectuals and the responses of workers to various economic developments and changes will also be considered. *Credit units: 3 ECTS Credit Units: 6.*

HIST 560 Major Issues in Medieval and Early Modern Economies
Study of the main transformations in the economies of Europe and the Near East from late Roman times to the mid-seventeenth century. Examination of the disappearance of monetary economy, emergence of manorialism, and trade life in the Mediterranean basin. Development of markets and the domination of Atlantic economy. Price inflation. Reasons and consequences of these developments. *Credit units: 3 ECTS Credit Units: 6.*

HIST 561 Supervised Research in Ottoman History I
Individual works with students in tutorials, aiming to give students expert assistance in their research as well as in their studies on archival sources. *Credit units: None ECTS Credit Units: None.*

HIST 562 Supervised Research in Ottoman History II
Individual works with students in tutorials, aiming to give students expert assistance in their research as well as in their studies on archival sources. *Credit units: None ECTS Credit Units: None.*

HIST 567 History and Literature in the Ottoman Empire
Chronicles in the from of literary works. Analysis and interpretation of historically significant literary works of Ahmedi, chronicles of Aşıkpaşazade and Oruç, MustafaÂli's Menâkib ül-Hünerverân, Mecâlis ün-Nefâis and Tezkires. *Credit units: 3 ECTS Credit Units: 6. Aut (M. Kalpaklı)*

HIST 568 British History-Writing to the Enlightenment
The course has as its subject matter a variety of writings about the past created in the languages of the British Isles, from the early medieval period until the end of the eighteenth century. It seeks to show the circumstances of their composition, their purposes, and their role in such field as law, theology, politics and purely imaginative literature. The purpose of the course is to allow the student to become acquainted with large areas of the intellectual history of the British Isles and also provide a comparative basis for a critical consideration of modern historiography. *Credit units: 3 ECTS Credit Units: 6.*

HIST 571 Religion and Nationalism in 19th Century Europe
The formation and development of nationalist movements in the late 18th and 19th centuries. Their relationship to religion, and competing and complementary ideologies. Study of concrete examples in existing states and in stateless ethnic groups, throughout Europe but with particular reference to the British Isles. *Credit units: 3 ECTS Credit Units: 6.*

HIST 573 New Era/New Deal (1920-1945)
This course is designed to give students in the masters program in US history an in-depth look at the history of and historical literature about the period 1920-1945. Major topics will include the Jazz Age, the Roaring's, the Great Depression, Franklin Rooselvelt's New Deal and World War II. *Credit units: 3 ECTS Credit Units: None.*

HIST 574 Enlightenment and Counter-Enlightenment
The nature of the Enlightenment and Counter-Enlightenment in mainland Europe and the British Isles, the social and political environment, their institutions, dissemination and influences. *Credit units: 3 ECTS Credit Units: 6.*

HIST 575 US Labor and Immigration History
Labor history and the history of immigration into the United States are intimately related topics. This course is designed to give students in the graduate program in American history an in-depth look at this relationship, with a focus on historiography. Topics may include colonial economies and labor, slavery, early industrialization and the breakdown of skilled trades, later industrialization and the struggle for control of the shop floor race and the American working class, NAFTA, and post-industrialization. *Credit units: 3 ECTS Credit Units: 6.*

HIST 576 The Ottoman Empire in the Great War 1911-1923
Internal and external conditions in the Ottoman Empire during the Tripolitanian War (1911-1912), the Balkan Wars (1912-1913), World War I (1914-1918), and the Turkish War of National Liberation (1918-1923). *Credit units: 3 ECTS Credit Units: 6.*

HIST 577 US Military and Diplomatic History
An intensive examination of American military and diplomatic history from the colonial period to the present with a focus on historiography. Topics may include colonial wars in North America, the wars of the United States, war and American society, treaties with European nations and with Native Americans, imperialism and anti-imperialism, relationism, and the cold war. *Credit units: 3 ECTS Credit Units: 6.*

HIST 579 Modernization of the Ottoman Empire:1800-1923
Study of the processes by which the Ottoman Empire modernized itself during the 19th and early 20th centuries. Special attention to the Tanzimat, the reign of Sultan Aldülhamid II, and the Young Turk Constitutional era. *Credit units: 3 ECTS Credit Units: None.*

HIST 580 American Foreign Relations from the Early Republic to World War I
Important themes in the formation and early development of American foreign relations: Exceptionalism, isolationism, unilateralism, hegemony, expansionism, anti-colonialism, idealism, period covered 1787-1918. *Credit units: 3 ECTS Credit Units: 6. Aut (E. Kohn)*

HIST 585 Seminar in Medieval European History I
Selected topics in medieval European History tailored to current student research projects. *Credit units: 3 ECTS Credit Units: None.*

HIST 586 Seminar in Medieval European History II
Selected topics in medieval European History tailored to current student research projects. *Credit units: 3 ECTS Credit Units: None.*

HIST 587 Topics in American Legal History
This course surveys crucial themes in American legal and constitutional history from the late eighteenth century to the late twentieth century. We examine the interactions between social and political history and changes in the law and legal institutions. Topics include the law and ideological frameworks put in place in the American revolution; the creation of a national constitution; federalism. The law of slavery; the rise of the legal profession and formal legal education; the regulation of race and gender; and formal legal education; the regulation of race and gender; labor law; economic regulation, citizenship and rights. Course materials include legislation, course cases, legal treatises, and secondary sources. *Credit units: 3 ECTS Credit Units: None.*

HIST 588 The Latin Kingdom of Jerusalem 1099-1291
Brought into being by the First Crusade, the Latin Kingdom of Jerusalem established a western presence in Palestine which, with the somewhat erratic assistance of further crusades, maintained itself against the Muslims, for nearly two centuries, before finally being destroyed by the Egyptian Mamluks. This course will examine the complex society that arose there of Latin princes, knights and lesser folk from Northwestern and Northern Europe, Military Religious Orders, Italians, Eastern Christians, Jews and Muslims. Although, focused on the Latin kingdom of Jerusalem itself, the course will also necessarily deal to some extent with the other crusader states of the Near East in this period, as well as the Muslim, Byzantine and Mongol states of the region. *Credit units: 3 ECTS Credit Units: 6. Aut (P. Latimer)*

HIST 589 History of Arab Nationalism in the Middle East
This course explores the birth, triumph and fall of Arab nationalism in the Middle East. The course focuses on historical events, political leaders and movements all of which defined and shaped the nature of the movement. Concepts such as Arabism, Arab unity, Arab nationalism are among the terms that we will investigate along with their contextualization in different regions of the Middle East by various actors. Factors which contributed to the development and/or decline of the Arab nationalist movement will be examined are: colonialism, the dissolution of the Ottoman Empire, the World War I and WW-II, the emergence of the State of Israel, the Egyptian Revolution and the rise of Al-Nasser, Islamic resurgence and the recent incidents in the region. The ideological links between Arab nationalism and modern radical movements will also be examined. *Credit units: 3 ECTS Credit Units: 6.*

HIST 591 Seminar in Ottoman History I
Reading and interpretation of selected sets of documents on particular topics. *Credit units: None ECTS Credit Units: None.*

HIST 592 Seminar in Ottoman History II
Independent work on the periods of transition and modernization of the Ottoman state and society. *Credit units: None ECTS Credit Units: None.*

HIST 593 Seminar in English History I
Selected topics in English History tailored to current student research projects. *Credit units: 3 ECTS Credit Units: None.*

HIST 594 Seminar in English History II
Selected topics in English History tailored to current student research projects. *Credit units: 3 ECTS Credit Units: None.*

HIST 595 Seminar in American History I
Independent work on the history of the United States in the nineteenth century. *Credit units: 3 ECTS Credit Units: None.*

HIST 597 Seminar in Ottoman History III
Reading and interpretation of documents related to individual student's thesis research. *Credit units: 3 ECTS Credit Units: None. Aut (E. Radushev)*

HIST 598 Seminar in Ottoman History IV
Reading and interpretation of documents related to individual student's thesis research. *Credit units: None ECTS Credit Units: None.*

HIST 599 Master's Thesis
Credit units: None ECTS Credit Units: None. Aut (Staff)

HIST 612 Ottoman Imperial Socio-Economic History, 1453-1600
Mehmet the Conqueror and the establishment of the Ottoman Empire. Ottoman administration in its classical form. The Çift-Hane system. The Shari'a and Örf. The Ulema and the religious orthodoxy. Heterodox movements in the provinces. *Credit units: 3 ECTS Credit Units: None.*

HIST 613 Urban Institution in the Ottoman Classical Period, 1500-1600
Physical organization of Ottoman cities. Demography. Central administration and municipality. Social groups. Economic structures. Trade life. Manufacturing. Religious and charitable institutions. *Credit units: 3 ECTS Credit Units: None.*

HIST 616 The Rise of the Hanedans and the Sublime Porte, 1774-1821
The Russo-Ottoman War of 1768-1774 and the dependency of the central government on the Ayans. Hanedans as political and military forces challenging the Sublime Porte. The Sened-i İttifak as the tidemark of the Hanedan-power. Elimination of the Ayans and the Hanedans. *Credit units: 3 ECTS Credit Units: None.*

HIST 644 Intellectual History of Medieval Europe 12th-15th Century
Intensive study of major themes and figures in political, theological and scientific thought in the Middle Ages. The 12th-century Renaissance, the high medieval synthesis and late medieval developments. *Credit units: 3 ECTS Credit Units: None.*

HIST 651 Continental and Insular Ancien Regimes
The economic and social structure of European Ancien Regimes. Politics and ideology. Absolutism and its rivals. The British Ancien Regime and the politics of reform. *Credit units: 3 ECTS Credit Units: None.*

HIST 658 The World Transformed (1975-2001)
This course deals with major themes in international affairs and is designed for graduate students and senior undergraduates. It starts with the post-Vietnam crisis of the West (including the oil shock) and the last Soviet expansion (culminating with Afghanistan). the western recovery after 1979 is assessed and so is the resulting upheval in Moscow, where a completely different tack was used. In 1986 the Soviet bloc started to disintegrate, a process culminating in 1991 with the disappearance of the USSR and the proclamation of a 'New World Order'. The Communist world then entered upon crisis, and the USA became by far the dominant power. This process is analyzed as far as the occupation of Iraq in 2002. *Credit units: 3 ECTS Credit Units: 6.*

HIST 663 The Revolution of the 1980's: Causes and Consequences
This course covers the era of Turgut Özal, Ronald Reagan and Margaret Thatcher (1979-1993). All aspects, domestic, international, economic and cultural, will be surveyed, with a detachment that has not until recently been possible. The causes of the great change, in the failure of the post-1945 order with the inflation and unrest of the 1970's, are examined; so also are the consequences, the collapse of Communism and the spread of a 'free-market' ideology. *Credit units: 3 ECTS Credit Units: 6. Aut (N. Stone)*

HIST 699 Ph.D. Dissertation
Credit units: None ECTS Credit Units: None. Aut (Staff)

HIST 701 British Societies 1793-1901
The course treats of the perticular histories, i.e. social, cultural, economic, religious, political, etc., of the nations and regions of the British Isles in the nineteenth century. *Credit units: 3 ECTS Credit Units: 6.*

HIST 702 The Historical Image of "The Turk" in Europe
The course aims at giving an overview of the Image of the Ottoman Empire in different European countries up to World War I, as the picture is changing from century to century and from country to country. The course will deal with the first encounter with Islam, the perspectives and images created then and how some of these prejudices were transferred to the Ottomans after they established their first presence on the Balkans and above all after the Conquest/Fall of Constantinople. A general separation has to be made into Central Europe (primarily the German speaking countries Austria, and as a consequence of Protestantism, Germany) and Western European Countries. It will be taken into regard that there were different perceptions in the upper and lower classes and how propaganda instruments were used to either create a negative or positive image. Similarly, source material (such as diplomatic documents, philosophical and ecclesiastical writings, travelogues/travel books and the belles letters) will have to be divided into different classes identifying influences from various European intellectual movements (i.e. Renaissance-Humanism, Enlightenment Period, French Revolution and its impacts on Europe, etc.) as well as different economic and diplomatic relations (sphere of interest) of diverse countries to the Ottoman Empire. Within the framework of the course, terms like "stereotypes" (Lippman), "images of the

other" and "propaganda" will be discussed; visual media like paintings, wood engravings, leaflets, illuminations, caricatures will be involved. *Credit units: 3 ECTS Credit Units: 6. Aut (K. Tomenendal)*

HIST 704 Medieval Nobilities

This course deals with the origin of medieval nobilities and their changing fortunes and natura in the course of the Middle Ages. ıt is also concerned with various questions about the material and ideological underpinings of the position of nobilities. was one noble through birth, status, wealth, power or behaviour, or a varying mixture of all of these? How was nobility expressed? How were new members recruited into the nobility; what kind of wastage was there from within the nobility? What was the relationship between the nobility and other elites in society? What was the relationship between nobilities and kings? What was the relationship between nobilities and city-states? What of nobilities outside of Europe? *Credit units: 3 ECTS Credit Units: 6.*

HIST 706 Aristocraties from 1500

The course examines the character and constitution of aristocratic elites in a variety of states and regions throughout the period of post-medieval monarchical government. It also reflects on the military, cultural, political, social, administrative and economic roles of these elites in that period. In all these matters, emphasis is placed on local and temporal diversity and opportunity exists for students to pursue comparative studies. More general consideration is given to the topic of aristocracies in historiography, particularly of political thought and ideologies. *Credit units: 3 ECTS Credit Units: 6.*

HIST 708 European Migration to the Ottoman Empire and Early Republican Turkey

The course aims at giving an overview of European Migration to the Ottoman Empire up to Early Republican Times (1930ies). Jewish immigrants of 15th century Spain, the Levantines, renegades, and converts to Islam, reformers in different areas in the 18th and 19th centuries up to German intelligentsia migrating to the Republic of Turkey during World War II will be dealt with. Biographies of selected persons from different backgrounds will be introduced. Within the framework of the course, migration theories will be subject of discussion; selected primary sources will be studied and analysed. *Credit units: 3 ECTS Credit Units: 6.*

DEPARTMENT OF INTERNATIONAL RELATIONS

E. Aydınlı (Chair), İ. Akipek, M. Almond, H. P. Bilgin, N. B. Criss, T. Fougner, O. Gökçe, S. S. Güner, Y. İnan, P. İpek, A. L. Karaosmanoğlu, H. A. Karasar, S. H. Kırımlı, M. Kibaroğlu, S. McMeekin, T. Oğuzlu, İ. Ortaylı, D. Sezer, N. Stone, N. S. Şatana, A. Tekin, D. Tsarouhas, G. Tuna, P. Williams.

Part-time: B. Ö. Gökakın.

International Relations (IR) is a relatively new discipline. Its importance, however, has been rapidly growing in recent decades. All of us are affected by the international environment and by foreign policy decisions. International issues are becoming increasingly significant, complex, and diversified. We often read and hear about such issues as the Arab-Israeli conflict, the Aegean dispute, the post-Cold War period, the European Union, arms control negotiations, and problems of international trade and finance. All these issues lend themselves to conflicting interpretations and competing alternative solutions. In order to grasp the significance of these contemporary problems, we need to have not only a certain degree of specialized knowledge about the geographical regions in question, but also some theoretical understanding of International Relations.

Career opportunities in the field increase as Turkey's foreign relations diversify. The diplomatic service and other sectors of public bureaucracy continue to be an important source of employment. In addition to this, the media, private sector, professional organizations, and universities need increasing numbers of specialists in international affairs.

UNDERGRADUATE PROGRAM

The undergraduate program is comprised of a broad set of integrated courses designed to provide the training and perspective necessary for future career responsibilities in the field of International Relations. These courses emphasize increased competence in IR specialties such as International Law, Diplomatic History, Politics of International Economy, Foreign Policy Analysis, Global Issues and Area Studies. The teaching objectives are to maintain the crucial balance between theory and practice and to ensure that every student is exposed to the latest understanding of all the key IR issues and to the conceptual and analytical frameworks underlying them.

The core set of courses provides the fundamentals of the field of IR while a wide variety of elective courses, to be taken from the department as well as from the Departments of Political Science, Economics and Management, permits students to develop a program that will meet personal needs and special career interests.

For students who choose to pursue a more advanced degree in the field, the Department offers a Master's degree program and a doctoral degree program with considerable flexibility for graduate students to develop specialized academic programs to suit their needs and interests.

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
ECON 101	Introduction to Economics I	3 / 6
ENG 101	English and Composition I	3 / 6
GE 100	Orientation	1 / 1
HCIV 101	History of Civilization I	3 / 6
POLS 101	Introduction to Political Science I	3 / 6
SOC 101	Introduction to Sociology	3 / 5
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
CS 121	Introduction to Computing for Social Sciences	3 / 6
ECON 102	Introduction to Economics II	3 / 6
ENG 102	English and Composition II	3 / 6

HCIV 102	History of Civilization II	3 / 6
IR 101	Introduction to World Politics	3 / 6
TURK 102	Turkish II	2 / 1

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
ENG 241	Sophomore Academic English I	3 / 5
HISTR 201	History of Turkish Republic I	2 / 1
IR 205	Diplomatic History I	3 / 6
IR 227	Research Methods in International Relations	3 / 6
MATH 264	Statistics for Social Sciences	3 / 6
PHIL 241	Social and Political Philosophy I	3 / 6

Spring Semester		Credits / ECTS Credits
ENG 242	Sophomore Academic English II	3 / 5
HISTR 202	History of Turkish Republic II	2 / 1
IR 218	Diplomatic History II	3 / 6
PHIL 242	Social and Political Philosophy II	3 / 6
POLS 102	Introduction to Law	3 / 6
PSYC 102	Introduction to Social Psychology	3 / 5

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
IR 303	International Law I	3 / 6
IR 305	International Organizations	3 / 6
IR 335	International Relations Theory	3 / 6
	Elective (2)	6 / 12

Spring Semester		Credits / ECTS Credits
IR 304	International Law II	3 / 6
IR 333	Foreign Policy Analysis	3 / 6
IR 338	Politics of International Economy	3 / 6
	Elective (2)	6 / 12

FOURTH YEAR

Autumn Semester		Credits / ECTS Credits
IR 439	Turkish Foreign Policy I	3 / 6
	Elective (4)	12 / 24

Spring Semester		Credits / ECTS Credits
IR 440	Turkish Foreign Policy II	3 / 6
	Elective (4)	12 / 24

In addition to elective courses offered by the Department of International Relations, students are allowed to take up to one elective per semester from the departments of Economics, Political Science, Faculty of Law, Management and/or philosophy or foreign language courses.

BİLKENT-BINGHAMTON DUAL DIPLOMA PROGRAM

in Global and International Affairs

The dual diploma program Bilkent-Binghamton, SUNY bachelor's degree in **Global and International Affairs** (GIA) offers students at Bilkent University a unique program of interdisciplinary study in International Relations, History, Economics and other fields yielding high-level substantive knowledge and analytical skills for careers requiring global perspectives on international issues of various kinds. This four-year program includes full-time enrolment for four semesters at Binghamton University, the SUNY doctoral campus most noted for its undergraduate excellence, its comprehensive internationalisation, and its history of fruitful association with Turkish universities. Students in the program meet all of the requirements for a Bachelor's degree both at Binghamton University and at Bilkent University. Although degree recipients receive two diplomas, one from each institution, both

diplomas refer to the degree as jointly awarded, and no student can receive the degree or either of the diplomas without satisfying the academic requirements of both institutions. To be able to start the program, students must achieve a satisfactory score, specifically a 550 or better on the U.S. Test Of English as a Foreign Language (213 on the computer based, 80 on the internet based).

Minimum credits for the joints Bachelor's Degree in Global and International Affairs is 120 (minimum of 50 credits from each partner).

Following is the first and third year courses to be taken at Bilkent University.

FIRST YEAR (Bilkent University)

Autumn Semester		Credits / ECTS Credits
CS 121	Introduction to Computing for Social Sciences	3 / 6
ECON 101	Introduction to Economics I	3 / 6
ENG 101	English and Composition I	3 / 6
GE 100	Orientation	1 / 1
HCIV 101	History of Civilization I	3 / 6
POLS 101	Introduction to Political Science I	3 / 6
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
ECON 102	Introduction to Economics II	3 / 6
ENG 102	English and Composition II	3 / 6
HCIV 102	History of Civilization II	3 / 6
MATH 264	Statistics for Social Sciences	3 / 6
POLS 102	Introduction to Law	3 / 6
TURK 102	Turkish II	2 / 1

THIRD YEAR (Bilkent University)

Autumn Semester		Credits / ECTS Credits
ENG 241	Sophomore Academic English I	3 / 5
HISTR 201	History of Turkish Republic I	2 / 1
IR 303	International Law I	3 / 6
IR 439	Turkish Foreign Policy I	3 / 6
PHIL 241	Social and Political Philosophy I	3 / 6
	Elective*	3 / 6

Spring Semester		Credits / ECTS Credits
ENG 242	Sophomore Academic English II	3 / 5
HISTR 202	History of Turkish Republic II	2 / 1
IR 304	International Law II	3 / 6
IR 440	Turkish Foreign Policy II	3 / 6
PHIL 242	Social and Political Philosophy II	3 / 6
	Elective*	3 / 6

* International Relations, Political Science and Faculty of Law.

SECOND and FOURTH YEARS (Binghamton University)

Binghamton will specify which courses are to be made available to students in this program in a given year. Binghamton also provides advising prior to students' arrival in Binghamton and during their stay to ensure that they enroll in courses appropriate to their individual academic and personal backgrounds, needs, and interests. Following is a minimum credit breakdown by category (please note that some of these credits will be satisfied with courses taken at Bilkent):

Political Science: 32 credits

History: 32 credits

Economics: 9-12 credits

Research Methods: 6-8 credits

General Education: 36 credits (some of which will be satisfied with courses taken in above categories)

GRADUATE PROGRAMS

Master of Arts in International Relations

Admission: Prospective students must have completed the Bilkent University requirements for a Bachelor of Arts degree in International Relations or approximately equivalent training. (Also refer to the "Graduate Admissions" section in the introduction of this catalog for the general graduate admission requirements.)

Degree Requirements: A completed program must satisfy the following criteria:

1. Completion of at least 31 units of credit course work. The five required international relations courses include the following: International Relations Theory (tied to Academic English Writing I), Research Methods (tied to Academic English Writing II) and Issues in Turkish Foreign Policy. The five elective courses can be selected from the offered graduate courses each semester.
2. Completion of an M.A. thesis proposal before the start of the second year.
3. An M.A. thesis must be submitted, defended and approved by the thesis defense committee.
4. A cumulative grade point average of at least 3.00 must be maintained for the totality of Master's level work.

Every MIR candidate must pass the two Academic English Writing courses before starting to write the M.A. thesis.

Master of International Affairs and Public Policy (MIAPP)

The curriculum of the Master of International and Public Policy (MIAPP) is designed to provide students with a broad analytical background in the major fields of international affairs and European integration, combined with the specific focus on the newly emerging issues of governance and globalization. The program of study requires 60 units of graduate credits and is completed in four terms of full-time attendance without the requirement of submission of a Master's thesis.

By underlining updated knowledge and skills essential to careers in international, private, and public sectors, the program responds to new professional opportunities at home as well as abroad. The program addresses the fundamental issues of the post-Cold War era, globalization, public governance, corporate governance and European integration with an approach that incorporates scholarly perspective and practical experience.

Requirements for Application: An undergraduate degree in international relations is not a prerequisite for admission. Graduates of other disciplines are also eligible and are encouraged to apply.

CURRICULUM

FIRST YEAR

Autumn Semester (Compulsory Courses)		Credits / ECTS Credits
ECON 507	Economics for International and Public Affairs I	3 / 6
ENG 406	Graduate Writing and Presentation Seminar	3 / -
IR 543	International and Public Policy Decision Making	3 / 6
IR 574	Turkey's International Relations	3 / 6
IR 629	Global Political Economy	3 / 6

Spring Semester (Compulsory Courses)		Credits / ECTS Credits
ECON 508	Economics for International and Public Affairs II	3 / 6
IR 547	International Politics	3 / 6
IR 572	European Union Integration, EU and OECD Economies	3 / 6
IR 594	International Law and Organizations	3 / 6
MAN 509	International Business	3 / 6

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
	Electives (5)	- / -

Spring Semester		Credits / ECTS Credits
	Electives (5)	- / -

GRADUATE ELECTIVES

HIST 402	Ottoman Turkish and Paleography II	4 / 8
HIST 412	Ottoman History: 1600-1914	3 / 6
HIST 414	Byzantine History II: 1025-1453	3 / 6
HIST 415	British History: 1485-1914	3 / 6
HIST 432	History of the United States from the Reconstruction	3 / 6
HIST 479	Comparative Perspective On Museum and Archives History and Practice	3 / -
HIST 482	Latin for Medieval and Early Modern History II	3 / -
HIST 502	Ottoman Paleography II	4 / 8
HIST 508	Methodology in History II	3 / 6
HIST 512	Ottoman Social and Economic History II	3 / -
HIST 517	Ottoman Millet System	3 / 6
HIST 526	Advanced Ottoman Diplomatics	3 / -
HIST 534	Themes in the History of American Radicalism	3 / 6
HIST 546	Comparative Perspectives on Museum and Archives History and Practice	3 / -
HIST 558	US Politics and Culture Since 1945	3 / -
HIST 597	Seminar in Ottoman History III	3 / -
IR 322	International Protection of Human Rights	3 / 6
IR 331	War, Peace and Security	3 / 6
IR 343	Middle East Security Structures	3 / 6
IR 345	Policies of the European Union	3 / 6
IR 408	European Union Law	3 / 6
IR 434	Selected Topics in International Law	3 / 6
IR 452	Contemporary International Relations	3 / 6
IR 454	International Environmental Politics	3 / 6
IR 455	The European Union and Turkey	3 / 6
IR 465	Global Economic Governance	3 / 6
IR 470	International Terrorism and Transnational Crime	3 / 6
IR 477	Political Economy of Natural Resources	3 / 6
IR 478	Political Theory in International Relations	3 / 6
IR 479	Contemporary Trends in Eurasia	3 / 6
IR 485	The Politics of Turkey's Relations With the European Union	3 / 6
IR 488	Security and Strategy	3 / 6
IR 489	EU Foreign and Security Policy	3 / 6
IR 492	Gender in International Relations	3 / 6
IR 494	Causes and Prevention of War	3 / 6
IR 495	World Energy Politics	3 / 6
IR 496	Turkey's Security in a Changing World	3 / 6
IR 529	Arms Control and Disarmament	3 / 6
IR 567	Contemporary Russia	3 / 6
IR 619	Strategic Studies	3 / 6
IR 629	Global Political Economy	3 / 6
IR 631	Political Economy of Development	3 / 6
IR 647	Nuclear Weapons and U.S. Foreign Policy	3 / 6
IR 652	New World Orders 1945-2000	3 / 6
IR 658	The World Transformed (1975-2001)	3 / 6
MAN 336	Marketing Management	3 / 6
MAN 406	Business Strategy	3 / 6
MAN 572	European Community Law	3 / 6
MAN 579	Sales Management	3 / -

After having completed the core curriculum course work during their first year, students must satisfy the requirements of the second year through the completion of the course work of at least 30 credit

units (five elective courses each semester). Students who wish to concentrate on European Affairs are advised to take at least 6 courses from basket 2. Those students who wish to acquire a more general international and policy outlook can construct their own individual programs by selecting courses out of all the baskets with the advice of the Director. Elective courses are divided into five baskets:

1. International Relations and Security
2. Politics, Economics and Law of European Integration
3. International Economics and Management
4. Decision-Making and Governance
5. Area Studies

Doctor of Philosophy in International Relations

This is a highly specialized program. Its purpose is to develop the candidates' skills in international political analysis and to increase their capacity to conduct research on theoretical issues, international security studies, strategic studies, comparative foreign policy, international political economy, regional integration, global environmental problems, international law, peacekeeping and conflict resolution as well as area studies such as Europe, the Balkans, Russia, the Middle East, Central Asia and Caucasus. The program is reserved for a limited number of students who are qualified to spend several years doing intensive research. The program is particularly suitable for those candidates who wish to stay in academic life after having obtained the Doctor of Philosophy degree.

The students accepted to this program must complete course work of no fewer than 26 credit hours. This requirement can be met by taking graduate-level International Relations courses and, if necessary, other courses approved by the Department. The compulsory courses are Current Debates in International Relations Theory (IR 621), and Reading and Research in Diplomatic History (IR 625).

Every Ph.D. candidate must demonstrate reading and writing proficiency in a language appropriate to the candidate's area of research, preferably before beginning to work on the dissertation. The language requirement may be satisfied in two ways: 1) by obtaining at least an average of grade B (3.00) for the level of 12 units; 2) by being a native speaker of the language appropriate to his/her area of research.

COURSE DESCRIPTIONS

UNDERGRADUATE COURSES

IR 101 Introduction to World Politics
This course introduces students to international relations by presenting the basic concepts, approaches and major contemporary currents in world politics. The purpose of the course is to provide students with a framework for analysis whereby they can understand and evaluate international phenomena. It covers a wide range of topics including security issues such as war, terrorism, diplomacy and arms control; ecological issues such as climate change and resource depletion, and economic issues such as development, world trade and globalization. *Credit units: 3 ECTS Credit Units: 6.*

IR 205 Diplomatic History I
Diplomatic history from the Peace of Westphalia until World War I. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

IR 218 Diplomatic History II
Diplomatic history from World War I to the contemporary era. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: IR 205.*

IR 227 Research Methods in International Relations
This course aims to introduce the students how to design an IR research paper and gradually write one throughout the semester. The students are familiarized with the basic concepts of research philosophies and methods such

as formulation of a good research question, a theory, hypotheses and data collection & analysis techniques. The course does not only focus on theory but also makes the students acquainted with applied and empirical research. For that purpose, students get first hand experience on how to do library research by actually going to the library and meeting with a library advisor. Overall, the objective of the course is to build a basic background in students who are later in their training expected to write good research papers. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

IR 303 International Law I
The first part of a comprehensive survey of international law as the normative factor in international relations, to be continued in IR 304. The basic legal concepts are described and explained, together with a view of prospective developments. Rules of law are considered in their political, economic and cultural contexts, while emphasizing their normative character and the elements of legal reasoning. *Credit units: 3 ECTS Credit Units: 6. Aut (İ. Akipek)*

IR 304 International Law II
The second part of a comprehensive survey of international law as the normative factor in international relations, continuing IR 303. The basic legal concepts are described and explained, together with a view of prospective developments. Rules of law are considered in their political, economic and cultural contexts, while emphasizing their normative character and the elements of legal reasoning. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: IR 303.*

IR 305 International Organizations
A comprehensive study of the development of international organization and its role in the contemporary world. The central part of the course deals with the United Nations, its structure, performance and prospects, both in the maintenance of peace and in the economic and social field. Then specialized agencies and the regional organizations are treated on a descriptive basis. *Credit units: 3 ECTS Credit Units: 6. Aut (Y. İnan)*

IR 308 Turkic/Muslim People of the Former USSR
Russian Rule over the Turco-Muslim lands, the enlightenment and national revival of the Turco-Muslim peoples: establishment of Soviet power, communist rule and the road to national independence. *Credit units: 3 ECTS Credit Units: 6.*

IR 309 Contemporary Socio-Political Movements
This course offers modern political trends that have impact on decision-making mechanisms such as ethnicity, nationalism, feminism, poverty and environmentalism in our days. *Credit units: 3 ECTS Credit Units: None. Aut (G. Tuna)*

IR 311 Russian History
A survey of Russian History from the rise of Kievan Confederation (9th century) to the Bolshevik Revolution. Focus will be on reform, revolution, ideology and society. *Credit units: 3 ECTS Credit Units: 6.*

IR 315 History of the Balkans
Recent developments have shown that the Balkans is a potentially explosive area and the sources of conflict have historical origins. This course will take up Balkan history from its origins to the post-cold war era and introduce the student to the structures of ethnic conflict. *Credit units: 3 ECTS Credit Units: 6.*

IR 318 Contemporary Balkan Politics
This course examines current political development in the Balkans and highlights potential flash-points with special reference to wars in former Yugoslavia. *Credit units: 3 ECTS Credit Units: 6.*

IR 322 International Protection of Human Rights
Analyzes the concept of human rights firstly at the domestic level and then shifts the focus to the international level. During these analyses minority rights are also analyzed from the point of the treaties signed by the Ottomans and the Turkish Republic. The turning point in the protection of human rights at the international level commences by the U.N. Due to this all the developments in the U.N. and also in the Council of Europe in this particular field are analyzed in detail. *Credit units: 3 ECTS Credit Units: 6.*

IR 331 War, Peace and Security
This course is about three concepts that have been at the core of thinking about world politics, namely: ‘war’, ‘peace’ and ‘security’. By introducing a wide variety of intellectual traditions and contemporary ideas on these three core concepts to students, this course aims to provide a comprehensive basis for understanding the dynamics of world politics. The general objectives include the development of oral, written and research skills as the course requires students to become able to read, absorb and critically assess a large amount of complex (and at times contradictory) material. The subject-specific objectives of the course include the ability to discuss the causes and significance of war, alternative meanings and practices of peace, and contending conceptions and practices of security. *Credit units: 3 ECTS Credit Units: 6. Aut (H. P. Bilgin)*

IR 333 Foreign Policy Analysis
The making and implementation of foreign policy in theory and practice. The theoretical literature on foreign and security policymaking. Case Studies. *Credit units: 3 ECTS Credit Units: 6.*

IR 335 International Relations Theory
This course provides students with a comprehensive introduction to contemporary international relations theory. No prior knowledge of international theory is expected. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

IR 337 Human Rights and Human Security Regimes
This course covers two closely interrelated subjects: 1) contemporary concepts, doctrines, and practice of human rights as generally understood by the international community; 2) international social and political trends aimed at the development of universal norms, rules and institutions in order to enhance the chances of human beings to lead safe, secure and qualitatively meaningful lives that are at the same time sustainable. The protection of civilians during armed conflict and the protection of the environment are among such movements. The ultimate goal of the regimes and/or arrangements multilaterally constructed to reach this goal is the survival of the human race into posterity in full possession of its natural physical, mental and emotional capacities. *Credit units: 3 ECTS Credit Units: 6. Aut (D. Sezer)*

IR 338 Politics of International Economy
The aim of this course is to provide students with a comprehensive introduction to International Political Economy (IPE) as a field of study. The course focuses on recent developments and current trends in the world political economy, various theoretical IPE-perspectives, as well as more specific topics such as international monetary affairs, global finance, foreign debt, international trade, global production, foreign direct investment, transnational corporations, and development. *Credit units: 3 ECTS Credit Units: 6.*

IR 343 Middle East Security Structures
A series of inter-state as well as intra-state conflicts, have determined the political and military dispositions of the states in the Middle East. Heavy armament of the states in the region, including all categories of weapons of mass destruction and ballistic missiles, and the emergence of terrorist groups make the prospects for a fair and lasting peace all the more difficult. These developments in its immediate neighborhood which raise serious concerns for Turkey will also be studied. *Credit units: 3 ECTS Credit Units: 6. Aut (M. Kibaroğlu)*

IR 345 Policies of the European Union
This course will analyze European Integration and its policies. In doing so, firstly the main reasons for establishing the European Union and the general aspects of this integration, such as history, enlargement process, institutions will be examined. Then, we shall focus on different topics of the EU policies. In this part we shall first examine the internal policies of the EU integration, by taking into consideration the customs union and free circulation of goods, persons, services and capital. After that, we shall focus on the external policies of the EU integration. We shall put a particular emphasise on three types of policies; accession policy, association policy and commercial policy. At the end of the course the “European Foreign and Security Policy” will be examined *Credit units: 3 ECTS Credit Units: 6.*

IR 347 The International System
Some international relations theories would argue that most of the problems and opportunities the world faces today are related to the structure of the modern international system. This course examines the historical and theoretical evolution of the international system, with particular emphasis on the last two centuries. The main objective is to see which ideas and events have shaped the structure of the current system, as well as how the structure has shaped ideas and events. The students are expected to actively participate in the class discussions. *Credit units: 3 ECTS Credit Units: 6. Aut (N. S. Şatana)*

IR 408 European Union Law
The historical evaluation of the European Community; the basis of EC Law; basic features, organization and functioning of European Community institutions; legal and budgetary principles of the community. *Credit units: 3 ECTS Credit Units: 6.*

IR 413 Game Theory and International Politics
This course is designed to study rational behavior related to conflict. Substantively, it focuses on strategic rationality underlying 1. bargaining; 2. deterrence; 3. surprise attack. *Credit units: 3 ECTS Credit Units: 6.*

IR 433 Selected Topics in International Politics and Economy
Special topics of international political economy will be studied: economic development, North-south relations, problems of foreign trade, aid, and investment, multinational corporations, environmental impact of economic policies. *Credit units: 3 ECTS Credit Units: 6.*

IR 434 Selected Topics in International Law
The course intends to focus on certain selected topics of contemporary international legal order and study them in depth referring to state practice, the practice of international organizations as well as to decisions of international

courts and tribunals. Such topics may be related to self-determination, law of the sea, peacekeeping operations, humanitarian intervention, state succession and international responsibility. *Credit units: 3 ECTS Credit Units: 6.*

IR 439 Turkish Foreign Policy I

Analysis of Turkish Foreign Policy from the beginning of the Republic until 1950. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

IR 440 Turkish Foreign Policy II

The setting, objectives and issues of Turkish Foreign Policy since 1950. *Credit units: 3 ECTS Credit Units: 6.*

IR 452 Contemporary International Relations

Such topics as arms control, the international economy, intervention, and recent and current developments in various global regions will be addressed in this course. Students will be expected to undertake independent research that combines topicality and theoretical content. *Credit units: 3 ECTS Credit Units: 6.*

IR 454 International Environmental Politics

This course will focus on applying divergent theoretical approaches (realism, neoliberal institutionalism, domestic politics, epistemic communities, critical theory, feminism, etc.) to analysis of the causes, consequences, and resolvability of a representative range of international environmental political issues, from disputes relating to transboundary water shortages and degradation to global common property resource issues (especially ozone layer depletion, acid rain, and global warming). *Credit units: 3 ECTS Credit Units: 6.*

IR 455 The European Union and Turkey

This course aims to analyze the dynamics of Turkey's relations with the European Union since the foundation of official relations in the early 1960s till now. The particular issues to be analyzed are the following: The reasons for Turkey's application for membership in the EU, the reasons for the European Union to embrace an ambiguous attitude towards Turkey's membership, the role of the European Union in the Cyprus dispute, the impact of the September 11 on the dynamics of Turkey-EU relations, and the role of the United States in the general EU-Turkey relations. *Credit units: 3 ECTS Credit Units: 6.*

IR 465 Global Economic Governance

The aim of this course is to provide historical, theoretical and critical accounts of contemporary efforts to govern the world economy. The course focuses on the key multilateral institutions engaged in the management of the world economy, the growing role played by private authority, and the emergence of transnational social movements opposed to current forms of global economic governance. *Credit units: 3 ECTS Credit Units: 6.*

IR 470 International Terrorism and Transnational Crime

This course is designed to give students a comprehensive understanding both conceptual and practical of the topics of international terrorism and transnational crime. On the conceptual side, the theories, origins, definitions, forms, strategies/tactics, international relations and countering strategies of international terrorism and transnational crime will be explored. On the practical side, we will have guest speakers who are active counter terrorism/organized crime professionals, as well as having the opportunity to visit relevant departments of the national and military police commands. The course will be run on a lecture/seminar basis, and will include a simulation activity of an international terrorist act, which will involve the participation of all class members. *Credit units: 3 ECTS Credit Units: 6.*

IR 471 Communication Skills for IR

The purpose of this course is to enhance students' oral communication skills by exposing them to the highly specialized vocabulary commonly found in foreign policy and diplomacy and by practicing a variety of speaking activities of particular importance in this field of study (e.g. presentations, press conferences, and debates). This course is primarily for students interested in pursuing careers in the Ministry of Foreign Affairs or in international organizations (e.g. UN and the World Bank). *Credit units: 3 ECTS Credit Units: 6.*

IR 472 Diplomatic Language and Translation

The purpose of this course is to familiarize the student with diplomatic language, which is different from the language used in ordinary life. The difference stems mostly from the terms and expressions used that have a meaning other than those found in dictionaries. The course is an introduction to the art of communication and finesse employed in the diplomatic profession and as such, should be taken only by those who are interested in seeking employment in the Ministry of Foreign Affairs. *Credit units: 3 ECTS Credit Units: 6. Aut (O. Gökçe)*

IR 477 Political Economy of Natural Resources

This course introduces students to the importance of natural resources in the international political economy. It explores: how previously marginal actors on the energy scene, such as China, India, Russia, Turkey and their Caucasian and Central Asian neighbors, have become more central; the extent to which European Union energy requirements are driving this shift; how this shift is reshaping multinational business strategies; how ethnic conflict and terrorism are posing salient risks to major hydrocarbon supplies and supply lines; and the degree to which the need to preserve environmental integrity will ultimately limit fossil-fuel consumption. *Credit units: 3 ECTS Credit Units: 6.*

IR 478 Political Theory in International Relations

The purpose of this course is to acquaint students with the history of political philosophy as relevant to international relations. The course is based on reading of original texts and deals with selected political thinkers, such as Thucydides, Aristotle, Machiavelli, Grotius, Hobbes, Rousseau, Kant, and Clauzewitz. We will critically examine the origins and development of the many concepts, including freedom, justice, individual rights, power, and democracy, and give special attention to philosophical thought on war and peace. *Credit units: 3 ECTS Credit Units: 6.*

IR 479 Contemporary Trends in Eurasia

This course examines certain selected political developments in Eurasia and studies the construction of new international and national institutions in the post-Soviet space since 1991. A special focus will be given to contemporary "revolutions," democratization and regional cooperation efforts. *Credit units: 3 ECTS Credit Units: 6. Aut (H. A. Karasar)*

IR 482 International Ethics

Theories of international relations usually ignore the relevance of ethics for world politics. This course proposes an alternative approach. It focuses on the ethical dimensions of international relations. It introduces students to a range of contemporary foreign policy issues and to the ethical dilemmas they may raise. We will focus on critical questions such as: What is the moral standing or justification of the principle of state sovereignty? What moral ends or principles constrain a state in pursuit of its national security? We will examine such problems facing the international community as resort to force, just and unjust war, humanitarian intervention, and the protection of human rights. *Credit units: 3 ECTS Credit Units: 6.*

IR 483 International Politics of the Middle East

This course presents an overview of the Middle East in international politics from the collapse of the Ottoman Empire at the end of World War I into the contemporary era. It begins by addressing the rise of the Ottoman Empire and its strategy of defensive modernization vis-a-vis Western imperialism. Then it addresses the reactions to Western imperial penetration of the region following World War I and the rise of nationalisms. The bulk of the course focus on the experiences of state-formation in post-colonial Middle Eastern states, wars and conflicts and the roles of the military establishments, and the domestic factors, regional and international factors shaping the policies of Middle Eastern states. The course concludes with the impact of the events of 9/11 on the Middle East and the attempts to 'remake' the region by promoting democratization in Iraq. *Credit units: 3 ECTS Credit Units: 6.*

IR 485 The Politics of Turkey's Relations With the European Union

This course will analyze Turkey's relations with the Europe Union from historical security and political perspective. In doing so we first will examine the nature of Turkey's Europeanazition process from the early stages of westernization attempts during the Ottoman Empire up to now. Then, we will highlight the main turning points in Turkey-EU relations since Turkey's application for associate membership status in the European Economic Community in 1959. In this regard we will put a particular amphasize on Turkey's application for full membership in the European Communities in 1987, the EU's confirmation of Turkey's candidacy status in1999, and the changing dynamics of bilateral relations in the wake of September 11 events. This course will also analyze European approaches towards Turkey's membership aspirations and discuss the reasons why Turkey's accession process has lasted too long. *Credit units: 3 ECTS Credit Units: 6. Aut (T. Oğuzlu)*

IR 488 Security and Strategy

This course is designed to examine the changing features of use of force, security and strategy. In this context, it studies the evolution of strategic theory, political and legal restrictions on the use of force in international relations, the causes of armed conflicts, peace operations, and terrorism and irregular warfare. *Credit units: 3 ECTS Credit Units: 6.*

IR 489 EU Foreign and Security Policy

This course aims at introducing the students with the theoretical and empirical analysis of the EU's foreign, security and defense policies. In this regard, the following questions are of interest. Does the EU integration process cover integration in foreign and security issues? What are institutional developments in this area? What are the foreign policy instruments of the EU? What are the main goals behind the attempts to endow the EU with capabilities in foreign and security policy? From which theoretical perspectives can analysts approach this process? What is the relationship between CFSP and ESDP (European Security and Defense Policy)? Does the existence of CFSP/ESDP imply that the EU is transforming into a global security actor? In which ways does CFSP impact the transatlantic relations between the USA and EU? *Credit units: 3 ECTS Credit Units: 6.*

IR 492 Gender in International Relations

The aim of this course is to highlight the role played by gender in world politics. The course locates a concern with gender in the broader context of International Relations as a field of study, and seeks to uncover and critically assess the gender dimension of key IR-issues such as war, peace, security, international political economy, development, and human rights. *Credit units: 3 ECTS Credit Units: 6. Aut (T. Fougner)*

IR 493 European Union

This course is designed to introduce the students to the history, institutions and policies of the European Union. It aims to develop an understanding of the basic dynamics of the European integration with a view of national and global contexts in which the EU has evolved towards an "ever closer union". The course does not require previous study on the EU. *Credit units: 3 ECTS Credit Units: 6. Aut (D. Tsarouhas)*

IR 494 Causes and Prevention of War

This course examines the causes and prevention of war. The goal is to discover and assess why interstate and intrastate (civil) wars take place and how to prevent or at least control them. The first part of the course focuses on theoretical aspects of war and in the second part we aim to empirically understand war through the study of various case studies. The two world wars, ethnic cleansing in states such as Rwanda are only a couple of the cases we cover. By the end of the course students will be familiar with basic theories of causes of war and cases associated with them. Finally, an assessment of the possible causes of wars of the future, namely terrorism follows with a focus on possible means to prevent such wars. The course objective is to involve the students in an in-depth examination of war through discussion of extensive readings, class presentations and critical essay writing. *Credit units: 3 ECTS Credit Units: 6.*

IR 495 World Energy Politics

Energy resources and their geographical distribution. Advances in energy technologies. reference and alternative scenarios on energy. Supply and demand. Factors and actors effecting the oil prices. Major actors in the energy scene (States, organisations, etc). Main principles of energy policy. Energy policies and strategies of principal actors (U.S., Russian Federation, E.U., China and others). Concept of the energy security. Turkey's resources and energy policies. Will Turkey be an energy bridge? The importance of international relations on energy policies. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

IR 496 Turkey's Security in a Changing World

This course examines the key security challenges Turkey has faced throughout the history of the Republic (1923 -). The course would focus on national security threats as identified by Turkey's policy-makers as well as other insecurities that are voiced by non-state actors (interest groups, think tanks) and the citizens. Towards this end, we will make use of founding texts of the Republic, as with *Nutuk* , the Great Speech of Mustafa Kemal Atatürk), policy documents (to the extent that they are publicly available) and policy statements as well as the secondary literature addressing theoretical and practical debates. *Credit units: 3 ECTS Credit Units: 6.*

IR 497 Turkish Foreign Policy : Challenges in the Twenty- First Century

Turkish foreign policy operates in a radically different international and domestic environment at the dawn of the twenty-first century. The challenges presented by this new environment vary widely from those that prevailed through the second half of the twentieth century when Turkey chose to pursue an exclusively pro-Western foreign policy orientation, with the United States and the Atlantic Alliance having enjoyed a preeminent place in the wider web of relationships that the country cultivated with the West. Today, the organizing paradigm and the principles behind that orientation are being modified in response to developments both within and outside Turkey. This course is designed to offer the students an in-depth understanding and appreciation of the new challenges facing Turkish foreign policy and to promote alternative ways of thinking about how to meet the essential interests of Turkey through positive interaction with the outside world. *Credit units: 3 ECTS Credit Units: 6.*

IR 498 International Relations and Media

When the telegram was first introduced into news reporting during the Crimean War in 1856, nobody could have predicted the current effect of the media in international relations today. Thanks to the continuous revolution in communication technologies and in the global economy, the role of the media in international relations, whether in wars or trade agreements or environmental affairs, is evolving from the level of propaganda to one of decision making capacity. International Relations and Media is a unique course being offered to examine this new and evolving situation. Through this practice-oriented class, students will become familiarized with practical issues and dilemmas of the media connection within International Relations. Several guests speakers will be brought in, from leading media figures to experienced public officials. *Credit units: 3 ECTS Credit Units: 6.*

IR 499 Us Security Policy in the Middle East

This course examines the major security challenges facing the United States in the contemporary Middle East and the U.S. responses to meeting those challenges. The primary topics examined are the Arab-Israeli conflict, terrorism and jihad, nuclear proliferation, and Islam and democracy. Theoretical and methodological questions of "interpreting" the Middle East are also addressed. *Credit units: 3 ECTS Credit Units: 6.*

GRADUATE COURSES

IR 501 International Relations Theory

The main traditions and currents of thought in international political theory. Early thinking about international relations. Major twentieth century approaches: idealist-realist debate; the power politics approach and its fundamental concepts such as balance of power, national interest, nationalism and imperialism. Behaviorism; systems thinking; interdependence and structure list theories. Decision-making and integration theories. *Credit units: 3 ECTS Credit Units: 6. Aut (H. P. Bilgin)*

IR 519 Research Methods
This course aims to develop in students an appreciation of research design and methods and to prepare them for the thesis stage of the Master's program. Topics covered include principles and foundations of empirical research, design and structure of research, and data processing and analysis. It also provides an opportunity for students to begin to design their own research project in the light of the methods discussed. *Credit units: 3 ECTS Credit Units: 6.*

IR 529 Arms Control and Disarmament
This course is designed to teach the concepts, approaches and institutions related to arms control and disarmament and the historical developments and current trends in this field. *Credit units: 3 ECTS Credit Units: 6.*

IR 530 History and Politics in the Balkans
This course is designed to provide students with a thorough understanding of Balkan politics. Though the course will highlight certain historical points in order to give students the chance to make comparisons between the past and the present, it will mostly concentrate upon latest political developments in the Balkans. It will start off by giving students some background of Balkan politics in recent history in order for them to grasp part of the reasons for the existing turmoil in the area from a historical perspective. It will then focus upon the place of the Balkans in the general strategic policies of "Great" and "Super" powers. The course will be research-oriented, and every student will be expected to prepare a thorough research seminar on a given topic. *Credit units: 3 ECTS Credit Units: 6.*

IR 537 The Russian Revolutions
This course focuses on the analysis of the events leading up to the revolutions of 1905 and 1917 in Imperial Russia. Particular attention will be paid to the social, economic and political transformations of the pre-revolutionary period; the nature of the revolutionary and liberal opposition and the reactionary imperial administration. The main stages of the revolutions, changes in the nature of the Russian autocracy, the role of Duma in the imperial administration system, the nationalities problem, the formation of various political organizations and ultimately the overthrow of the autocracy will be examined in detail. A particular emphasis will be on the impact of the Russian revolutions on the subsequent global developments. *Credit units: 3 ECTS Credit Units: 6. Aut (S. H. Kırımlı)*

IR 541 Academic Writing I
This course will help you develop your ability to present your thoughts in written from, in a way that is appropriate in the International Relations academic community. You will work on different text types, including summaries and critiques, and you will also work on developing your skills in signposting and organizing text structures, important writing skills that will contribute to ease of understanding for those who read your work. According to the needs of the students, there may also be some emphasis on certain language structures that are important to academic discourse. *Credit units: 2 ECTS Credit Units: 4. Aut (J. Mathews-Aydınlı, J. Walters)*

IR 543 International and Public Policy Decision Making
This course aims at a gentle introduction of students into formal political theory. It is basically divided into two parts: individual decision-making theory and game theory. The first part concentrates on individual preferences and choice including decision making under certainly and risk, cardinal utility, subjective probability, the calculus and paradoxes of voting, and mispresentation of preferences. The second part includes two-person mixed-motive games, coalitional-form games, concepts of equilibrium such as iterated elimination of dominated strategies and backward induction, Nash and subgame-perfect Nash equilibrium. These analytical tools would serve as nuts and bolts for the student to go beyond mere description of political events, either domestic or international, and to construct their own explanations of puzzling choices at those levels. *Credit units: 3 ECTS Credit Units: 6. Aut (S. S. Güner)*

IR 547 International Politics
This course offers an introduction to the study of international politics. It aims to first provide the historical, conceptual, and theoretical tools and lenses for analyzing behavioral and institutional patterns in the international system, and then to use these analytical means in exploring major international issues and events. Particular emphasis will be given to topics of international security, such as major power rivalries, the impact of globalization on security, and the management of low intensity conflicts. Government experts and practitioners will be invited as quest lectures for certain specific issues, such as international terrorism and regional geostrategy. *Credit units: 3 ECTS Credit Units: 6.*

IR 563 Intensive Russian Language
This course is an intensive introduction to Russian language. Its contents and coverage are equal to the total of Russian. I, II, III and IV courses taught at Bilkent normally in four semesters. *Credit units: 5 ECTS Credit Units: 12. Aut (G. Tanrıkulu) Spr (G. Tanrıkulu)*

IR 565 Russian History Civilization and Culture
This course is a general overview of Russian history through specific case studies. The main themes of Russian history, civilization and culture from early times until the Russian revolutions would be covered in a seminar style. *Credit units: 3 ECTS Credit Units: 6.*

IR 572 European Union Integration, EU and OECD Economies
This course includes analyses of EU integration, globalization, regionalism and their relationship with nation states. Students will learn about the impact of EU integration on economic, political, cultural and social structures, the structure of the Turkish economy and the dynamics of its technological and socio-economic development. There will be a comparative analysis of EU and OECD economies and a transdisciplinary analysis of Turkey and the EU integration process. *Credit units: 3 ECTS Credit Units: 6.*

IR 573 Readings in Russian History Civilization and Culture
This course is an intensive introduction to the colorful world of Russian history, civilization and culture, aiming to increase students' ability to understand and use sophisticated and intellectual level skills of the Russian language. *Credit units: 5 ECTS Credit Units: 12.*

IR 574 Turkey's International Relations
This course will first examine the structural and historical determinants of Turkish foreign policy, with an emphasis on the foreign policy decision-making mechanism, as well as the sources of change and continuity. This will be followed by first, a general exploration of the dynamics of the sub-system/region in which Turkey is located, and then more in-depth analyses of Turkey's particular relations with different geographical regions, such as Europe, Eurasia, the United States, and the Middle East. Some experts from the Turkish foreign ministry, as well as public figures with experience and expertise on relevant issues, will provide guest lectures. *Credit units: 3 ECTS Credit Units: 6. Aut (O. Gökçe)*

IR 578 History of the Cold War
The Cold War was an anomaly in history. Until then the World had never experienced bi-polarity, atomic foreign policies or third worldism. This course is designed as an inquiry into why this happened while assessing. Cold War events. Topics include leadership profiles, cries, propaganda/intelligence activities and the Cold War culture throughout (1945-1991). *Credit units: 3 ECTS Credit Units: 6. Aut (N. B. Criss)*

IR 588 Readings in Central Asian History and Politics
This course will examine the emergence and development of modern nation states in Central Asia, taking into account the efforts for nation-building, regional cooperation, as well as the revival of ethnic, tribal and religious identities. Although its scope is post-Soviet Central Asia, an important amount of readings on the history of the region before 1991 will be required to better understand the contemporary trends. *Credit units: 3 ECTS Credit Units: 6.*

IR 590 Pre-Thesis Seminar
This course is designed to guide the Master's students in their thesis work. Each student is instructed to select a thesis topic, to do the relevant literature review, to determine the research design and to write a thesis proposal. *Credit units: None ECTS Credit Units: 24.*

IR 594 International Law and Organizations
International relations have legal and political sides. This comprehensive study will firstly analyze the normative side of international relations by describing and explaining the basic legal concepts of international law. At the later stage, it will focus on to the role of international organizations e.g. UN, Council of Europe, EU etc. to the contemporary world order under the effect of international law and politics. *Credit units: 3 ECTS Credit Units: 6.*

IR 598 Turkish Political Economy
This class is designed to introduce you to the political economy of the Turkish Republic. It starts with and overview of the Turkish political economy between the years 1908 and 1980. It then focuses on Turkey's economic and political structure and reform efforts in the post-1980 period. Within the political economy context, it looks at Turkey's interactions with the IMF, the EU and the USA. Finally, the course deals with the political economy of political ideologies; state-society relations; and the income distribution in Turkey. *Credit units: 3 ECTS Credit Units: 6.*

IR 599 Master's Thesis
Credit units: None ECTS Credit Units: 30. Aut (Staff)

IR 616 Individual National and Global Security
Despite the prevalence of state-based ('national security') approaches to security studies during the Cold War, alternative ways of thinking about security – focusing on the individual and society – also developed during this time period. In the post-Cold War era the primacy of state in considerations of security has come under increasing challenge from a variety of perspectives. This course is designed to provide a critical overview of (1) state-based approaches to security in an increasingly globalized world; (2) alternative approaches to security that focus on individual, societal and/or global security. The strengths and, weaknesses of these approaches will be highlighted through a consideration of cases such as Turkey's national security, societal security and the role of security culture in Turkey-EU relations, regional security in the Middle East, state failure and human security in the developing world. *Credit units: 3 ECTS Credit Units: 6.*

IR 617 Eurasian Atlantic Security I

This course is designed to explore the dynamics behind and the interconnections among strategic changes that took place in large parts of the Northern Hemisphere following the end of the Cold War, and their consequent impact on hemispheric and international security. The emergence of "Eurasia", as a pivotal strategic space is one such development. It is in one part of Eurasia, for example, namely Afghanistan, that the terrorist attack on the United States on September 11, 2001, was masterminded. The second major strategic change occurred in the Euro-Atlantic zone. On this front, the absolute and relative power positions of the United States and Europe have drastically changed; transatlantic relations have been severely strained, and NATO has undergone functional and institutional redefinition. Fundamental questions to answer: How do these developments endanger regional, hemispheric and international security? To what extent have these developments fed on each other to create a new momentum for enhanced security cooperation among regional and global actors, for example, against international terrorism? *Credit units: 3 ECTS Credit Units: 6.*

IR 618 Eurasian Atlantic Security II

This course, as the follow-up of IR 617 Eurasian-Atlantic Security I, is designed to examine strategic issues in critical regions such as the Broader Middle East, the Black Sea and Caspian basins and Central Asia. It focuses not only on power political relationships between major regional and extra-regional actors, but also on cooperative security arrangements they make to contribute to regional stability and peace. How are major powers such as the United States, Russia, Turkey, and international organizations such as NATO, OSCE and EU engaged in those regions? How do regional states react to them? To what extent and in what ways do extra-regional involvements promote regional and national transformations? *Credit units: 3 ECTS Credit Units: 6.*

IR 619 Strategic Studies

This course examines the origins and development of the field of strategic studies as a sub-discipline of political science and international relations in the aftermath of WW II and the advent of the atomic age. Strategy is primarily concerned with the use of armed force to achieve military and political objectives. While the modern era is the main focus of attention, consideration is also given to earlier periods of military thought and action which continue to inform and shape contemporary strategy. Various methodologies, decision making models and analytical frameworks employed in strategic studies are also investigated. *Credit units: 3 ECTS Credit Units: 6.*

IR 621 Current Debates in International Relations Theory

This course is designed as a post-graduate level introduction to current debates in International Relations theory. The content and nature of International Relations theory is by no means fixed. Indeed, International Relations theory has been the subject of intense academic, intellectual and political debate. The main aim of this course is to introduce students to some of the major debates in International Relations theory. The course also covers epistemological, ontological and methodological debates in IR. Specifically, the course aims to generate familiarity with the language of social research, the uses of theory and meanings of methodology in IR, ethical and political issues involved in the research process. *Credit units: 4 ECTS Credit Units: 12. Aut (E. Aydınlı)*

IR 624 European Union Studies I

This course is designed to introduce graduate students to the discussions on the history, theory and architecture of the EU. It begins with a historical account of the origin and development of the EU in the post-war period. It then dwells on the theory of European integration from the classical to recent post-modern perspectives. Finally, the course ends with an in-depth analysis of the current EU institutions and their evolutions over time. *Credit units: 3 ECTS Credit Units: 6.*

IR 625 Advanced Diplomatic History

The course is designed to help prepare students for the diplomatic history qualifying examination by introducing them to current literature and comparative history. *Credit units: 4 ECTS Credit Units: 12.*

IR 626 International Political Economy

The aim of this course is to provide students with an advanced, considered and critical understanding of the field of International Political Economy (IPE). The course begins by exploring the intellectual origins and disciplinary identity of IPE; proceeds by investigating the field's main theoretical perspectives and thematic issues; and concludes by engaging with theoretical and substantive debates central to contemporary IPE. *Credit units: 3 ECTS Credit Units: 6.*

IR 628 European Union Studies II

This course begins with a study of the contents of the current EU policies. It then turns to the external policies and linkages of the EU, including its enlargement and new neighborhood policies. Next part focuses on the alternative futures of the European democracy and capitalism. Among the issues discussed are the European approaches to the US hegemony, to the promotion of democracy, and to the global political economy, all in comparative perspective. *Credit units: 3 ECTS Credit Units: 6.*

IR 629 Global Political Economy

This course is designed to explore questions relating to theory and process of increasingly globalizing international political economy. The purposes of the course are to expose students to major changes in the international

political economy; to explore some of the theoretical debates over these changes; and, to examine the multitude of adjustment strategies states adopt to cope with changing structure of comparative advantage. Particular emphasis is placed upon the position of the middle-income developing countries (especially Turkey) within the global market structure. *Credit units: 3 ECTS Credit Units: 6. Aut (O. Güvenen)*

IR 631 Political Economy of Development

This course is addressed to students interested in a comprehensive introduction to development studies. The course is divided into three sections. The first section introduces the underlying assumptions and arguments of development theories to examine what development is and what development should be. The second section examines the role of state in economic, social, and human development by looking at the interplay between the state and market in development process. The third section examines the issues concerning development such as poverty, civil society, and security. *Credit units: 3 ECTS Credit Units: 6.*

IR 634 Peace Operations

Evolution from collective security to peacekeeping operations. The new generation of peace operations after the Cold War. NATO-UN cooperation. Peace enforcement, peace-making and building. Conflict prevention. Humanitarian operations. Possibilities and constraints in peace operations are examined with reference to a number of typical and atypical cases ranging from the UN's experiences in the Suez and Cyprus to the post-Cold War operations such as Cambodia and Bosnia. *Credit units: 3 ECTS Credit Units: 6. Aut (A. L. Karaosmanoğlu)*

IR 636 Science Technology and International Security

This course examines the role of science and technology in international security. Of primary concern is the relationship of science and technology to "cardinal choices" of policy such as the deployment and employment of weapon systems and arms control. The methodology used in the course is the case study and cases include the development of radar in WWII, the atomic and hydrogen bombs, the Strategic Defense Initiative, and tailored-effect nuclear warheads. *Credit units: 3 ECTS Credit Units: 6.*

IR 647 Nuclear Weapons and U.S. Foreign Policy

This course examines the foreign policy of the United States in the nuclear age. Consideration is given to the closing days of World War II when nuclear weapons were dropped on Hiroshima and Nagasaki; the decades of the Cold War when nuclear weapons formed the backdrop to American policies in such conflicts as the Korean War, the Cuban missile crisis, and the Vietnam War; and the post-Cold War era in which American foreign policy is being driven by concerns about the proliferation of weapons of mass destruction in the hands of rogue states and militant jihadists. Various theories and models of foreign policy decision-making are tested against the reality of empirical cases. *Credit units: 3 ECTS Credit Units: 6.*

IR 648 Russia at War and Peace II: The Ages of Alexander I and Nicholas I

This course covers the reigns of the Russian Emperors Alexander I and Nicholas I in detail. Having discussed the Napoleonic Wars and subsequent revolutions in Europe with respect to their impacts on Russian state and society, a special emphasis will be given on the Eastern Question which would become a central issue of European politics in the first half of the 19th century. A thorough understanding of the evolution of the Russian society, especially that of intelligentsia, throughout this period is one of the main goals of this course. *Credit units: 3 ECTS Credit Units: 6.*

IR 650 The Soviet Union Under Stalin (1924-1953)

This course covers the history of the Stalinist regime in detail. The political, economic, social, and cultural impacts of Stalinist policies (with a special emphasis on Soviet nationalities) before, during, and after the Second Worlds War will be examined thoroughly. The humanitarian cost caused by the Great Terror, the forceful collectivization, and deportations will be dwelt on in depth. A better understanding of Stalin's role in the making of the Soviet Empire is one of the main goals of this course. *Credit units: 3 ECTS Credit Units: 6.*

IR 651 Russian Historiography

This course is intended to introduce students to the fundamental texts of Russian historical scholarship, their methodology, and some of the focal historical questions and interpretations in Russian history-writing. The time period that is designed to be covered extends from ancient times to the Soviet Union with an emphasis on the works of several prominent historians. In addition, our analysis of historical literature is designed to stimulate further discussion on the processes through which historians interpret the past as well as their debates. *Credit units: 3 ECTS Credit Units: 6.*

IR 652 New World Orders 1945-2000

This course covers efforts made to create a new international order since the Second World War. It begins with the moment of co-operation in 1944-45, which saw the creation of the IMF and the World Bank, the UN, and a division of the world into spheres of interest. The next world order was the NATO system that emerged in the later 1940's following the clash over Germany and the Marshall Plan: OECD, Federal Germany, GATT, the beginnings of the European Union. This brought vast prosperity to the western world, but also brought tensions in what became known (unwisely) as 'the Third World'. In the Sixties, a period of confusion began, as the blocs split apart (Sino-Soviet dispute, Euro-American clashes) and in the Seventies the entire western world was threatened by the great inflation that started in 1971. The international financiers' attempts to control this will be

examined. By 1980 the USSR had taken advantage of the troubles to push ahead, notably in Afghanistan. The failure of the West to collapse at that time, and the reversion of China to a freer economy in association with the USA caused a re-think, and the emergence of M.S. Gorbachev. In 1991 came a new world order altogether, in which History was supposed to come to an End and free market principles plus democracy were supposed to spread world wide. That new world order lasted roughly until 2000, when doubts and dissension once more set in. *Credit units: 3 ECTS Credit Units: 6.*

IR 653 Caucasus in the 20th Century

This course concentrates on the history and politics of the South Caucasus throughout the 20th century. The peoples, languages, regions, disputes over territories and human rights issues of the region will be covered within comprehensive reading and discussion gatherings. The major emphasis of the course would be on the post-independence political developments in the South Caucasus countries, namely Georgia, Azerbaijan and Armenia. Issues concerning the frozen conflicts, transition economies and transition to democracy will be the major themes of this course. *Credit units: 3 ECTS Credit Units: 6.*

IR 654 Russia in the Age of Reform and Reaction (1855-1894): The Reigns of Alexander II and Alexander III

This course covers the reigns of the Russian emperors Alexander II and Alexander III in detail. The domestic reforms carried out by Alexander II, most specifically the emancipation of serfs and the educational, judicial, and administrative changes will be given special emphasis. The return to oppressive policies during the reign of Alexander III and its impact on the development of revolutionary movements will be thoroughly analyzed. A better understanding of the evolution of the Russian society, especially that of intelligentsia, throughout this period is one of the main goals of this course. *Credit units: 3 ECTS Credit Units: 6.*

IR 655 Post Communist Russia Her Neighbours and the World

This seminar will offer graduate students the opportunity to study and discuss Post-Communist Russia's development since 1991 in a comparative perspective drawing on the experience of the other post-Soviet republics. Subjects like Russia's foreign and trade policies, the role of energy as well as domestic political, social and cultural developments will be studied. Members of the seminar will prepare presentations on topics of their choice from the array of relevant subject matter. *Credit units: 3 ECTS Credit Units: 6.*

IR 657 Security and Governance

In the globalizing world states, societies, and individuals are vulnerable to a wide range of internal and external threats. Good governance is the key to an effective and efficient management of the contemporary security challenges. Poor governance has serious local, regional, and global implications. Although the subject matter has various aspects, this course focuses only on two of them, namely the theory and practice of civil-military cooperation and political-military effectiveness from a comparative perspective, studying different cases. *Credit units: 3 ECTS Credit Units: 6.*

IR 658 The World Transformed (1975-2001)

This course deals with major themes in international affairs and is designed for graduate students and senior undergraduates. It starts with the post-Vietnam crisis of the West (including the oil shock) and the last Soviet expansion (culminating with Afghanistan). The western recovery after 1979 is assessed, and so is the resulting upheaval in Moscow, where a completely different tack was used. In 1986 the Soviet bloc started to disintegrate, a process culmianting in 1991 with the disappearance of the USSR and the proclamation of a 'New World Order'. The Communist world then entered upon crisis, and the USA became by far the dominant power. This process is analyzed as far as the occupation of Iraq in 2002. *Credit units: 3 ECTS Credit Units: 6.*

IR 659 American Security Policy: Current Issues

The graduate seminar takes a practitioners approach to learning about current foreign and security policy decision-making in the United States. The first part of the course will review the actors and their roles in foreign and security policy formulation: executive branch (White House, National Security Council, Department of State and Defense, etc.), legislative branch (Senate and House, Foreign Affairs and Defense Committees), international partners (international organizations and national governments), non-state actors (think-tanks, lobbyists, private sector/industry, NGOs), and the media (24 hour television, print media, talk radio, MTV and The Daily Show, etc.). *Credit units: 3 ECTS Credit Units: 6.*

IR 660 Peter the Great: The Birth of Modern Russia (1682-1725)

This course is designed to survey and evaluate the reign of Peter the Great (1682-1725), the Tsar who made Russia a European power, in detail. It will cover his wide range of reforms, the resurgence of Russia as an Empire, the wars he fought and the foreign relations conducted in his era with references to the social and cultural traits of his time. The course will not only explore how Peter I reorganized Russia, but it will also enhance the students' understanding on how his legacy shaped the course of Russian history. *Credit units: 3 ECTS Credit Units: 6.*

IR 661 The Making of Turkish Foreign Policy: Actors x Processes

This course particularly examines the Turkish Foreign Policy decision making and implementation process and its actors. In this regard we will analyze the interaction between government departments, the role of the parliament

and the political parties and the contribution from the non state actors. The complexity of Turkish Foreign Policy structure will be highlighted as different foreign policy issues require different level of coordination and involvement of different actors. In addition to the related books and the articles, students will have the opportunity to discuss with the invited speakers in order to have a better understanding of the subject. In this regard selected cases on global and regional political, security and economic issues, which have significant places in Turkish Foreign Policy, will also be heavily discussed. *Credit units: 3 ECTS Credit Units: 6.*

IR 662 EU Politics

This course is designed to provide graduate students with an advanced analysis of EU politics. After a general historical introduction, Part 1 discusses EU's institutional architecture. Part 2 dwells on an in-depth analysis of European integration theories. Part 3 explores various meanings of Europeanization before examining some of the most important EU policy areas, such as the single market. part 4 concludes with a discussion of EU's recent enlargements and possible future scenarios. *Credit units: 3 ECTS Credit Units: 6. Aut (A. Tekin)*

IR 663 The Revolution of the 1980's: Causes and Consequences

This course covers the era of Turgut Özal, Ronald Reagan and Margaret Thatcher (1979-1993). All aspects, domestic, international, economic and cultural, will be surveyed, with a detachment that has not until recently been possible. The causes of the great change, in the failure of the post-1945 order with the inflation and unrest of the 1970's, are examined; so also are the consequences, the collapse of Communism and the spread of a 'free-market' ideology. *Credit units: 3 ECTS Credit Units: 6. Aut (N. Stone)*

IR 699 Ph.D. Dissertation

Credit units: None ECTS Credit Units: 30. Aut (Staff)

IR 4102 War and Peace in Middle East

This course presents an analysis of the conflict and some efforts at conflict resolution in the Middle East. we will focus on the Arab-Israeli conflict, the various confrontations in the Persian Gulf region, and al-Qaeda brand terrorism. Sources of conflict (nationalist, ideological, ethnic/sectarian, economic, territorial, and foreign manipulation and intervention) will be delineated and scrutinized. Our task will be to identify and explain the factors and actors (internal and external) that have made conflict and conflict resolution in the Middle East more (or less) likely. *Credit units: 3 ECTS Credit Units: 6.*

IR 4103 Inter and Intra-State War and Peace

This course covers variations in inter- and intra-state war and peace over time and space. we will seek to discover how theories can help us to understand the causes of particular internal and external conflicts, and how the proper use of history can help us to construct better theories of war and peace. Our task is to develop a conceptual framework that attempts to account for inter- and intra-state war and peace. *Credit units: 3 ECTS Credit Units: 6.*

IR 4105 World Trends and Futures

The objective of this course is to develop abilities to understand and interpret the trends shaping possible futures for the world. The course reviews futures techniques and approaches and familiarizes the students with the futures literature. It analyzes the interaction of social, technological, environmental, economic, demographic and political systems at the global level with a focus on emerging trends that are drivers of change. Exploration of alternative images of the future state of the world will provide a future-oriented vision in a rapidly changing world. *Credit units: 3 ECTS Credit Units: 6. Aut (G. Tuna)*

IR 4107 The Iranian Revolution and the Middle East

All revolutions contain a fundamental contradiction. On the one hand, a revolution is the outcome of very specific social and political conditions in a country. On the other hand, revolutionaries perceive their experience as having universal significance. As a result, they seek to address and influence foreign populations over the heads of their respective governments. This means that a revolutionary state engages in both government-to-government and government-to-people diplomacy. The Iranian case is not different from this general pattern, expect that here the universalistic appeal of the revolution was limited by its sectarian origins. *Credit units: 3 ECTS Credit Units: 6.*

IR 4109 Issues for Turkey in Global Political Economy

This course is designed to introduce you to the issues important for the Turkish Republic in the global political economy. The course topics are grouped through a historical overview of the political economy of Turkey in relation to structural economic transformations and political developments in the globalization process. The course is divided into three sections. Section one introduces the relationship between politics and economics of Turkey between 1908 and 1960s. The issues covered in section one are state-led development and important substitution industrialization. Section two examines the economic cries and market liberalization period between 1970 and 1991. This issues covered in section two are chronic inflation, financial cries, privatization, export-led economic growth, and foreign debt. Section three will cover student presentations on a topic that are related to the twin processes of regionalization, specifically accession to the EU, and globalization in Turkey. *Credit units: 3 ECTS Credit Units: 6. Aut (P. İpek) Spr (P. İpek)*

IR 4111 The Rise and Fall of the Soviet Bloc: Internaland External Aspects (1917-1991)

The establishment of the Soviet Union after 1917 was both a revolution inside Russia but also the appearance of a new revolutionary force in international politics. This course considers the life-span of the Soviet system from birth via expansion to superpower status then its collapse as both an ideological state and superpower with a ring of allies/satellites by 1991. By studying the mixture of internal and external dynamics which shaped this key force in twentieth century internal relations students get good grounding in the continuities and change affecting contemporary post-Soviet states (Russia, her neighbours and East-Central Europe). *Credit units: 3 ECTS Credit Units: 6. Aut (M. Almond)*

IR 5103 American Public and Foreign Policy

The course examines American foreign policy in connection with American politics, government, public opinion, media and economics. The first part of the course introduces domestic factors that shape foreign policy-making, including political parties and culture, the presidency, the congress, public opinion, media and civil society. Based on the concepts learned in the first part, the second section of the course will review American foreign policy with an emphasis on the twentieth century and America's rise from isolationism to a world power. The course will focus on both domestic and international sources of foreign policy-making and cover functional topics, such as American human rights and democratization policy, foreign aid, economic policy and US military strategies. All issues will be discussed in connection with current challenges US foreign policy makers face. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

DEPARTMENT OF POLITICAL SCIENCE

M. Heper (Chair), J. Alexander, İ. Aytürk, T. Bölükbaşı, B. Burçak, D. Cindoğlu, Ü. Cizre, E. Çuhadar Gürkaynak, A. Eren, T. E. Erman, N. Fehim-Kennedy, I. N. Grigoriadis, A. Güney, J. Gürzumar, B. Helvacıoğlu, B. İnce, M. N. Karakayalı, E. Özbudun, S. Özçürümez Bölükbaşı, J. Salt, Z. Sarıgil, Z. Tandoğan, L. Yanık.

Political science is one of the oldest social science disciplines. It examines how people in one society and in societies organized into states live together and resolve or fail to resolve their conflicts. Politics is the art of influencing others as well as arriving at consensus. It is a widespread phenomenon that one encounters at all levels of society (family, school, government, and the like) as well as between states.

The discipline of political science which studies systematically (that is, shows and accounts for) the recurring patterns of events in politics, is divided into five subdisciplines: political theory, comparative politics, international relations, national politics and public administration. The undergraduate and graduate programs offered by the Department aim to provide a balanced education and training in these five subdisciplines. Through elective courses students can, to a certain degree, specialize in certain areas.

UNDERGRADUATE PROGRAM

The Department offers an education in political science with opportunities for a broad and balanced undergraduate study. Students pursue programs which, in addition to providing a firm grounding in the core subjects of the discipline, allow students to take courses in economics, management, and international relations as well as in computer sciences and humanities. Departmental courses are divided in a balanced fashion between the fields of public law, political theory, comparative politics, and Turkish government and politics.

The Department aims at providing the students with an education that would enhance their understanding of social artifacts. In addition to giving the basic requirements of a degree in political science, the program emphasizes the utility of learning social and political roles. The goal for a study in the Political Science major is to maximize students' capacity to analyze and interpret the significance and dynamics of political events and governmental processes. The purpose is not simply to reveal the significance of political events and issues. It is to equip the students with the knowledge in coping with political phenomena and problems. The aim is political education "in depth" for those students who have an interest in politics whatever their professional goals and eventual occupations are.

UNDERGRADUATE CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
ECON 101	Introduction to Economics I	3 / 6
ENG 101	English and Composition I	3 / 6
GE 100	Orientation	1 / 1
HCIV 101	History of Civilization I	3 / 6
POLS 101	Introduction to Political Science I	3 / 6
SOC 101	Introduction to Sociology	3 / 5
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
ECON 102	Introduction to Economics II	3 / 6
ENG 102	English and Composition II	3 / 6
HCIV 102	History of Civilization II	3 / 6
POLS 104	Introduction to Political Science II	3 / 6
PSYC 102	Introduction to Social Psychology	3 / 5
TURK 102	Turkish II	2 / 1

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
ENG 241	Sophomore Academic English I	3 / 5
HISTR 201	History of Turkish Republic I	2 / 1
PHIL 241	Social and Political Philosophy I	3 / 6
POLS 201	Fundamentals of Social Research	3 / 6
POLS 231	Introduction to Law	3 / 6
	Elective (1)	3 / 6

Spring Semester		Credits / ECTS Credits
ENG 242	Sophomore Academic English II	3 / 5
HISTR 202	History of Turkish Republic II	2 / 1
MATH 264	Statistics for Social Sciences	3 / 6
PHIL 242	Social and Political Philosophy II	3 / 6
POLS 232	Turkish Public Law	3 / 6
	Elective (1)	3 / 6

Elective courses must be taken from the departmental offerings. A sophomore is allowed to choose an elective course **only** at the 200 level.

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
CS 121	Introduction to Computing for Social Sciences	3 / 6
POLS 303	Comparative Politics I	3 / 6
POLS 305	Turkish Political Development	3 / 6
	Electives (2)	6 / 12

Spring Semester		Credits / ECTS Credits
POLS 304	Comparative Politics II	3 / 6
POLS 306	Contemporary Turkish Politics	3 / 6
POLS 324	Research Methods	3 / 6
	Electives (2)	6 / 12

At least two of the elective courses must be chosen from amongst the departmental offerings. All other elective courses must be chosen either from amongst the departmental offerings or from amongst the courses that are offered and open to POLS students by the Departments of International Relations, Economics, History, and Management. A junior is allowed to choose an elective course **only** at the 300 level.

FOURTH YEAR

Autumn Semester		Credits / ECTS Credits
POLS 455	World Politics I	3 / 6
	Electives (4)	12 / 24

Spring Semester		Credits / ECTS Credits
POLS 476	World Politics II	3 / 6
	Electives (4)	12 / 24

At least **four** of the elective courses must be chosen from amongst the departmental offerings. Other elective courses must be chosen from amongst the courses that are offered and open to POLS students by the Departments of International Relations, Economics, History, and Management. A senior is allowed to choose an elective course **only** at the 400 level.

Language courses satisfy elective requirements for the third and fourth year electives, but only one language course per semester is allowed.

GRADUATE PROGRAM

Doctor of Philosophy in Political Science

The Doctor of Philosophy Program in Political Science is designed to provide candidates with a depth of knowledge in their respective areas of study and help them to gain a high level conceptual and analytical capability in their subject. The candidate is expected to write a dissertation which would be a contribution to theory in Political Science. Refer to the “Graduate Admissions” section in the introduction of this catalog for the general graduate admission requirements.

The candidates must complete no fewer than 24 credit hours. All courses need to be approved by the Department.

CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
POLS 601	Seminar in Turkish Politics	3 / 6
POLS 602	Seminar in Comparative Politics	3 / 6
POLS 603	Advanced Academic English	3 / 6
POLS 610	Research Methods	3 / 6

Spring Semester		Credits / ECTS Credits
POLS 604	Democratization Process in Turkey	3 / 6
POLS 606	Seminar in Political Theory	3 / 6
POLS 612	Seminar in Social and Cultural Studies:	3 / 8
POLS 634	European Union Politics	3 / 6

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
POLS 633	Seminar on the European Union	3 / 6
POLS 635	Politics of Turkish Modernization	3 / 6
POLS 639	The Ecology of Social Relations and Cultural Processes	3 / 6
POLS 643	Issues in Political Theory	3 / 6

Spring Semester		Credits / ECTS Credits
POLS 609	Issues in Urban Studies	3 / 8
POLS 616	Political Cultures in the Middle East	3 / 7
POLS 636	Nationalism and Politics	3 / 6
POLS 638	Political Theory in a Time of Terror	3 / 6

COURSE DESCRIPTIONS

UNDERGRADUATE COURSES

POLS 101 Introduction to Political Science I
This course explains the nature of political science and its basic concepts including power, legitimacy, authority and choice. The development of modern nation-state; fundamental of the classical and contemporary ideologies; policy-making role of the state; relationship between the state and the citizen; democratic and non-democratic governments and constitutional design of government are also covered. *Credit units: 3 ECTS Credit Units: 6. Aut (B. İnce, Z. Tandoğan)*

POLS 102 Introduction to Law
Sources of law. Social life and the law. Definitions and concepts. Division of public and private law. Branches of law. *Credit units: 3 ECTS Credit Units: 6.*

POLS 104 Introduction to Political Science II
This second part of the course explores the major political institutions and processes. Elections and participation; the role of political parties and interest groups in a democratic polity; parliamentary structures; presidential and parliamentary systems of government; bureaucracy; courts and international organizations are analyzed. *Credit units: 3 ECTS Credit Units: 6.*

POLS 201 Fundamentals of Social Research
Introduction to philosophical bases and goals of social research. The logic underlying a scientific analysis. The problems and considerations arising in the selection and formulation of a research question. *Credit units: 3 ECTS Credit Units: 6. Aut (A. Eren)*

POLS 204 Political Sociology
Development of the modern state and society. Power structure of society. Functions and roles of political institutions. Political processes such as participation and political socialization; political culture. *Credit units: 3 ECTS Credit Units: 6.*

POLS 225 Culture and Change in Turkey
It provides the basic essentials required for understanding culture change. It examines the various issues and aspects of change, particularly directed or planned change, as it occurs within multicultural settings or as a state-policy. Topics covered, with case studies from Turkey, include culture and subcultures; innovation; acculturation; diffusion; voluntary and directed change; change agents; culture change strategies and dynamics of change. *Credit units: 3 ECTS Credit Units: 6.*

POLS 229 Turkish Political History I
This course is a survey of Turkish political history from its late Ottoman roots, until the Democrat Party rule (1940-1950), focusing on an analysis of political and social institutions with an emphasis on continuity and change. *Credit units: 3 ECTS Credit Units: 6. Aut (B. Burçak)*

POLS 230 Turkish Political History II
This course is a survey of Turkish political history from the Democrat Party rule (1940-1950) until current affairs in Turkish politics, focusing on an analysis of political and social institutions with an emphasis on continuity and change. *Credit units: 3 ECTS Credit Units: 6.*

POLS 231 Introduction to Law
Sources of law. Social life and the law. Definitions and concepts. Division of public and private law. Branches of law. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

POLS 232 Turkish Public Law
The idea of constitutional law, constitutionalism, and the constitutional system in Turkey. General characteristics of Turkish administrative law. Administrative power and judicial control of public administration. *Credit units: 3 ECTS Credit Units: 6.*

POLS 234 Religion and Politics in the Arab World
An account of importance in the modern Middle East from the colonial/imperial period to the present time. Special attention will be paid to the role of the tarikats in the resistance to imperialism; the rise of the Muslim brotherhood in the Post-1918 period; the relationship between religion and state; and the resurgence of Islamist movements in the contemporary period. *Credit units: 3 ECTS Credit Units: 6.*

POLS 235 Political Psychology
Political Psychology explores the area that lies between politics and psychology. This course is an introduction to the psychological study of political life. It is an inter disciplinary course which will draw upon from the literatures of political science, international relations, and psychology (especially social psychology). During the course, we will explore different perspectives in psychology and will apply those psychological theories to particular domestic and international political problems including foreign policy decision making, leadership, inter-group conflict and cooperation, identity, authoritarianism, social dominance orientation, the formation of belief systems, political socialization, and collective violence and nass hysteria. *Credit units: 3 ECTS Credit Units: 6. Aut (E. Çuhadar Gürkaynak)*

POLS 236 Introduction to Political Anthropology
This course a comprehensive overview of political anthropology, including its history, its major research findings, and its theoretical concerns both past and present. It also covers such as topics types of preindustrial political systems, religion and ritual in politics, the power of the people, the politics of identity, and the transition from modernism to postmodernism. *Credit units: 3 ECTS Credit Units: 6.*

POLS 237 The Contemporary Middle East
This is a survey course designed to cover contemporary developments in the Middle East, including Israel/Palestine and the 'peace process' since 1993; the invasions of Iraq in 1991 and 2003 and their consequences, including constitutional developments and the formation of regional governments; nuclear technology, nuclear weapons and Iran's nuclear program; and 'western' policies towards the region against a background of shifting global economic and political power. Turkey's interests and involvement in all these issues will be continuing theme. *Credit units: 3 ECTS Credit Units: 6.*

POLS 238 Negotiation and Mediation in Politics
This course focuses on both the theory and practice of negotiation and mediation concerning legal and political conflicts. The course covers a wide range of issues concerning negotiations including the different theories of bargaining, different outcomes of negotiations, processes of negotiation, psychological dynamics affecting

negotiations, effective communication strategies, the role of language, culture, and power in negotiations, and the role of third parties in negotiations. An important part of the class is devoted to teaching the applied negotiation and mediation skills to students. Towards this end the students will carry out negotiation simulations and role plays related to various legal and political negotiations. In addition to the role plays and simulations, the course will also discuss several negotiation cases in detail including the negotiations over the Turkish Constitution, Cyprus, and Jerusalem. *Credit units: 3 ECTS Credit Units: 6.*

POLS 240 Social Transformation in Turkey

This course aims at providing an insight into the social and cultural aspects of social transformation in Turkey. The transformation of spaces, divisions of labour, social stratification, life-styles and cultural values are explained through sociological and anthropological studies carried out in Turkey since the 1960s. *Credit units: 3 ECTS Credit Units: 6.*

POLS 303 Comparative Politics I

Historical and contemporary political developments in the USA, UK, France, and Germany. *Credit units: 3 ECTS Credit Units: 6. Aut (T. Bölükbaşı, I. N. Grigoriadis, S. Özçürümez Bölükbaşı)*

POLS 304 Comparative Politics II

Historical and contemporary political developments in Russia and her neighboring countries (the Commonwealth of Independent States), Eastern Europe, and the Peoples Republic of China. *Credit units: 3 ECTS Credit Units: 6.*

POLS 305 Turkish Political Development

The development of the political systems from the Ottoman period to the present with special emphasis on the multi-party period. *Credit units: 3 ECTS Credit Units: 6. Aut (İ. Aytürk, Z. Sarıgil)*

POLS 306 Contemporary Turkish Politics

State, Politics and society in contemporary Turkey, from a theoretical perspective with special emphasis on problems of and prospects for democracy. *Credit units: 3 ECTS Credit Units: 6.*

POLS 309 Turkish Political Thought I

This course is a survey of political trends in Ottoman-Turkish history. The course will concentrate on the late Ottoman period until the establishment of the Turkish Republic, focusing on an analysis of political ideas with an emphasis on continuity and change. *Credit units: 3 ECTS Credit Units: 6. Aut (B. Burçak)*

POLS 312 Health, Society and Politics

Sociology, history and politics of health care. Social response to disease (including epidemics); the development and organization of the medical profession (hospitals, public health and health insurance); politics of health policy in comparative perspective. *Credit units: 3 ECTS Credit Units: 6. Aut (D. Cindoğlu)*

POLS 324 Research Methods

Quantitative and qualitative research methods. Formulating research problems and selecting appropriate research designs. General problems of measurement, data collection techniques, analysis and interpretation of social science data. *Credit units: 3 ECTS Credit Units: 6.*

POLS 325 Transnational Cultures

The course aims to provide an anthropological perspective to the issue of transnationalism. Contemporary transnational experience challenges the culturalist approach to cross-cultural human contact, as well as, the conventional usage of the term “culture”, and brings forth a new understanding of a very old phenomenon, people in motion. *Credit units: 3 ECTS Credit Units: 6.*

POLS 329 Politics in Russia and the Commenwealth of Independent States

This course analyzes the political, economic and social developments that took place in the countries, which were once part of the Soviet Union, since the collapse of communism in 1991. The main focus Russia, but the course also compares and contrasts the recent developments in other paths taken by Latvia, Lithuania and Estonia. *Credit units: 3 ECTS Credit Units: 6.*

POLS 330 European Society and Culture

The course aims to provide a framework for understanding the social and cultural settings that lead to or are created by political decisions and economics policies. It covers European countries, including partially Eastern Europe, with a focus on the EU member countries. Topics covered are the human geography of the area with a brief historical background; citizenship, cultural identities, minorities and racism; employment, unemployment, social welfare, health and housing; gender issues and the family; social class, social behavior and attitudes. *Credit units: 3 ECTS Credit Units: 6.*

POLS 331 State and Society in Israel

The aim of this course is to acquaint students with the basic characteristics of the Israeli society and political system. The course covers the evolution of a self-governing Jewish community from its origins in Ottoman Palestine until the present day. It addresses issues such as the governmental system, political parties, foreign

policy, military, nationalism, religion, citizenship and ethnicity from a comparative perspective. *Credit units: 3 ECTS Credit Units: 6. Aut (İ. Aytürk)*

POLS 334 Turkish Political Thought II

This course is a survey of political trends in modern Turkish History. The course starts with the Kemalist Republic and its ideology and ends with current political ideas in modern Turkey with an emphasis on continuity and change. *Credit units: 3 ECTS Credit Units: 6.*

POLS 338 Cosmopolis: From the Roman to the Ottoman and British Empires

This course will offer an unusual conspectus of political thought in the last two thousand years. Most political theory has considered the nature of the *polis* or the nature of the modern state: there are very few great works, with perhaps the exception of Augustine's *City of God*, which deal with the problem of the nature of empire, or *cosmopolis*, that is, a universal city rather than a particular city. The course shall involve a study of the understandings of empire held by those who reflected on the Roman, Byzantine, Holy Roman, Ottoman, Austrian and British Empires. It will include not only writers who lived within empires, but those from the more obvious western canon of political thought who reflected on empires from without. Not only political thought will be studied, but also some literature and history. The question will be why so little theory was written about empires. *Credit units: 3 ECTS Credit Units: 6.*

POLS 341 State Freedom and Sovereignty

The course will examine various views which consider the concept of the modern state, with its connection to the ideas of freedom and sovereignty and with the relationship between an individual citizen and the state. The course will aim to develop the ability to conduct independent research based on an analysis of both primary and secondary sources. *Credit units: 3 ECTS Credit Units: 6.*

POLS 343 Social Theory: Past and Present

A select survey of classical and contemporary social theories. The aim of the course is to enable students to understand the changes in social theory as a response to transformations in modern societies, and to develop an awareness of diverse theoretical perspectives that emerged since late nineteenth century. After a review of classical macro and micro theories, the focus will be on contemporary perspectives such as systems theory, critical theory, feminism, structuralism and post-structuralism. *Credit units: 3 ECTS Credit Units: 6.*

POLS 344 Turkish Nationalism :Politics and Ideology

This course aims to examine the emergence of Turkish nationalism as a political ideology in the late nineteenth century and its spread and influence in the Republic of Turkey. On the one hand, the emphasis is put on the history of ideas: the environment in which Turkish nationalism was born and flourished, its influence in the early republican era, and its evolution after are covered in detail. On the other hand, another goal of this course is to highlight the political institutionalization of Turkish nationalism. The way in which the Republic adopted nationalism as the core ideology of the nascent state and how various branches of the nationalist movement had found a political expression, participating in politics in modern Turkey, constitute the other central questions to be dealt with. Finally, prospects for future are to be discussed, taking into account the nationalist responses to Turkey's domestic and global interests, commitments, and problems. New voices among Turkish nationalist, providing answers to current issues and introducing theoretical openings will receive attention, as well. *Credit units: 3 ECTS Credit Units: 6.*

POLS 345 Political Parties and Voting Behavior in Democracies

This course is designed to introduce students to research on the electoral process in established and new democracies. Consequently the course will focus on political parties, party systems, and citizen voting behavior, and how they influence each other in democratic elections. The course will also take into account the role of electoral systems, social cleavages, political issues, the media, and the economy in the electoral process of contemporary democracies. *Credit units: 3 ECTS Credit Units: 6.*

POLS 347 Liberty and Liberalism

This is a course about one particular political ideal-liberty-and the attempt in modernity to make it the foundation of politics-in the form of liberalism. There is an engagement with historical views of liberty, with classical of liberalism since the early nineteenth century, and criticism which have been made of liberalism since that time. In contrasting an ideal with an ideology the course intends to make clearer the problems of attempting to establish political ideals in political parties. *Credit units: 3 ECTS Credit Units: 6.*

POLS 351 Information Age Landscapes

The second half of the 20th century and how they changed when their prior economic sectors were transformed by the information age. Cities changed and evolved as regional technological and educational hubs. One important theme to investigate is the rapid rates of rural-urban migration as families seek out economic and educational opportunities in the cities. Rapid urbanization puts a strain on city services and infrastructure and the environment. The underlying goal is to appreciate the underlying interrelationship between people and their urban landscapes and the influence of technology impacting this relationship. Examples of possible urban case studies are: Ankara, Turkey, San Jose California, Shenzhen, China, Bangalore, India and Guadalajara, Mexico. *Credit units: 3 ECTS Credit Units: 6.*

POLS 353 Foundations of Modern Political Theory
This course historically focuses on Renaissance and Reformation period and particularly analzes Republicanism, humanism, Lutherism, constitutionalism, and absolutism. It addresses such questions as how and why one defends liberty, under what circumstances the right to resist is justified, what are different responses to constitutionalism, and what is state sovereignty with and without absolutism. *Credit units: 3 ECTS Credit Units: 6. Aut (B. Helvacıoğlu)*

POLS 404 Political Parties and Interest Groups
Analysis of origins, functions and organizational characteristics of political parties and interest groups in different political systems. Pluralism, patron-client relationship and corporatism. *Credit units: 3 ECTS Credit Units: 6.*

POLS 411 Gender and Politics
The aim of the course is to gain a deeper understanding of the ways in which gender and gender inequality shape institutions, policies, and political processes, as well as the way states affect gender relations, the political construction of gender, and political mobilization based on gender. Classical and contemporary views on gender and politics will be examined with a focus on three topics within the broad area of the relationship of gender and politics in some depths: women in politics; state social policy, and gender and ideology. *Credit units: 3 ECTS Credit Units: 6.*

POLS 420 Theory and Modern Society
Elaborate examination of the efforts to address, evaluate, and extend questions posed by founding fathers of social theory (Durkheim, Marx, Weber, Nietzsche) with particular attention to current positions in social and political theory within the dynamic axis of modernity vs. post-modernity. This seminar-type course develops upon these debates with a special emphasis on social and intellectual contexts, conceptual frameworks and methods, and contributions to modern society and its theorizing. Works: Darwin, Spencer, Parsons, Dahrendorf, Saussure, Habermas, and Foucault. *Credit units: 3 ECTS Credit Units: 6.*

POLS 421 Issues in Modern Political Thought
The object of this course is to critically analyze the project of modernity through the prisms of democracy, industrialization, science and cultural representation. The first half of the course focuses on the idea of progress in modern thought and politics. In the second half, the main question under investigation is the political impact of the project of modernity on different social forces. *Credit units: 3 ECTS Credit Units: 6. Aut (B. Helvacıoğlu)*

POLS 426 Civil Society in Turkey
The course aims at studying the development of civil society in Turkey. Firstly, it focuses on the nation of civil society at the global level from a comparative and historical perspective, and then shifts the focus to the national level. Central to this is the distinction between civil society and state. The course introduces students to the characteristics and dynamics of present-day civil society in Turkey, and therefore deals with a number of case studies. Accordingly, media, labor unions, non-governmental organizations (associations, foundations), political parties, interest groups in contemporary Turkey are among the subjects of this course. *Credit units: 3 ECTS Credit Units: 6.*

POLS 431 Politics and Society in Turkey
This course explores the debates and controversies over modernization, westernization, nationalism and secularism as they become the main themes of the constitutive norms of the modern Turkish Republic. After briefly tracing the historical developments around these themes since the founding of the Republic, the course examines different dimensions of Turkish nationalism and its aspirations for a West-oriented modernity in various contexts of politics and daily life such as the use of public spaces, urban planning issues, differentiation of gender roles, or trends in popular culture. *Credit units: 3 ECTS Credit Units: 6.*

POLS 433 Politics of European Integration
This course aims to provide the 4th year students with a basic understanding of the process of European integration and second, focus on the historical evolution of the European Union and its institutions. Third, the course will analyse the challenges to the nation-state in Europe, specially those posed by integrative and fragmentary forces. The ultimate objective is to furnish students with the comprehension that the state is going through a major transformation in Europe due to the process of European integration. *Credit units: 3 ECTS Credit Units: 6.*

POLS 449 Political Concepts
This course aims to consider a range of fundamental concepts in political theory, not for the purpose of introduction, but for the purpose of reflection. These concepts will be democracy, justice, ideology, liberty, party, politics, power, public opinion, representation, revolution, rights, rule, state etc. The intention of the course will be an intensive study and discussion of writings on these concepts. The basic text will be "Political Innovation and Conceptual Change" eds. Ball, Farr and Hanson. *Credit units: 3 ECTS Credit Units: 6. Aut (J. Alexander)*

POLS 452 State Society and Citizenship in Turkey
The recent decades have witnessed the revival of the interest on citizenship issues worldwide. This course aims at analyzing the issue of citizenship in Turkey with respect to its relations with the state and society. The first part of the course will provide the students with theories on citizenship, how it emerged and developed,

and various aspects of citizenship in the current literature. In the second part of the course, related with the contemporary debates on citizenship, namely identity politics, multiculturalism and constitutional citizenship, the Turkish experience will be analyzed. This part will consist of the historical background, the construction attempts, legal process and the current situation in Turkey. *Credit units: 3 ECTS Credit Units: 6.*

POLS 454 Politics Media and Propaganda

This course deals with propaganda and the construction of news in the context of political life. Particular emphasis is given to prejudice and bias and reinforcing of ethnic, religious and national steotypes. Propaganda is studied as a tool of social control both formally and informally. The course will concentrate on the 19th century but there will be references back to earlier forms of propaganda. *Credit units: 3 ECTS Credit Units: 6.*

POLS 455 World Politics I

The course aims at analysing the basic dynamics behind the evolution of the international political order in the 20th century with reference to the theories of international relations and international political economy. It covers topics in a chronological order, the pre and post-World War politics, the interwar period, the Second World War, the Cold War and post-Cold War period. The chronological design of the course will revolve around the main topics of international politics in the relevant periods, such as colonialism, post-colonialism, nationalism, liberalism, fascsm, postmodernism, etc. *Credit units: 3 ECTS Credit Units: 6. Aut (A. Güney)*

POLS 458 Nationalism and Citizenship in Comparative Perspective

Politics is not only about formal governance and the state but also about the nation and its formation. This course takes the nation as its locus of study and investigates different dimensions of the making of nations and issues of national belonging (citizenship) in a global context. The readings have been structured so as to explore the complexity of nation-building processes and issues of national belonging, i.e. citizenship. They address the ways in which national identities are constructed along different constitutive elements, such as race, ethnicity, gender, class, religion or colonial relations, as one ore several of these elements converge in setting the parameters of national belonging in different contexts. The course will simultaneously explore different mediums of representation in the creation of nations and norms of citizenship, ranging from popular music, novels, architecture, art, films and mass media to clothing, food and other daily practices. The course and assignments are also designed to assist students in developing their reading, critical analysis and writing skills. *Credit units: 3 ECTS Credit Units: 6.*

POLS 466 Issues in Political Theory

This course is motivated by a nagging sense that the gendered character of politics is more complicated than it appears. It aims to conceptualize the inherent contradictions in such gendered categories as masculinity and femininity by examining the relationship between sex, gender, body and the politics of race, class and nationalism. *Credit units: 3 ECTS Credit Units: 6.*

POLS 470 European Political Thought II

This course provides a thematic overview of the evolution of European political ideas and institutions from the post-Enlightenment period to the present, addressing the issues of justice, power, legitimacy, democracy, progress, public and private, state and civil society in basic texts. *Credit units: 3 ECTS Credit Units: 6.*

POLS 472 Science, Society and Technology

Social and political consequences of scientific and technological developments in the second half of the twentieth century. Topics include new information and communication technologies, the concept of “virtual reality” and controversies about genetical engineering. *Credit units: 3 ECTS Credit Units: 6.*

POLS 473 Democratization Process in Turkey

This course deals with the constitutional and legal amendments in the last 20 years designed to improve the standards of democracy in Turkey. *Credit units: 3 ECTS Credit Units: 6. Aut (E. Özbudun)*

POLS 476 World Politics II

The course is designed to address the basic issues of world politics especially during the cold war and post-Cold War periods. It covers topics like deterrence, terrorism, nationalism, drug trafficking, immigration, refugees, new wars, regional and international organizations and their old-new roles in world politics. *Credit units: 3 ECTS Credit Units: 6.*

POLS 478 Public Opinion and Political Behavior in Democracies

Democracy is often referred to as government of the people, by the people, and for the people. This course is therefore designed to introduce students to research on citizen political behavior and public opinion in contemporary democracies. The course will thus examine what people in different countries think about politics, how they form their opinion, and how and why people participate in the political process. It will also take up how public opinion and behavior affect each other and what consequences they have for the democratic governance. *Credit units: 3 ECTS Credit Units: 6.*

POLS 479 Body and Emotions in Social Life

This course explores why the body in general and emotions in particular is a concern for social and political scientists. The students will be introduced to social scientific approaches to body and emotions in specific

contexts such as health, gender, strangeness, and bodily manners. Other topics of concern include formation of habits, the role of imitation in social processes and memory. *Credit units: 3 ECTS Credit Units: 6.*

POLS 482 Conflict Analysis and Resolution

The major goal of this course is to introduce the students to the basic concepts, frameworks, and techniques in the conflict analysis and resolution field. In this course, we will examine different approaches to and types of conflicts and deal with some of the contemporary questions the field is facing today. The course is organized in two parts. the first part deals with "conflict analysis" which aims to give students basic formation to assess conflicts in a more analytical and scientific manner. The second part will introduce the students to various conflict resolution techniques like negotiation, mediation, and interactive conflict resolution. At the end of this course, students are expected to think about conflicts analytically, acquire basic knowledge about conflict assessment tools, and develop some practical skills about conflict resolution processes such as negotiation and mediation. *Credit units: 3 ECTS Credit Units: 6.*

POLS 483 Liberalism and Socialism: Past and Present

This course examines the rise of liberalism and socialism from the nineteenth century to the present. Its primary focus is on the radically different conceptions of freedom, the good life and collectivism in liberal and socialist theories. Its objective is two-fold: to distinguish between political ideologies and political theories and to provide the students with a firm historical and theoretical background on two of the most popular ideologies which have shaped world politics in the last two centuries. *Credit units: 3 ECTS Credit Units: 6.*

POLS 484 Life, Nature and Politics

A survey of past and current approaches in the social sciences which try to understand social and political institutions by paying special attention to the fact that human beings are living entities that interact with nature. The focus will be on contemporary sociobiological research which tries to analyze language and communication, social hierarchies, gender relations, moral and religious values, and the formation of habits and customs by models borrowed from the life sciences. *Credit units: 3 ECTS Credit Units: 6. Aut (M. N. Karakayalı)*

POLS 485 Seminar in Comparative Politics

The course starts by examining the rationale for conducting comparative studies of political systems. The main body of the course considers the functions of constitutions, and the roles of (a) the main institutions of modern states (legislatures, leaders and executives, the judiciary, state bureaucracies) and (b) non-state actors (political parties and party systems, pressure groups, the mass media, and the military). Broader issues considered include such concepts as leadership, the rule of law, theories of representation and corporatism. Each section will begin with an introduction by the convenor. In the following section, assigned members of the class will be asked to give short presentations on the topics scheduled. This will be followed by a general class discussion. *Credit units: 3 ECTS Credit Units: 6. Aut (I. N. Grigoriadis)*

POLS 486 Issues in Comparative Politics

This module introduces students to advanced research in comparative politics. It centers around the following topics: politics and government, the state, democracy, authoritarian rule, the comparative approach, political culture, political communication, political economy, political participation, elections and voters, interest groups, political parties, constitutions and the legal framework, multilevel governance, legislatures, the political executive, public management and administration, and public policy. *Credit units: 3 ECTS Credit Units: 6.*

POLS 487 Politics of International Migration

The aim of the course is to give an overall view about the aspects of the international migration in international relations. The topics to deal will be the terminology of migration, the causes and the results of migrations, the situation of sending and receiving countries, illegal migration, human trafficking, refugees, international law dealing with refugees, international organization and how they are working in this area, the importance of migration in international relations. *Credit units: 3 ECTS Credit Units: 6.*

POLS 491 Issues of Urbanization

Rural-to-urban migration, accompanied by squatter settlements in the physical realm, has been transforming many Asian, African and Latin American societies since the 1950s. This course investigates the social and political outcomes of "rapid urbanization" with a focus on squatter settlements and their residents. It covers theories that seek to explain social and economic transformation of "modernizing" societies and their urban development. It attempts to develop a critical approach to the "integration" question of migrants in their new environment, and while so doing, it focuses mainly on the Turkish case. Gender, ethnicity, religion and regional identity are addressed. *Credit units: 3 ECTS Credit Units: 6. Aut (T. E. Erman)*

POLS 493 State and Society in the EU Member States

This course analyzes the relations between states and societies of the EU member states, major problems that key tackle in their domestic politics and how it related to the European integration process. This sequence of the course has two major purposes: to provide undergraduate students with knowledge on the EU member states their domestic problems regarding state-society relations and how they have addressed these problems within the scope of European integration. *Credit units: 3 ECTS Credit Units: 6.*

POLS 495 International Political Economy
Focusing on international political economy as inspired by both politics and economics, this course centers around the following topics: the neoclassical conception of an economy, new economic and political theories, national systems of political economy and the international trading, monetary and financial systems, multinationals corporations, economic and political development, and regional political and economic integration. *Credit units: 3 ECTS Credit Units: 6. Aut (T. Bölükbaşı)*

POLS 497 Local and Global in Cities
This course explores the relationship between local dynamics and global developments in the context of cities. By doing so, it aims to reveal how today's cities are being transformed in the process of the interplay between local and global forces. It brings together research on the cities of both the global South and the North. *Credit units: 3 ECTS Credit Units: 6. Aut (T. E. Erman)*

GRADUATE COURSES

POLS 601 Seminar in Turkish Politics
This is an introductory course on Turkish politics for the Ph.D. Program in Political Science. It covers such topics as political culture, including its antecedents, nationalism and politics, Islam and politics the dynamics of the political system with special reference to political parties and political leaders, the military and politics, and the consequent trial and tribulations of democracy in Turkey. *Credit units: 3 ECTS Credit Units: 6. Aut (M. Heper)*

POLS 602 Seminar in Comparative Politics
This seminar is designed to introduce students to the major theoretical and conceptual debates in the sub-field of comparative politics. The weekly readings are chosen to reflect the variety of topics and methodological approaches in comparative politics. *Credit units: 3 ECTS Credit Units: 6. Aut (S. Özçürümez Bölükbaşı)*

POLS 603 Advanced Academic English
In this course, students will advance in academic English as it relates to the field of political science. Academic and stimulating texts will serve as the foundation–both the stimulus and quality example–from which students will improve their knowledge and usage of English. Students will analyze the writing style and method of political science writers, write analytical essays of political science texts, lead discussions and deliver academic presentations. *Credit units: 3 ECTS Credit Units: 6. Aut (M. Krugman)*

POLS 604 Democratization Process in Turkey
This course will deal with the processes of democratization and liberalization in Turkey particularly in the light of constitutional and legislative reforms adopted between 1993 and 1995. Attention will also be given to the impact of the EU membership prospective. *Credit units: 3 ECTS Credit Units: 6.*

POLS 605 The Public Sphere
This course takes the public sphere as the main field of politics where different political ideologies emerge, contending ideologies clash and power relations take shape. Originally developed by Jurgen Habermas, the notion "public sphere" has been extensively and critically debated by writers in relation to democracy, civil society, state-society relations, political participation and the place and function of political identities in relation to these. This course surveys this debate and focuses on the different ways in which the "public sphere" is understood and contextualized, particularly in relation to ethnic, racial and gender identities. *Credit units: 3 ECTS Credit Units: 6.*

POLS 606 Seminar in Political Theory
This course engages in a critical reading of a select number of contemporary thinkers from K. Marx in 19th to L. Irigaray 20th, and to S. Zizek in 21st century. The course starts with the most recent texts and moves backward in history. Although the questions posed each week revolve around the most pressing issues of the present political conjuncture, such controversial concepts as democracy, difference, representation and the subject are analyzed from within a broad range of perspectives. *Credit units: 3 ECTS Credit Units: 6.*

POLS 607 Configuration of Political Theory Today
This course is designed to address multiple challenges world politics faces after September 11, 2001. It aims utilize a diverse range of theories, methodologies and modes of thinking of politics. Throughout the whole term the main focus is on only one concept-power. We will examine classical and contemporary texts on different conceptualizations and dimensions of power, e.g. state power, power of the markets, power of terror. We will also examine freedom, equality, representation, participation, gender and citizenship in relations to power. The format of the course is lecture in half and student presentation in half. *Credit units: 3 ECTS Credit Units: 6.*

POLS 608 Politics, Culture, Nation and Gender
This course takes the realm of urban daily life as the locus of politics and investigates different dimensions of the making of national identities in relation to issues of gender, race, ethnicity, and class. The readings have been structured so as to explore the complexity of national identities and founding ideologies around several dimensions. First, they will address the ways in which national ideologies are constructed and propagated in relation to race, ethnicity, gender, class, religion or colonial relations, as one or several of these elements converge in the making and contestations of national ideologies in different contexts. Second, the course will

simultaneously explore different mediums of representation in the making and contestation of national ideologies, ranging from popular music, novels, architecture, art, films and mass media to clothing, food and other daily practices. *Credit units: 3 ECTS Credit Units: 6.*

POLS 609 Issues in Urban Studies
This course addresses the theoretical and methodological issues in studying the city as a socio-cultural entity, and it aims to reveal urban dynamics that shape the city and city spaces in a variety of contexts. Attention is paid to emerging social and spatial landscapes in our era of globalization. In the class such concepts and topics are explored as the global city, the city in modernity and post-modernity, urban ethnography, suburbanization, gentrification and ghettoization, gated communities, the privatization of urban space, and urban governance, as well as Third World urbanization, squatter formation, migrant enclaves, and local politics. The city is approached critically in terms of gender, ethnicity and class. *Credit units: 3 ECTS Credit Units: 8.*

POLS 610 Research Methods
The purpose of this course is to introduce you to the qualitative research methods in social sciences. Emphasis will be placed both on acquiring skills as a researcher and on learning to evaluate empirical work in political science. We will take up, in turn, basic concepts of qualitative research design and data collection. This is a seminar course and students will design their own research project in the light of the methods discussed in class sessions. *Credit units: 3 ECTS Credit Units: 6. Aut (E. Çuhadar Gürkaynak)*

POLS 611 Political Theory :An Overview
This is a broad introduction to political philosophy. It consists of an in-dept engagement with some of the most important political writings between the fourth century B.C. and the twenty-first century A.D., including Aristotle, Augustine, Hobbes, Nietzsche and Oakeshott and other, lesser, writings, concluding with a view of the present state of theory. The course addresses issues such as what is theory? Does political theory relate better to some types of association more than others? How does theory relate to history, religion and law? How can theory interact with practice? Can theory legitimately include prescription as well as description? What is the theoretical status of ideological pronouncements? *Credit units: 3 ECTS Credit Units: 8.*

POLS 612 Seminar in Social and Cultural Studies:
This course brings together concepts and perspectives from various fields of the human sciences such as sociology, psychoanalysis, anthropology and semiology. The focus will be on current analyses of how societies and cultures are formed and break down. Special attention will be paid to the problems and future of contemporary societies and cultures. *Credit units: 3 ECTS Credit Units: 8.*

POLS 614 Politics of Nationalism and Ethnicity
Historical origins, defining characteristics, enduring power, morality and typologies of nationalism. “New” nationalism(s). The pull and push of ethnic politics vis-à-vis integrationism of the modern nation-state. *Credit units: 3 ECTS Credit Units: 8.*

POLS 616 Political Cultures in the Middle East
The overall aim of this course is to move away from traditional approaches to understanding the Middle East, through analysis of constitutions, parliaments, parties regional developments and interaction with the outside world, in favor of a more lateral approach based on the cultural content of Middle Eastern societies/ *Credit units: 3 ECTS Credit Units: 7.*

POLS 618 Hegel’s Philosophy of Right
This course will take the form of a close study of one of the most important modern works of political thought, Hegel’s *Philosophy of Right* . It will involve the relation of Hegel’s political thought to his philosophy as a whole, the identification of his political and philosophical concerns in the early nineteenth century, and will consider the possibility of theorising our later modernity in terms of his political thought. The aim will be for everyone who takes the course to have read the whole work, including its additions and appendices, by the end of the term and also to have studied a reasonable amount of Hegel commentary including the critiques of Hegel’s thought found in writers such as Schopenhauer, Marx and Kierkegaard. *Credit units: 3 ECTS Credit Units: 7.*

POLS 627 Cultural Diversity Cosmopolitanism and Europe
Various cosmopolitanisms and different forms of cultural diversity will be explored through a reading of anthropological and philosophical texts on the issues of immigration, interculturalism and multiculturalism with the geographic focus on Europe. The overall objective of the course is to give students a critical understanding of social science concepts such as culture, race, and ethnic group, and to discuss culturalist, essentialist, fluid and dynamic conceptualisations of cultural diversity in the light of different cosmopolitan experiences, perspectives and education. *Credit units: 3 ECTS Credit Units: 7.*

POLS 628 Social and Spatial Aspects of the Periphery
This course explores the politics of the periphery in social and spatial terms, focusing on the periphery of society (the poor, socially excluded, culturally stigmatized, politically repressed) and the periphery of space (squatter settlements, immigrant enclaves, diasporas, ghettos, transgressive spaces). It examines the mechanisms and strategies, as well as the discourses involved in the relationship of the periphery with the mainstream society and the role of space in it. The question of the governmentality of the periphery is addressed. Through reading

ethnography and other research, the course aims to teach students how to theorize the periphery, and hoe to approach critically to the studies of disadvantaged groups. *Credit units: 3 ECTS Credit Units: 6.*

POLS 629 Turkey in Its Muslim Environment

This course will deal with the relationships between Turkey and its Arab 'neighbors' and its place in the Muslim world generally. Starting points will be a definition of 'neighbors', the Ottoman legacy and the effect on relations between Turkey and Muslim countries of foreign and domestic policies adopted by the Turkish government after the foundation of the republic. Key issues will include Turkey's role at the UN, in diplomacy and through peace-keeping operations (i.e. in Lebanon); complications in relationships with close Arab countries, especially Syria and Iraq; the water issue; economics; Turkey's activities as a member of the Organization of the Islamic Conference; and the positioning of its Muslim world policies in the context of relations with the United States and the European Union. *Credit units: 3 ECTS Credit Units: 6.*

POLS 630 Comparative Political Studies and Turkey

This seminar course aims to enhance students; understanding of comparative analysis and alternative theoretical approaches for analyzing and comparing political systems and processes focusing on Turkish politics. Substantive areas of inquiry include states, institutions, democratic transitions and consolidation, state-society relations, citizenship and political participation, and policy-making and governance in selected policy areas. The course will survey the research on the case of Turkey in order to critically examine and advance systematic and contextualized comparison of the study of Turkish politics in the broader context of Europeanization processes and comparative political inquiry. *Credit units: 3 ECTS Credit Units: 6.*

POLS 631 Foreign Policy Analysis

This course is designed to introduce students to the comparative study of foreign policy, which lies at the intersection of comparative politics and international relations. It examines foreign policy activities of states and non-state actors and different theoretical perspectives that guide the study of foreign policy with an emphasis on the process of foreign policymaking and implementation. The first part of the course introduces the students to the general notions of foreign policy such as what foreign policy is, the levels of analysis, and how the scientific study of foreign policy has evolved. The rest of the course covers foreign policy analysis theories at different levels of analysis explaining both the external and domestic sources of foreign policy. Several case studies are examined in depth including the Israeli-Palestinian conflict and negotiations, US decision to go to war in Iraq, the signing of the Kyoto agreement, and Turkish-EU negotiations. *Credit units: 3 ECTS Credit Units: 6.*

POLS 633 Seminar on the European Union

The aim of the course is to provide the graduate students with the basic knowledge of how the European Union formulates and its basic policies within the member states as well as the challenges and opportunities in the implementation of these policies. The course exclusively addresses the main policy areas of the European Union that include social policies, public policies, migration, citizenship, justice and home affairs and how they are adapted by the member states within the framework of Europeanization. *Credit units: 3 ECTS Credit Units: 6. Aut (A. Güney)*

POLS 634 European Union Politics

This course discusses advanced studies on EU politics. The focus is on the following issues: EU executive, legislative and judicial politics, public opinion, democracy, parties and elections, interest representation, regulation of the single market, expenditure policies, economic and monetary union, citizen freedom and security policies, and foreign policies. *Credit units: 3 ECTS Credit Units: 6.*

POLS 635 Politics of Turkish Modernization

This course will explore the main themes around which Turkish modernization have revolved throughout the 20th century. First, the course will focus on debates and controversies over modernization, Westernization, nationalism and secularism as they become the main themes of the constitutive norms of the modern Turkish Republic. After briefly tracing the historical developments around these themes that have shaped Turkish society and politics since the founding of the Republic, the rest of the course examines different dimensions of the institutionalization and the negotiation of Turkish nationalism and its aspirations for a West-oriented modernity in various contexts of politics and daily life. Mainly, such negotiations are traced in daily life contexts such as the use of public spaces, urban planning issues, differentiation of gender roles, or trends in popular culture such as in music, political cartoons, films or television programs. *Credit units: 3 ECTS Credit Units: 6. Aut (Z. Sarıgil)*

POLS 636 Nationalism and Politics

The most important problem that inflicts the study of Turkish nationalism today is relative insularity in which its researchers are operating. Comparative studies are very few and the attempts to connect the field with the developments in nationalism studies of the last three decades are scanty. This doctoral seminar is designed to azquaint students of Turkish nationalism with select works from the enormous body of literature on nationalism as a global phenomenon and to draw parallels with the Turkish case. the main emphasis of the course will be on Turkish nationalism, covering a broad variety of topics from the origins of this ideology to its current institutionalization in the form of parties and civil society organizations. However, each one of those seminar themes will be embedded in a wider framework of theoretical analyses of nationalism as well as relevant case studies from other countries. *Credit units: 3 ECTS Credit Units: 6.*

POLS 637 Power and State
This course presents advanced notions of the concept of political power and how it applies to the nation state and new emerging political entities. We cover normative, descriptive and explanatory approaches to power and review how political theory, comparative politics and international relations deal with this phenomenon. *Credit units: 3 ECTS Credit Units: 6.*

POLS 638 Political Theory in a Time of Terror
This course examines the challenges 'September 11' has posed for political theory in the twenty-first century. It centers on critical analyses of such concepts as the passion for reality, difference, tolerance, the subject in politics and the politics of subject. In order to give a historical context for such analyses, the course starts with the present and moves backward to debates on transformations in the nineteenth century. The objective is to help students focus on different modes of reasoning, thinking and criticism on the same questions or concept. *Credit units: 3 ECTS Credit Units: 6.*

POLS 639 The Ecology of Social Relations and Cultural Processes
This seminar type course aims to explore key concept and models in social theory. One major concern throughout the course will be compare and contrast the perspectives that were developed by social theorists since the nineteenth century with "ecological" approaches which propose that the forms that social relations and cultures take can only be intelligible by looking at how human agents interact with their natural and social environments. *Credit units: 3 ECTS Credit Units: 6. Aut (M. N. Karakayalı)*

POLS 641 The Ultimate Sources of Politics
Political theory often considers the question of the most just or right form of politics. This course aims at analyzing the three theoretical foundations of any form of politics orginates with God; that politics orginates with those who are spirited, strong or powerful; and that it originates with the people. The course will consider them on its own terms: first, theocracy, then timocracy, and finally democracy. *Credit units: 3 ECTS Credit Units: 6.*

POLS 643 Issues in Political Theory
This is a higher level course which aims to extend political theory in terms of depth and breadth. In terms of depth, several major political works (highways) will be considered more reflectively and at more length than is usually possible elsewhere. And in terms of breadth, several rarely studied, little known or highly unconventional works (byways) which have contributed to political theory from odd angles, or what might be seen as cul-de-sac, will be studied. It is hoped that these two different approaches will give a better insight into the canons and canonical subjects of political theory than is possible in a more traditional course. *Credit units: 3 ECTS Credit Units: 6. Aut (J. Alexander)*

POLS 699 Ph.D. Dissertation
Credit units: None ECTS Credit Units: 24. Aut (Staff)

DEPARTMENT OF PSYCHOLOGY

E. Özgen (Chair), M. Adams, F. Bolger, H. Boyacı, K. Doerschner, O. A. C. Wright.

Psychology is the study of mind and behaviour. It explores the way in which humans (and sometimes animals) see, learn, remember, and think; as well as the way they behave among others. It also looks at the relationship between mind and brain physiology, and studies how all these faculties develop from conception and birth through to the end of life.

Psychology has a wide scope. Its subject matter ranges from biology of the brain and the nervous system, to social issues like what makes people behave the way they do in a group. Thus, it is widely accepted that psychology is a discipline of both natural and social science. There are five core areas of psychological science. These are biological, cognitive, social, developmental, and personality psychology. The undergraduate program offered by the department aims to provide a balanced education in all these areas as well as some more specialised areas offered as electives. It places importance on an active learning process with discussion-based classes and partly essay-based assessment.

The most important aspect of the program is its emphasis on scientific method and research. It is impossible to learn everything there is to know about such a vast area of scientific study. Thus it is more important to gain an understanding of the methods with which to study mind and behaviour. The main aim of the program therefore is to establish a good understanding of scientific method and analytic thinking as well as skills necessary to conduct research including data analysis and efficient use of computer software. In this capacity, students are required to take part in and conduct a range of research projects, which involve an increasing level of independence as the course progresses. In the final year students are required to complete an independent research project culminating in a senior thesis.

The program also aims to place somewhat more emphasis on the natural science aspect of psychology than social. Both the curriculum and research conducted in the department provide opportunity for students to specialise in cognitive psychology and neuroscience. However, the program also gives the choice to students to take courses in specialised application areas of psychology like health psychology or clinical psychology.

UNDERGRADUATE CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
CS 121	Introduction to Computing for Social Sciences	3 / 6
ENG 101	English and Composition I	3 / 6
GE 100	Orientation	1 / 1
MATH 105	Introduction to Calculus I	4 / 7
PSYC 100	Introduction to Psychology	3 / 6
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
ENG 102	English and Composition II	3 / 6
MATH 106	Introduction to Calculus II	4 / 7
MBG 110	Introduction to Modern Biology	3 / 6
PSYC 110	Psychological Methods	3 / 7
TURK 102	Turkish II	2 / 1

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
HISTR 201	History of Turkish Republic I	2 / 1
HUM 111	Cultures Civilizations and Ideas I	3 / 4
PSYC 200	Cognitive Psychology	3 / 7
PSYC 201	Statistics and Research Methods in Psychology I	4 / 7

PSYC 230	Social Psychology	3 / 6
	Elective (1)	3 /

Spring Semester Credits / ECTS Credits

HISTR 202	History of Turkish Republic II	2 / 1
HUM 112	Cultures Civilizations and Ideas II	3 / 4
PSYC 202	Statistics and Research Methods in Psychology II	4 / 7
PSYC 220	Brain and Behaviour	3 / 6
PSYC 240	Developmental Psychology	3 / 6
	Elective (1)	3 /

THIRD YEAR

Autumn Semester Credits / ECTS Credits

PSYC 301	Laboratory in Psychological Research	4 / 6
PSYC 310	Perception, Attention, and Action	3 / 6
PSYC 320	Cognitive Neuroscience	3 / 6
PSYC 330	Theory and Practice of Applied Social Psychology	3 / 6
	Elective (1)	3 /

Spring Semester Credits / ECTS Credits

PSYC 340	Learning, Remembering, and Thinking	3 / 6
PSYC 350	Cognitive and Social Development	3 / 6
PSYC 360	Individual Differences and Personality	3 / 6
	Elective (2)	6 / 12

FOURTH YEAR

Autumn Semester Credits / ECTS Credits

PSYC 401	Senior Thesis I	3 / 6
	Elective (4)	12 / 24

Spring Semester Credits / ECTS Credits

PSYC 402	Senior Thesis II	3 / 6
	Elective (4)	12 / 24

ELECTIVE COURSES

PSYC 370	Conceptual Issues and Current Directions in Psychology	3 / 6
PSYC 400	Psychology in Historical Context	3 / 6
PSYC 405	Introduction to FMRI	3 / 6
PSYC 410	Neuropsychology	3 / 6
PSYC 420	Selected Topics in Cognitive Psychology	3 / 6
PSYC 421	Selected Topics in Social Psychology	3 / 6
PSYC 422	Selected Topics in Developmental Psychology	3 / 6
PSYC 430	Clinical Psychology	3 / 6
PSYC 431	Psychological Testing and Measurement	3 / 6
PSYC 433	Abnormal Psychology	3 / 6
PSYC 435	Industrial and Organisational Psychology	3 / 6
PSYC 436	Economic Psychology and Consumer Behaviour	3 / 6
PSYC 440	Cross-cultural Psychology	3 / 6
PSYC 482	Mind in Evolution	3 / 6
PSYC 483	Theory of Mind	3 / 6

RESTRICTED ELECTIVES

CS 101	Algorithms and Programming I	4 / 7
CS 102	Algorithms and Programming II	4 / 7
CS 111	Introduction to Computing in Engineering and Science	3 / 5
CS 122	Introduction to Programming for Social Sciences	3 / 5
HART 120	Human Evolution and World Prehistory	3 / 6
MATH 227	Introduction to Linear Algebra	3 / 6
MATH 255	Probability and Statistics	3 / 6
MBG 210	Genetics	4 / 7
PHIL 103	Introduction to Philosophy I	3 / 6

PHIL 104	Introduction to Philosophy II	3 / 6
PHIL 241	Social and Political Philosophy I	3 / 6
PHIL 242	Social and Political Philosophy II	3 / 6
PHIL 304	Philosophy of Science	3 / 6
PHIL 308	Philosophy of Mind	3 / 6
PHYS 101	General Physics I	4 / 6
PHYS 102	General Physics II	4 / 6

ELECTIVE REQUIREMENTS

The undergraduate curriculum requires students to take a total of 13 elective courses. At least 5 (five) of these must be chosen from the list of Psychology (PSYC) "elective courses" seen above. Not all of these courses may be offered in a given academic year, and new courses not mentioned here may be offered during the academic year. Available courses will be announced by the Department at the beginning of each academic year mainly in the "undergraduate" section of the psychology department website (www.psy.bilkent.edu.tr). Students have the sole responsibility to follow announcements made on the website and other media specified by the department.

At least 2 (two) elective courses in the curriculum must be chosen from the list of "restricted electives" seen above. This list may be changed during the academic year, which will be announced on the department website.

At least one of the remaining unrestricted electives should be chosen from among the Faculty of Art, Design, and Architecture or Faculty of Music and Performing Arts.

COURSE DESCRIPTIONS

UNDERGRADUATE COURSES

PSYC 100 Introduction to Psychology

This course is a general introduction to the main issues and findings in psychological science. It lays out the kinds of questions facing psychologists trying to study the mind and behaviour, and it covers some major methods of answering them. The course spans the major research fields of psychology, presenting major findings from biological, cognitive, social, developmental, and personality psychology. It also gives a brief introduction to mental disorders and clinical psychology. *Credit units: 3 ECTS Credit Units: 6. Aut (M. Adams, H. Boyacı, K. Doerschner)*

PSYC 102 Introduction to Social Psychology

This course is designed to acquaint the student with the nature and causes of individual behavior in social situations; to identify the factors that shape feelings, behavior and thought. The topics to be covered include: the research methods of social psychology, social perception, social cognition, attitudes, prejudice/discrimination, interpersonal attraction, social influence, aggression, individual behavior in groups, and applications of social psychology in health, the legal system and the work setting (organizations). *Credit units: 3 ECTS Credit Units: 5.*

PSYC 110 Psychological Methods

This course introduces main types of research design and issues involved in designing a good study. Its practical component involves reading classic empirical research papers and writing reports on the scope, methods, and findings of each. *Credit units: 3 ECTS Credit Units: 7.*

PSYC 200 Cognitive Psychology

This course provides a comprehensive introduction the area of cognitive psychology. It lays out the emergence and importance of cognitive psychology as a field of scientific research. Issues and findings are presented in sensation and perception, learning, memory, problem solving, thinking and reasoning, and language. *Credit units: 3 ECTS Credit Units: 7, Prerequisite: PSYC 100. Aut (O. A. C. Wright)*

PSYC 201 Statistics and Research Methods in Psychology I

Main concepts and methods of statistical data analysis are covered and practiced. This is followed by a mini-research project requiring the use of the statistical technique being studied. Finally students write a research report on each of these mini-projects, outlining the theoretical issues, methods, results, and implications. Main topics covered in statistics: graphical representations, variables, distribution, measures of central tendency, probability, X^2 , t test, and one-way analysis of variance (ANOVA). *Credit units: 4 ECTS Credit Units: 7, Prerequisite: CS 121 and PSYC 100 and PSYC 110. Aut (E. Özgen)*

PSYC 202 Statistics and Research Methods in Psychology II
This is the continuation of PSY 201 and follows an identical structure. Some topics covered in statistics: correlation, simple regression, multivariate analysis of variance. *Credit units: 4 ECTS Credit Units: 7, Prerequisite: PSYC 201.*

PSYC 210 Interpersonal Communication
This course focuses on the theoretical background and practice of interpersonal skills for communicating effectively, for establishing and maintaining relationships in one-to-one and group situations. The main objective is the development of self-understanding and self-awareness along with the acquisition of effective communication techniques, to produce a discipline and conscious use of oneself in professional as well as personal relationships. *Credit units: 3 ECTS Credit Units: 6.*

PSYC 220 Brain and Behaviour
As a basis for all mental activity and behaviour the nervous system and the brain in particular are quite important. This course introduces the structure and workings of the brain, its main characteristics, and its relationship to mind and behaviour. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MBG 110 and PSYC 100.*

PSYC 230 Social Psychology
This course is a comprehensive introduction to the field of empirical research which examines the individual in a social setting. It covers areas such as social cognition, social perception, attitudes, conformity, and aggression. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: PSYC 100. Aut (F. Bolger)*

PSYC 240 Developmental Psychology
The mind develops from conception right up to the end of life. In order to understand our nature and capabilities, it is important to know how the mind develops and what affects the course of this development. Main topics covered are Piaget's model of cognitive development and its critique, language acquisition, social interaction, attachment, parenting styles, and adolescent development. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: PSYC 100.*

PSYC 301 Laboratory in Psychological Research
This course follows the same system as the prerequisites PSY 201 and 202; the difference is that students form small groups in which to carry out research on a topic of their choice (from among a set of alternatives) and complete two such projects in the semester. They conduct all aspects of the research with supervision from the instructor, including design, analysis and report write-up. The statistics component of the course covers more advanced techniques than in the previous year such as factor analysis and multiple regression. *Credit units: 4 ECTS Credit Units: 6, Prerequisite: PSYC 202. Aut (E. Özgen)*

PSYC 304 Industrial Psychology
This course will integrate the principles, theories and practices of industrial psychology. Topics will include personnel psychology; employee selection; performance appraisal; organizational psychology; morale, motivation and job satisfaction; designing the optimal organizational structure; training, development and productivity in organizations; designing work conditions; engineering psychology and methods dealing with stress at work. *Credit units: 3 ECTS Credit Units: 6.*

PSYC 308 Workshop in Cognitive Psychology Research
The aim of the course is to involve students in research activity in their field of interest, in projects supervised by members of the department. The course will provide opportunity for the students to gain experience in research design, data collection, data analysis, report write-up presentation. research projects will be announced each semester. *Credit units: None ECTS Credit Units: None.*

PSYC 310 Perception, Attention, and Action
The focus here is on perception, specifically visual perception. This is the part of cognitive psychology, where we know more than any other area about the brain's involvement. Thus, studying perception, and specifically vision, tells us much about the rest of our cognitive capacities. Main topics covered are physiological structure of vision, modularity, attentional influences, spatial vision, colour vision, perceptual learning, categorical perception, and motion perception. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: PSYC 200 and PSYC 220. Aut (K. Doerschner)*

PSYC 320 Cognitive Neuroscience
This course covers the techniques and findings that have allowed us to know much more about what happens in our brains when we see, hear, think, talk, and even dream. Recent technological advances such as fMRI brain imaging techniques are covered and findings from studies using such techniques are discussed. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: PSYC 200 and PSYC 220.*

PSYC 330 Theory and Practice of Applied Social Psychology
Social psychology has accumulated a wealth of knowledge as well as theories to predict human behaviour in social settings. This knowledge is fast becoming crucial in understanding social problems such as immigration,

national identity, inter-group relations, and conflict resolution. The course introduces studies and applications of social psychological findings to social issues and problems. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: PSYC 230. Aut (F. Bolger)*

PSYC 340 Learning, Remembering, and Thinking

A great deal of what we call cognition (knowing) is a direct result of our capacity to learn and remember. Scientists have long been interested to find out exactly how we learn, and what happens in our minds and brains when we do learn. Learning of course is not enough; we also need to remember what we have learned. How does memory work? What is the best way of remembering things we learn? How are memories processed before they become a part of our mental world? After remembering, we have to make use of those memories: we have to relate them with each other, see connections, and reach to conclusions. In other words, we have to think. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: PSYC 200.*

PSYC 350 Cognitive and Social Development

This course elaborates on the previous year's developmental psychology course, providing a more in-depth analysis of problems and up-to-date findings in cognitive and social development. The object is to see the relationship between developmental processes and the adult mind. Main topics covered are development of logic and reasoning, memory, spatial cognition, perception, face recognition, prosocial behaviour, sociocultural approaches. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: PSYC 240.*

PSYC 360 Individual Differences and Personality

While, the rest of psychology studies the similarities between people, this area looks at what makes each individual distinct from others. It investigates areas such as intelligence, aptitude, personality traits, and development of a self concept, and tries to answer questions on why each individual turns out the way he/she does. One very important issue here is the famous nature-nurture debate: are we born like this or do we become what we are as we go through life? The course also looks at methods with which psychologists assess intelligence and personality. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: PSYC 230 and PSYC 240.*

PSYC 370 Conceptual Issues and Current Directions in Psychology

This course is a look at the historical and current trends in psychological research and thinking. Psychology as a science has shown remarkable developments over the past century or so. From Wundt and James to Skinner, to the cognitive revolution, there have been many arguments, switches of focus and philosophy, as well as a steady progress towards an exact science. It is important to study the journey of psychology in order to understand the research carried out today in a wider context. *Credit units: 3 ECTS Credit Units: 6.*

PSYC 400 Psychology in Historical Context

A survey of major ideas and hypotheses about the mind, ranging from influential philosophical precursors to key stages, doctrines and personalities that shaped the development of psychology as a science in 19th and 20th centuries. The class will insist both on the content of the most important doctrines and research programs as well as on the intellectual climate in which they arose and on their impact beyond psychology. The class will combine lectures with student presentations and discussions, and will involve readings of primary sources as well as of wider intellectual influences on the development of psychology. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: PSYC 200 and PSYC 220 and PSYC 230 and PSYC 240.*

PSYC 401 Senior Thesis I

This is a final year research project. Each student gets together with a supervisor, a member of academic staff whose research area is related to a topic of research he/she is interested in. Students spend a year to plan, design, conduct, analyse and write-up a research project. The role of the supervisor is minimal. The object is to acquire skills necessary to conduct an independent project. Students will have the opportunity to get together in tutorial groups with others and discuss common problems and difficulties and get instruction on these from a member of academic staff. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: PSYC 301. Aut (E. Özgen)*

PSYC 402 Senior Thesis II

This is a final year research project. Each student gets together with a supervisor, a member of academic staff whose research area is related to a topic of research he/she is interested in. Students spend a year to plan, design, conduct, analyse and write-up a research project. The role of the supervisor is minimal. The object is to acquire skills necessary to conduct an independent project. Students will have the opportunity to get together in tutorial groups with others and discuss common problems and difficulties and get instruction on these from a member of academic staff. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: PSYC 401. Aut (E. Özgen)*

PSYC 405 Introduction to FMRI

This course covers the basic principles of Functional Magnetic Resonance Imaging (fMRI), including the physical principles of signal generation in MRI and the relation of neuronal activity with the blood-oxygen-level-dependent (BOLD) signal. The course emphasizes techniques to conduct experiments investigating the functional activity of the nervous system, and statistical analysis of the fMRI data. Weekly hands-on sessions are held using the in-campus MRI scanner. The objectives of the course are to gain a basic understanding of physical and biological

concepts of fMRI; a basic knowledge of fMRI data collection and the operation of the scanner (through weekly hands-on sessions); a basic knowledge of fMRI experimental design. *Credit units: 3 ECTS Credit Units: 6. Aut (H. Boyacı)*

PSYC 410 Neuropsychology

This advanced course is a more in-depth study of the brain and the nervous system in relation to mind and behaviour. Specifically, here, disorders of the brain, lesions resulting from accidents and strokes, and the effects of these on mental capacity and behaviour are discussed. The implications of such findings are discussed particularly in relation to philosophical questions such as free-will and self determination. *Credit units: 3 ECTS Credit Units: 6.*

PSYC 420 Selected Topics in Cognitive Psychology

Members of academic staff cover a research topic that they are working on, presenting an in-depth, advanced understanding of the research problem, data that have been collected by the instructor or colleagues, and a discussion of these results in relation to the bigger questions. This course brings final year students up to date with a current research area and provides them an opportunity to continue academic study in this or other areas. *Credit units: 3 ECTS Credit Units: 6.*

PSYC 421 Selected Topics in Social Psychology

Members of academic staff cover a research topic that they are working on, presenting an in-depth, advanced understanding of the research problem, data that have been collected by the instructor or colleagues, and a discussion of these results in relation to the bigger questions. This course brings final year students up to date with a current research area and provides them an opportunity to continue academic study in this or other areas. *Credit units: 3 ECTS Credit Units: 6.*

PSYC 422 Selected Topics in Developmental Psychology

Members of academic staff cover a research topic that they are working on, presenting an in-depth, advanced understanding of the research problem, data that have been collected by the instructor or colleagues, and a discussion of these results in relation to the bigger questions. This course brings final year students up to date with a current research area and provides them an opportunity to continue academic study in this or other areas. *Credit units: 3 ECTS Credit Units: 6.*

PSYC 430 Clinical Psychology

In its first offering semester we would like to change the name of this course from “Health and Clinical Psychology” to “*Clinical Psychology*” (Turkish name: “Klinik Psikoloji”). The reason for this is that Health Psychology is an increasingly independent area and will have to be taught as a separate course in future. To avoid Problems it is best to take the word “health” out of the name of the present course. Another problem we are trying to fix is that this course has been registered without any credits. It should be worth 3 credits. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: PSYC 433.*

PSYC 431 Psychological Testing and Measurement

This course is a training in techniques of psychological assessment in areas like intelligence testing and personality testing. Problems associated with “measuring” human mind and behaviour are discussed and methods in dealing with these covered. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: PSYC 202 and PSYC 301. Aut (Staff)*

PSYC 433 Abnormal Psychology

This course is about the study of mental disorders and problems. It covers the history of the understanding of mental health, and introduces the advances made. It provides an in-depth understanding of various disorders such as schizophrenia, depression, phobias, addiction, and sexual health. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: PSYC 100. Aut (Staff)*

PSYC 435 Industrial and Organisational Psychology

This course introduces the student to the main advances of this relatively new field, which explore the psychological aspects of working in an organisation. What makes a good organisation? What are good strategies in dealing with the “human factor” in the workplace? Who is good for which job? How can people develop their careers? These are the kinds of questions that this course introduces. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: PSYC 330. Aut (Staff)*

PSYC 436 Economic Psychology and Consumer Behaviour

We are all consumers and our consumption behavior is an important aspect of our daily lives. However, consumers are only one kind of economic agent, others include taxpayers, investors, entrepreneurs, bankers, multi-national companies and governments. Psychology is integral to the behaviour of all these economic agents - they base their decisions on their perceptions and judgments of economic data, their memory of past economic trends, and expectations about future economic developments. In this course we examine the psychology behind consumption, and economic behavior more generally. We do this by looking at relevant psychological theory and research within some of the main sub-divisions of psychological inquiry, for example: perception; learning and memory; motivation and personality; attitudes and expectations; judgment and decision making; game theory;

and the relations between cognition and emotion. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: PSYC 100 or PSYC 102 or PSYC 230.*

PSYC 440 Cross-cultural Psychology

Psychology has recently been interested to see if psychological principles discovered through scientific methods apply to different cultures differently. We are discovering every passing day that different cultures have different ways of dealing with life, different psychological reactions, and possibly even different cognitive structures. The study of cross-cultural psychology aims to discover these differences in order to gain a better understanding of what makes us the way we are. It tells us a lot about ourselves to discover that our culture influences us to such an extent that even our mental capacities are affected. *Credit units: 3 ECTS Credit Units: 6.*

PSYC 450 Cognitive Science Education and Literacy

The course focuses on latest advances in educational psychology and literacy research. Topics include language acquisition, language and thought, culture and literacy, consciousness of language, speech and writing. Topics are covered from a cognitive science perspective. *Credit units: 3 ECTS Credit Units: 6.*

PSYC 457 Special Topics in Theoretical Physics

Credit units: 3 ECTS Credit Units: None.

PSYC 482 Mind in Evolution

As a biological capacity, the human mind must have evolved. Can evolution explain its design? The human mind has many components, from perception and emotion to language and thinking. Are they all products of natural selection, of other evolutionary forces, or of no such forces at all? Can evolution explain the uniqueness of the human mind? What could be the factors that explain this uniqueness: tool making, language, social life? In attempting to answer these questions, the course brings an evolutionary perspective to some important topics in philosophy of mind and cognitive science and offers a multidisciplinary introduction to the emerging but rapidly developing field of evolutionary cognitive science. *Credit units: 3 ECTS Credit Units: 6.*

PSYC 483 Theory of Mind

Theory of Mind (or ToM) is the name of the mental competence that enables humans (and possibly other primates) to represent and predict mental states, such as seeing, desiring, believing, thinking, and so on, whether they belong to others or themselves. This is a new discipline, barely 25 years old, which has rapidly become one of the most dynamic research areas in psychology, of central and increasing interest to developmental, comparative, cognitive and clinical psychology, as well as to cognitive science in general. There are several reasons for the importance of ToM: it is the mental competence directly involved in communication, socialization and the acquisition of culture; it is also the competence vitally implicated in the acquisition of language and of higher mental abilities, such as self-control, metarepresentation, introspection, and thinking about one's own thoughts. The class will survey and analyze the evolution and development of ToM, in terms of basic experiments and observational results, both psychological and neuroscientific, will examine clinical conditions caused by ToM deficits, such autism and schizophrenia, and explore the impact of ToM on other competencies, such as empathy, imitation, self-regulation, and more. The class will also discuss major positions and explanations of ToM, such as (the so-called) theory-theory, simulation, modularity, learning, the recently discovered mirror neurons, and so on. *Credit units: 3 ECTS Credit Units: 6.*

PSYC 491 Introduction to Cognitive Psychology

Cognition is a process composed of various phases like transferring sensory information to memory, retention, reasoning, logic, and problem solving. this course is intended to provide an introductory overview of theories and findings in the field of cognitive psychology. The main topics will include perception, memory, language and thought, problem solving and neuroscience. *Credit units: 3 ECTS Credit Units: None. Aut (O. A. C. Wright)*

PSYC 492 Developmental Psychology

This course focuses on developmental psychology which studies the stages and the lifelong development of human beings in the physical, cognitive, social and emotional domains. The main topics will include developmental research methods, Piaget's stages of cognitive development; Erickson's psychosocial stages of development; nature and nurture. *Credit units: 3 ECTS Credit Units: None.*

PSYC 493 Learning: Theory and Practice

This course covers theories and findings about hoe we acquire and develop knowledge and skills. Topics will include the physiology of learning, learning theories and approaches (e.g. behavioral, cognitive, social-cognitive). *Credit units: 3 ECTS Credit Units: None.*

FACULTY OF EDUCATION

Zeki C. Kuruoğlu, Ph.D., Acting Dean
Margaret K. Sands, Ph.D., Associate Dean

The Faculty of Education, in conjunction with the Graduate School of Education offers:

- A four year program in Computer and Instructional Technology Teacher Education
- A five year program in English Teacher Education
- MA in Curriculum and Instruction
- MA in Education Management
- MA in Teacher Education
- MA in Teaching English as a Foreign Language (TEFL)

In addition, sports courses are offered through the Faculty's Physical Education Unit.

ACADEMIC STAFF

Necmi Akşit, Assistant Professor
Ph.D., Educational Science, Middle East Technical University, 1998. Curriculum development, educational administration, instructional design, assessment and evaluation. Teaching English as a foreign language.

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Ph.D., Computer Education and Instructional Technologies, Middle East Technical University, 2008. Science and biology education, environmental issues.

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M.S., Computer Engineering, Middle East Technical University, 1981. Database management, programming languages, data structures.

Barbara Clark, Instructor
M.Ed., Teacher Training for English Language Teaching, University of Exeter, 2000.

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Ph.D., History, UCLA, 1975. Teacher education, Education management.

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B.A., Mathematics, University of California, Long Beach, 1974. Mathematics teaching, computer science.

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Ph.D., Statistics Education, Middle East Technical University, 2000. Use of IT in education, mathematics education, test construction.

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Ph.D. Applied Linguistics, University of Nottingham, 2008. Corpus linguistics, English for Academic Purposes, and formulaic language.

Hande Işıl Işık-Mengü, Instructor
Ph.D., English Language Teaching, Hacettepe University, 2005.

Valerie Kennedy, Assistant Professor
Ph.D., English Literature, University of East Anglia, 1979. Modern drama, Victorian fiction, 20th century fiction.

Ceylan Kızılduman Yazıcı, Instructor
Ph.D., Computer Education and Instructional Technology, Middle East Technical University, 2009. Instructional technology and design, development and evaluation, print and web-based learning material production, instructor training, project management and English language teaching.

Seyit Koçberber, Assistant Professor
Ph.D., Computer Engineering and Information Science, Bilkent University, 1996. Information retrieval, database systems.

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Ph.D., English Literature, Bilkent University, 1997. Modern drama, 16th and 17th century English Literature, literary theory and criticism.

Can Kültür, Instructor
Ph.D., Computer Education and Instructional Technologies, Middle East Technical University, 2009. Software engineering, human computer interaction, instructional technology, distance education, instructional systems design.

Joseph Malloy, Lecturer
M.A., Communication, New York, 1986. Teaching English as a second language, school development and improvement, managing educational change, curricular development, teacher evaluation.

Robin Martin, Instructor
Ph.D., Curriculum and Instruction, Iowa State University, 2003. Educational psychology, curriculum development, instructional design, learning and development.

Julie Mathews-Aydınlı, Assistant Professor
Ph.D., McGill University, 2003. Literacy development, culture and identity in second language reading and writing, literature in the language classroom, curriculum development.

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Ph.D., Mathematics Education, Rhodes University, 1999. Biology education, teacher training, estuarine ecology, mathematics education, independent learning.

John O'Dwyer, Assistant Professor
Ph.D., Curriculum and Project-Evaluation, University of Surrey, 2005. School and project management, organisational learning, curriculum development.

Halil Özmen, Instructor
M.S., Computer Engineering, Middle East Technical University, 1981. Data structures, algorithms, computer architecture, web based software development.

Murat Özsoy, Instructor
M.S., Computer Science and Technology, Linkoping Institute of Technology, Sweden, 1986. Introduction to computers, computer applications for business.

Rasim Özyürek, Instructor
Ph.D., Turkish Language Teaching, Baku State University, 1998.

Simon Phipps, Instructor
Ph.D., Teacher Education, University of Leeds, 2009. Teacher education, teacher cognition, second language acquisition, educational management.

Donald Bruce Randall, Associate Professor
Ph.D., English Literature, University of Alberta, 1995. Post-colonical literature, Victorian literature.

Lori Russell-Dağ, Instructor
M.S., Computer Engineering, Atılım University, 2006. Object oriented programming, database management systems, computer applications.

Margaret K. Sands, Visiting Professor
Ph.D., Science Education, University of Nottingham, 1983. Science and biology education, assessment and evaluation, international project management.

İpek Sözen, Instructor
M.S., Computer Engineering, Middle East Technical University, 1989. Programming languages, data structures, information systems.

Sema Taşkın, Instructor
Ph.D., English Literature, Hacettepe University, 1999. 20th century poetry, romantic poetry, victorian literature.

Elif Uzel Şen, Instructor
Ph.D., English Language Teaching, Middle East Technical University, 2002.

Jodee Walters, Visiting Assistant Professor
Ph.D., Applied Linguistics, University of Nottingham, 2006. Second language vocabulary acquisition, second language teaching methodology, individual differences in language learning.

Eric Thomas George Williams, Senior Lecturer
Ph.D., Education, University of Illinois, 1996 Curriculum and assessment, quality assurance and evaluation, e-learning.

Hülya Yavuz, Assistant Professor
Ph.D., Educational Sciences, Middle East Technical University, 1991. Computer aided education, curriculum development, mathematics education.

Füsun Yürüten, Instructor
M.S., Computer Engineering, Middle East Technical University, 1993. Database management systems, object oriented system analysis and design, systems development, programming languages.

PART-TIME ACADEMIC STAFF

Özgür Bayam, B.A:, Turkish Language and Literature, Hacettepe University, 1993. Turkish language and literature teaching.

Ece Biçer, B.Sc., Mathematics, Ankara University, 1993.

Sema Coşkun, Ph.D., Biology, Gazi University, Ankara, 2006. Biology education.

Aykut İnan İşeri, Ph.D., Secondary Science and Mathematics Education, Middle East Technical University, 2002.

Serpil Tuti, MA., Msc., Computer and Instructional Technology Education, Hacettepe University, 2002. Integrating information and communication technologies into teaching.

DEPARTMENT OF COMPUTER AND INSTRUCTIONAL TECHNOLOGY TEACHER EDUCATION

S. Koçberber (Chair), E. Arkun, R. Ayfer, G. B. Çalıkoğlu, C. Kızılduman Yazıcı, C. Kültür, H. Özmen, M. Özsoy, L. Russell-Dağ, İ. Sözen, H. Yavuz, F. Yürüten.

Part-time: S. Tuti.

The program for Computer and Instructional Technology Teacher Education is designed to prepare well-qualified teachers for high schools in Turkey. It develops the skills and expertise required from teachers in modern classrooms. Students spend one day a week in partner schools, gaining practical experience of up-to-date approaches to teaching, followed by a block practice in a third school.
The practical approach to the development of professional teachers is fully supported by the teacher education courses which emphasize student participation in problem solving, case studies, and developmental work.

Starting Fall 2009, the program is reorganized as a four year undergraduate program. Currently there are three programs offered:

1. Five-year combined undergraduate and graduate program, which leads to a M.A. diploma in computer and instructional technology teacher education for the students admitted prior to 2007.
2. Five-year undergraduate program which leads to a B.A. diploma in computer and instructional technology teacher education for the students admitted 2007 and 2008.
3. Four-year undergraduate program which leads to a B.A. diploma in computer and instructional technology teacher education for the students admitted 2009.

FIVE-YEAR M.A. PROGRAM

The masters-without-thesis program, which follows the undergraduate program, is taken in the Graduate School of Education. It gives not only a Masters diploma but also qualified teacher status.

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
CTE 101	Introduction to Programming I	4 / 8
CTE 103	Information Technologies in Education I	3 / 5
CTE 105	Discrete Mathematics	3 / 5
ENG 101	English and Composition I	3 / 6
GE 100	Orientation	1 / 1
HISTR 201	History of Turkish Republic I	2 / 1
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
CTE 102	Introduction to Programming II	4 / 8
CTE 104	Information Technologies in Education II	3 / 6
ENG 102	English and Composition II	3 / 6
HISTR 202	History of Turkish Republic II	2 / 1
MATH 105	Introduction to Calculus I	4 / 7
TURK 102	Turkish II	2 / 1

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
CTE 201	Programming Languages I	4 / 8
CTE 203	Data Structures	4 / 6
CTE 205	Computer Organization	3 / 5

HCIV 101	History of Civilization I	3 / 6
PHYS 107	Basic Physics I	4 / 6

Spring Semester		Credits / ECTS Credits
CTE 202	Programming Languages II	4 / 8
CTE 208	System Analysis and Design	3 / 6
CTE 214	Operating Systems	3 / 6
PHYS 108	Basic Physics II	4 / 6
TE 304	Theory Of Knowledge	2 / 4

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
CHEM 100	General Chemistry	4 / 6
CTE 301	Programming for the Internet	3 / 6
CTE 304	Database Management Systems	4 / 8
CTE 307	Network Structures and Communication	3 / 6
PSYC 100	Introduction to Psychology	3 / 6

Spring Semester		Credits / ECTS Credits
CTE 302	Internet Applications in Education	3 / 6
CTE 306	Human-Computer Interaction	3 / 4
CTE 310	Project Management and Development	3 / 4
CTE 314	Communications Skills	3 / 5
MBG 110	Introduction to Modern Biology	3 / 6
PSYC 240	Developmental Psychology	3 / 6

FOURTH YEAR

Autumn Semester		Credits / ECTS Credits
CTE 400	Summer Training	- / -
CTE 401	Multimedia Techniques	3 / 6
CTE 403	Research Methods in Education	3 / 6
CTE 405	Information Ethics and Security	3 / 6
CTE 409	Programming for Education	3 / 6
CTE 410	Community Service	2 / 2

Spring Semester		Credits / ECTS Credits
TE 501	Introduction to Teaching Profession	3 / 5
TE 502	Development and Learning	3 / 5
TE 506	Planning and Assessment in Teaching	4 / 6
TE 536	Computer Teaching Methods I	3 / 6
	Elective (1)	3 / 4

FIFTH YEAR

Autumn Semester		Credits / ECTS Credits
CTE 504	Material Design and Development	3 / 5
TE 503	Classroom Management	3 / 7
TE 546	Computer Teaching Methods II	3 / 6
TE 566	School Experience II in Computer Teaching	3 / 6
	Elective (1)	3 / 4

Spring Semester		Credits / ECTS Credits
CTE 502	Foundations of Distance Education	3 / 5
TE 505	Guidance	3 / 6
TE 576	Teaching Practice in Computer Teaching	5 / 10
	Elective (1)	3 / 4

FIVE-YEAR B.A. PROGRAM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
CTE 101	Introduction to Programming I	4 / 8
CTE 103	Information Technologies in Education I	3 / 5
CTE 105	Discrete Mathematics	3 / 5
ENG 101	English and Composition I	3 / 6
GE 100	Orientation	1 / 1
HISTR 201	History of Turkish Republic I	2 / 1
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
CTE 102	Introduction to Programming II	4 / 8
CTE 104	Information Technologies in Education II	3 / 6
ENG 102	English and Composition II	3 / 6
HISTR 202	History of Turkish Republic II	2 / 1
MATH 105	Introduction to Calculus I	4 / 7
TURK 102	Turkish II	2 / 1

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
CTE 201	Programming Languages I	4 / 8
CTE 203	Data Structures	4 / 6
CTE 205	Computer Organization	3 / 5
HCIV 101	History of Civilization I	3 / 6
PHYS 107	Basic Physics I	4 / 6

Spring Semester		Credits / ECTS Credits
CTE 202	Programming Languages II	4 / 8
CTE 208	System Analysis and Design	3 / 6
CTE 214	Operating Systems	3 / 6
PHYS 108	Basic Physics II	4 / 6
TE 304	Theory Of Knowledge	2 / 4

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
CTE 301	Programming for the Internet	3 / 6
CTE 304	Database Management Systems	4 / 8
CTE 307	Network Structures and Communication	3 / 6
PSYC 100	Introduction to Psychology	3 / 6
TE 301	Introduction to Educational Science	3 / 6

Spring Semester		Credits / ECTS Credits
CTE 302	Internet Applications in Education	3 / 6
CTE 306	Human-Computer Interaction	3 / 4
CTE 314	Communications Skills	3 / 5
MBG 110	Introduction to Modern Biology	3 / 6
TE 302	Developmental Psychology	3 / 6

FOURTH YEAR

Autumn Semester		Credits / ECTS Credits
CTE 400	Summer Training	- / -
CTE 401	Multimedia Techniques	3 / 6
CTE 403	Research Methods in Education	3 / 6
CTE 408	Project Development and Management	4 / 6
CTE 410	Community Service	2 / 2

TE 401	Turkish Educational System and School Management	2 / 4
TE 413	Learning Teaching: Theory and Approaches	3 / 6

Spring Semester Credits / ECTS Credits

CTE 404	Computer Education Research Project	3 / 4
TE 403	Curriculum and Instruction	3 / 6
TE 404	Classroom Management	2 / 4
TE 411	Computer Teaching Methods I	3 / 6
	Elective (1)	3 / 6

FIFTH YEAR

Autumn Semester Credits / ECTS Credits

CTE 504	Material Design and Development	3 / 5
TE 505	Guidance	3 / 6
TE 518	Measurement and Evaluation	2 / 4
TE 546	Computer Teaching Methods II	3 / 6
TE 566	School Experience II in Computer Teaching	3 / 6

Spring Semester Credits / ECTS Credits

CTE 502	Foundations of Distance Education	3 / 5
CTE 508	Information Ethics and Security	3 / 6
CTE 509	Subject Area Education Research Project	3 / 9
TE 576	Teaching Practice in Computer Teaching	5 / 10

FOUR-YEAR B.A. PROGRAM

FIRST YEAR

Autumn Semester Credits / ECTS Credits

CTE 100	Transferable Skills	2 / 2
CTE 111	Introduction to Programming I	5 / 10
CTE 113	Information Technologies in Education I	4 / 5
CTE 115	Discrete Mathematics	3 / 5
ENG 101	English and Composition I	3 / 6
GE 100	Orientation	1 / 1
TURK 101	Turkish I	2 / 1

Spring Semester Credits / ECTS Credits

CTE 112	Introduction to Programming II	5 / 8
CTE 114	Information Technologies in Education II	4 / 4
ENG 102	English and Composition II	3 / 6
MATH 105	Introduction to Calculus I	4 / 7
TE 116	Introduction to Education Science	3 / 4
TURK 102	Turkish II	2 / 1

SECOND YEAR

Autumn Semester Credits / ECTS Credits

CTE 205	Computer Organization	3 / 5
CTE 209	Communication Skills	3 / 4
CTE 211	Programming Languages I	5 / 7
HISTR 201	History of Turkish Republic I	2 / 1
PHYS 117	Basic Physics I	3 / 4
TE 203	Educational Psychology	3 / 4
TE 207	Introduction to Curriculum	3 / 4

Spring Semester Credits / ECTS Credits

CTE 212	Programming Languages II	4 / 6
CTE 216	Introduction to Web Technologies	3 / 5
CTE 218	Operating Systems	4 / 5
CTE 252	Instructional Design	3 / 4
HISTR 202	History of Turkish Republic II	2 / 1
PHYS 118	Basic Physics II	3 / 4
TE 204	Principles and Methods of Instruction	3 / 4

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
CTE 309	Community Service	2 / 2
CTE 311	Database Management Systems	4 / 5
CTE 317	Programming for the Internet I	3 / 5
CTE 321	Human Computer Interaction	3 / 5
CTE 351	Material Design and Development in Education	3 / 5
HCIV 101	History of Civilization I	3 / 6
TE 307	Measurement and Evaluation	3 / 5

Spring Semester		Credits / ECTS Credits
CTE 308	Information Ethics and Security	3 / 4
CTE 316	Network Structures and Communication	3 / 5
CTE 322	Multimedia Design and Development	3 / 5
TE 310	Computer Teaching Methods I	3 / 4
TE 312	School Experience I	3 / 5
TE 314	Classroom Management	2 / 4
TE 318	Turkish Education System and School Management	2 / 3

FOURTH YEAR

Autumn Semester		Credits / ECTS Credits
CTE 403	Research Methods in Education	3 / 6
CTE 417	Programming for the Internet II	3 / 6
CTE 421	Project Management and Development I	3 / 6
TE 405	Computer Teaching Methods II	3 / 6
TE 407	School Experience II	3 / 6

Spring Semester		Credits / ECTS Credits
CTE 422	Project Management and Development II	4 / 8
TE 402	Guidance	3 / 6
TE 406	Teaching Practice in Computer Teaching	5 / 8
	CTE Elective (1)	3 / 4
	Elective (1)	3 / 4

COURSE DESCRIPTIONS

UNDERGRADUATE COURSES

CTE 100 Transferable Skills
This course aims to provide the input and practice in transferrable skills such as learning skills, self-management, working collaboratively, problem solving, communication skills and information technology. The course aims to help students discover their personal strengths and weaknesses as well as guiding them to develop their life-long competencies. The course work consists of self-awareness activities and authentic tasks such as role-plays and case studies. *Credit units: 2 ECTS Credit Units: 2. Aut (C. Aydoğmuş, C. Kızılduman Yazıcı)*

CTE 101 Introduction to Programming I
An introduction to effective problem solving using the computer as a tool. Theoretical principles and phases of problem solving. Basic properties of algorithms. Top down design. Structured programming techniques will be introduced along with the usage of C language. Data representation. Simple arithmetic expressions. Decision and control statements. *Credit units: 4 ECTS Credit Units: 8. Aut (F. Yürüten)*

CTE 102 Introduction to Programming II
Basic programming structures. Software development methodologies. Modular programming: functions and parameters. Parameter passing. File usage. Basic data structures. Simple sort and search methods. *Credit units: 4 ECTS Credit Units: 8, Prerequisite: CTE 101. Aut (Staff)*

CTE 103 Information Technologies in Education I
An introduction to computers and computer applications. This course aims to familiarize the students with the basic terminology and skills needed to use a computer efficiently. Course topics include computer structure and terminology, the Internet, operating systems (Unix, DOS, and Windows). Applications covered include word processing, presentation, spreadsheet and databases applications. Students work with widely used application packages, MS Word, PowerPoint, Excel and Access. *Credit units: 3 ECTS Credit Units: 5. Aut (C. Aydoğmuş)*

CTE 104 Information Technologies in Education II
The aim of this course is to provide the students with skills necessary to construct well-designed web sites. The course provides an introduction to basic web design and implementation topics to create professional looking web pages. Topics include an introduction to HTTP and CGI web protocols, HTML, cascading style sheets, principles of web page design, JavaScript basics, and the implementation of web pages using web authoring tools. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CTE 103. Aut (S. Uğurlubilek)*

CTE 105 Discrete Mathematics
The aim of this course is to develop logical reasoning ability of students. Topics include: elements of logic, set theory and operations on sets; DeMorgan's rules, finite and infinite. Relations and functions. Logic circuits. Induction and recursion, pigeonhole principle. Permutations, combinations and probability of discrete events. Graphs and their representation in computing. *Credit units: 3 ECTS Credit Units: 5. Aut (H. Özmen)*

CTE 111 Introduction to Programming I
An introduction to programming using problem solving strategies. Theoretical principles and phases of problem solving. Basic properties of algorithms. Top down design. Structured programming techniques will be introduced using the C language. Topics include data representation, simple arithmetic expressions, basic problem solving concepts: selection and repetition, arrays, functions and modular programming, program testing and debugging. *Credit units: 5 ECTS Credit Units: 10.*

CTE 112 Introduction to Programming II
Introduction to data structures. Files: text and binary files. Strings and string manipulation. Structures: Structures as function parameters, pointers to structures, arrays of structures. Dynamic memory allocation. Linked lists. Stacks. Queues. Searching, sorting and merging. Recursion. *Credit units: 5 ECTS Credit Units: 8, Prerequisite: CTE 111.*

CTE 113 Information Technologies in Education I
An introduction to computers and computer applications. This course aims to familiarize the students with the basic terminology and skills needed to use a computer efficiently. Course topics include computer structure and terminology, the Internet, operating systems (Unix, DOS, and Windows). Applications covered include word processing, presentation, spreadsheet and databases applications. Students work with widely used application packages, MS Word, PowerPoint, Excel and Access. *Credit units: 4 ECTS Credit Units: 5.*

CTE 114 Information Technologies in Education II
This course is designed to introduce students to the fundamentals of the usage of the internet in education. Students will gain knowledge of the requirements of successful internet applications in different aspects of education, and become familiar with existing educational internet applications. The course includes an introduction to relevant educational topics. Following this, topics include internet applications used in education, such as course management systems, web quests, blogs and wikis. Students have the opportunity to apply the technologies in an educational context. *Credit units: 4 ECTS Credit Units: 4, Prerequisite: CTE 113.*

CTE 115 Discrete Mathematics
The aim of this course is to develop logical reasoning ability of students. Topics include: elements of logic, set theory and operations on sets; DeMorgan's rules, finite and infinite. Relations and functions. Logic circuits. Induction and recursion, pigeonhole principle. Permutations, combinations and probabilit of discrete events. Graphs and their representation in computing. *Credit units: 3 ECTS Credit Units: 5.*

CTE 191 Information and Communication Technology
This course aims to provide students with the ICT skills required for success in their academic and professional lives. The course covers basic concepts of information technology, Internet and web concepts, and the use of word processing, spreadsheet, and presentation software. At the end of the course, students should be able to effectively search for information using Internet, library and online database search tools, prepare professional and well formatted documents, prepare well-organized, professional presentations using presentation software, use spreadsheet tools to create charts and prepare spreadsheets that use basic formulas and functions. The course will include project-based assignments to give students hands on experience with various applications. *Credit units: 3 ECTS Credit Units: 6. Aut (M. Özsoy)*

CTE 201 Programming Languages I
This course is designed as a first introduction to object-oriented design and programming concepts. Object-oriented concepts are taught using the Java programming language. The course teaches the fundamental concepts of OOP, including classes and objects, encapsulation, inheritance, polymorphism, interfaces and abstract classes. Important Java packages, classes, file and database access and GUI design are also included. *Credit units: 4 ECTS Credit Units: 8, Prerequisite: CTE 102. Aut (L. Russell-Dağ)*

CTE 202 Programming Languages II
The concept of object-oriented and event-driven programming. Designing effective GUIs using Visual Basic. Database access, the use of object linking and embedding. *Credit units: 4 ECTS Credit Units: 8, Prerequisite: CTE 201. Aut (S. Koçberber)*

CTE 203 Data Structures
Introduction to data structures. Strings and string manipulation. Files: text and binary files. Structures: Structures as function parameters, pointers to structures, arrays of structures. Linked lists. Stacks. Queues. Dynamic memory allocation. Recursion. *Credit units: 4 ECTS Credit Units: 6, Prerequisite: CTE 102. Aut (Staff)*

CTE 205 Computer Organization
Introduction to digital computers. Logic gates. Boolean algebra. Number systems, complements, signed numbers. Von Neumann architecture. Bus structure and interconnection of components. Memory organization. CPU organization, ALU. Control Unit organization. Input/Output organization. *Credit units: 3 ECTS Credit Units: 5, Prerequisite: CTE 105. Aut (H. Özmen)*

CTE 208 System Analysis and Design
The course presents a comprehensive introduction to the systems design skills in information engineering that students, as future users or systems analysts, will need to work in a highly competitive computer-integrated business environment. It provides the students with the skills to identify business problems which may be solved by technology-based solutions, and determine requirements for information systems solutions. The course includes Systems Development Life Cycle (SDLC), Systems Analysis and Design Techniques (DFDs, Logical Modeling, E-R Diagrams, Object Oriented Modeling), review of Unified Modeling Language (UML), Project Management tools (CPM, GANTT, PERT) and evaluation of engineering standards such as MIL-STD-498, IEEE/EIA 12207 and ISO 9000-2000. *Credit units: 3 ECTS Credit Units: 6.*

CTE 209 Communication Skills
This course is designed to provide students with an understanding of the discipline of communication skills and to allow them to gain experience in interpersonal, small group and mass communication. After taking this course, students should be able to recognize and evaluate communication skills, improve discussions and writing skills, adapt communication skills to the demands of particular communication situations, learn how major elements of culture influence communication and develop an understanding of the intercultural communication process. *Credit units: 3 ECTS Credit Units: 4.*

CTE 211 Programming Languages I
This course is designed as a first introduction to object-oriented design and programming concepts. Object-oriented concepts are taught using the Java programming language. The course teaches the fundamental concepts of OOP, including classes and objects, encapsulation, inheritance, polymorphism, interfaces and abstract classes. Important Java packages, classes, file and database access and GUI design are also included. *Credit units: 5 ECTS Credit Units: 7, Prerequisite: CTE 112.*

CTE 212 Programming Languages II
The concept of object-oriented and event-driven programming. Designing effective GUIs using Visual Basic. Database access, the use of object linking and embedding.
Credit units: 4 ECTS Credit Units: 6, Prerequisite: CTE 201.

CTE 214 Operating Systems
The course is designed to provide the fundamentals of operating systems and an introduction to the internal operations of modern operating systems (OS). Topics include: history and basic OS concepts, process management, memory management, file systems, input/output management, operating system security and protection and support for distributed systems. Also covered is the UNIX environment and shell scripts. Lab sessions: Unix/Linux Administration. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CTE 205. Aut (M. S. Azgur)*

CTE 216 Introduction to Web Technologies
The aim of this course is to provide students with skills necessary to construct well-designed web sites. The course provides an introduction to basic web design and implementation topics to create professional looking web pages. Topics include an introduction to HTTP and CGI web protocols, HTML, XHTML, cascading style sheets, coding standards and techniques accepted by popular Web browser programs, template development, principles of web page design and the implementation of web pages using web authoring tools. *Credit units: 3 ECTS Credit Units: 5.*

CTE 218 Operating Systems
The course is designed to provide the fundamentals of operating systems and an introduction to the internal operations of modern operating systems (OS). Topics include: history and basic OS concepts, process management, memory management, file systems, input/output management, operating system security and protection and support for distributed systems. Also covered is the UNIX environment and shell scripts. Lab sessions: Unix/Linux Administration. *Credit units: 4 ECTS Credit Units: 5, Prerequisite: CTE 205.*

CTE 252 Instructional Design
Principles and models of instructional design. Issues, concepts, and philosophical considerations behind uses of technology in education, with particular emphasis on teacher training resources. Analysis of content, learner, and resources. Selecting instructional objectives and sequencing instruction. *Credit units: 3 ECTS Credit Units: 4.*

CTE 301 Programming for the Internet
Fundamentals of web-based computing, web clients and hyper text servers, the CGI standard and CGI programming techniques. DHTML, Javascripting techniques will be introduced for web based graphical user interface design. Techniques and tools for interfacing to popular RDBMS servers. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CTE 203. Aut (H. Özmen)*

CTE 302 Internet Applications in Education
This course is designed to introduce students to the fundamentals of the usage of the internet in education. Students will gain knowledge of the requirements of successful internet applications in different aspects of education, and become familiar with existing educational internet applications. The course includes an introduction to relevant educational topics. Following this, topics include internet applications used in education, such as course management systems, web quests, blogs and wikis. Students have the opportunity to apply the technologies in an educational context. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CTE 104.*

CTE 304 Database Management Systems
DBMS concepts, definitions, specifications and objectives. Topics include relational data model, SQL as a data manipulation language. Data base design considerations (ER Diagrams and normalization), concurrency control mechanisms, crash recovery concepts and an overview of current trends. Lab sessions include hands on experience using SQL, creating applications with a widely used database package. *Credit units: 4 ECTS Credit Units: 8. Aut (F. Yürüten)*

CTE 306 Human-Computer Interaction
This course focuses on human computer interaction (HCI) design processes and covers the underlying design principles, user interface design methodology, and the user-interface technologies used to implement HCI. The importance of good interfaces will be discussed and throughout the semester concepts and methods will be introduced. Students will complete small project to gain an understanding of HCI methods and concepts. *Credit units: 3 ECTS Credit Units: 4.*

CTE 307 Network Structures and Communication
The course aims to provide information about the fundamentals of data communications and contemporary computer network principles and applications. Topics include general information about networking terminology: ISO 7 layers, physical connections, switching and dedicated connection, packet switching vs. session switching, topologies, transmission protocols, routing, peer networks vs. client-server networks, services. Lab sessions: Unix/Linux networking. *Credit units: 3 ECTS Credit Units: 6. Aut (İ. Kalender)*

CTE 308 Information Ethics and Security
Introduction to ethics and security in computer science. Topics include historical milestones; information ethics: privacy and anonymity, computer crime and malware, professional responsibility, intellectual property. Legal and licensing issues, licensing models, usability and authentication, security auditing. *Credit units: 3 ECTS Credit Units: 4.*

CTE 309 Community Service
This course aims to expose students to volunteer services in order to increase their awareness of the importance of volunteer work, and to gain hands-on volunteer experience. As part of the course, students will be expected to research and assess the needs of the community and, in doing so, participate in projects to gather information, develop community contacts, view ideas from different perspectives, and formulate solutions. To fulfill course requirements, students will be expected to participate in at least one volunteer project in the community. In addition, students will be expected to attend conferences, seminars, panels, participate in organizing activities, and work as members of related students clubs. *Credit units: 2 ECTS Credit Units: 2.*

CTE 310 Project Management and Development
Specification, analysis, design, implementation, documentation and presentation of a medium-sized software system by small teams under close supervision of a faculty advisor for each team. Teams will develop a software system, utilizing tools and techniques taught in previous courses and new ones that they will independently choose and learn during project development. *Credit units: 3 ECTS Credit Units: 4, Prerequisite: CTE 202. Aut (T. Baycan, İ. Sözen)*

CTE 311 Database Management Systems
DBMS concepts, definitions, specifications and objectives. Topics include relational data model, SQL as a data manipulation language. Data base design considerations (ER Diagrams and normalization), concurrency control mechanisms, crash recovery concepts and an overview of current trends. Lab sessions include hands on experience using SQL, creating applications with a widely used database package. *Credit units: 4 ECTS Credit Units: 5, Prerequisite: CTE 214.*

CTE 312 International Term Project
The ability to work with colleagues from other cultures and to work on international projects are key assets in today's job market. The centerpiece of this course is a real-world computing project that students develop in cooperation with peers from an institution of higher education in a foreign country. Exposes students to the procedures and complexities of working on projects that span many time zones and cultures. Additionally, students examine the use and impact of computing in a global community. Student will work in teams, to analyze, design and develop a software solution for a selected non-governmental organization (NGO). Students from the partner institute will visit Bilkent with their supervisor twice during the semester for face to face meetings. *Credit units: 3 ECTS Credit Units: 5.*

CTE 314 Communications Skills
This course is designed to provide students with an understanding of the discipline of communication skills and to allow them to gain experience in interpersonal, small group and mass communication. After taking this course, students should be able to recognize and evaluate communication skills, improve discussions and writing skills, adapt communication skills to the demands of particular communication situations, learn how major elements of culture influence communication and develop an understanding of the intercultural communication process. *Credit units: 3 ECTS Credit Units: 5.*

CTE 316 Network Structures and Communication
The course aims to provide information about the fundamentals of data communications and contemporary computer network principles and applications. Topics include general information about networking terminology: ISO 7 layers, physical connections, switching and dedicated connection, packet switching vs. session switching, topologies, transmission protocols, routing, peer networks vs. client-server networks, services. Lab sessions: Unix/Linux networking. *Credit units: 3 ECTS Credit Units: 5, Prerequisite: CTE 214.*

CTE 317 Programming for the Internet I
The aim of this course is to provide students with a background in the fundamentals of web-based computing. The course focuses on creating interactive web pages through client-side scripting technologies. Includes a discussion of difference between client-side and server-side technologies. DHTML and Java-scripting techniques will be introduced for use in web based graphical user interface design. Also included are new technologies such as web services, AJAX, XML, XSLT, and RSS. *Credit units: 3 ECTS Credit Units: 5, Prerequisite: CTE 102 and CTE 212.*

CTE 321 Human Computer Interaction
This course focuses on human computer interaction (HCI) design processes and covers the underlying design principles, user interface design methodology, and the user-interface technologies used to implement HCI. The importance of good interfaces will be discussed and throughout the semester concepts and methods will be introduced. Students will complete small project to gain an understanding of HCI methods and concepts. *Credit units: 3 ECTS Credit Units: 5.*

CTE 322 Multimedia Design and Development
Basic principles of design and development of interactive instructional computer applications. Students will complete several projects utilizing a representative multimedia authoring tool and will create a prototype instructional software. Analysis of teaching-learning process using multi-media techniques in education. *Credit units: 3 ECTS Credit Units: 5.*

CTE 351 Material Design and Development in Education
Students will focus on using and integrating technology into teaching-learning processes: visual teaching aids, technology integration issues and interactive materials will be covered from an instructional point of view. The production of such materials and the evaluation of these materials when used in teaching are expected from the student teachers. *Credit units: 3 ECTS Credit Units: 5.*

CTE 400 Summer Training
This course aims to provide students with the opportunity to take part in a professional work environment. This experience will allow for students to obtain a general view of the work environment, and to apply the knowledge and experience gained during their courses to real life problems. As well, students will be exposed to educational topics in technology, both from the technology development and teaching perspective, and may participate in the development of educational tools. Upon completion of the training students will then be able to identify learning objectives in order enable them to effectively utilize their remaining education. This thirty day training period is undertaken during the summer break following the successful completion of the third year. *Credit units: None ECTS Credit Units: None. Aut (Staff)*

CTE 401 Multimedia Techniques
Basic principles of design and development of interactive instructional computer applications. Students will complete several projects utilizing a representative multimedia authoring tool and will create a prototype instructional software. Analysis of teaching-learning process using multi-media techniques in education. *Credit units: 3 ECTS Credit Units: 6. Aut (C. Kültür)*

CTE 403 Research Methods in Education
Basic concepts of probability, nature of statistical methods, elementary distribution and sampling theory, Estimation and testing hypothesis. Linear regression and analysis of variance. Use of various software systems for statistical analysis of data in education. *Credit units: 3 ECTS Credit Units: 6. Aut (C. Kızılduman Yazıcı)*

CTE 404 Computer Education Research Project
The course introduces the field of computer education research. Students will work on selected computer education or instructional technology related topics. Through the projects students will complete the stages: preparing a research project, sampling, data collection, data analysis, evaluation, reporting and presentation of the project. *Credit units: 3 ECTS Credit Units: 4, Prerequisite: CTE 403.*

CTE 405 Information Ethics and Security
Introduction to ethics and security in computer science. Topics include historical milestones; information ethics: privacy and anonymity, computer crime and malware, professional responsibility, intellectual property. Legal and licensing issues, licensing models, usability and authentication, security auditing. *Credit units: 3 ECTS Credit Units: 6. Aut (R. Ayfer)*

CTE 408 Project Development and Management
The course will begin by reviewing the basic concepts of project development and management. Other topics included are the need for and properties of projects, the process of project management, methods for budgeting and calculating the cost of the projects, and scheduling and tracking the process. Students will also learn the use of tools related to project management. *Credit units: 4 ECTS Credit Units: 6.*

CTE 409 Programming for Education
Program development for education environment using a visual programming language. Problem analysis and design. Development of effective user interfaces. Effective access methods to databases. Applications with event-driven visual programming languages. *Credit units: 3 ECTS Credit Units: 6. Aut (T. Baycan)*

CTE 410 Community Service
This course aims to expose students to volunteer services in order to increase their awareness of the importance of volunteer work, and to gain hands-on volunteer experience. As part of the course, students will be expected to research and assess the needs of the community and, in doing so, participate in projects to gather information, develop community contacts, view ideas from different perspectives, and formulate solutions. To fulfill course requirements, students will be expected to participate in at least one volunteer project in the community. In addition, students will be expected to attend conferences, seminars, panels, participate in organizing activities, and work as members of related students clubs. *Credit units: 2 ECTS Credit Units: 2. Aut (C. Aydoğmuş)*

CTE 417 Programming for the Internet II
The aim of this course is to provide students with an understanding of the fundamentals of web-based computing, web clients and hyper text servers, the CGI standard and CGI programming techniques. Through server-side scripting languages such as PHP students will develop web-applications using accepted techniques and tools and interfacing to popular RDBMS servers. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CTE 317.*

CTE 421 Project Management and Development I
The course presents a comprehensive introduction to the systems design skills in information engineering that students, as future users or systems analysts, will need to work in a highly competitive computer-integrated business environment. It provides the students with the skills to identify business problems which may be solved by technology-based solutions, and determine requirements for information systems solutions. The course includes Systems Development Life Cycle (SDLC), Systems Analysis and Design Techniques (DFDs, Logical Modeling, E-R Diagrams, Object Oriented Modeling), review of Unified Modeling Language (UML), Project Management tools (CPM, GANTT, PERT) and evaluation of engineering standards such as MIL-STD-498, IEEE/EIA 12207 and ISO 9000-2000. *Credit units: 3 ECTS Credit Units: 6.*

CTE 422 Project Management and Development II
Students will be working as small teams under close supervision of a faculty member to produce a software system for educational purposes, or develop an "instructional system design" as a solution to an education related problem. Knowledge, structures, principles and methods from computer and/or education related courses from previous semesters will be used during the specification, analysis, design, development implementation, and evaluation phases of the project. Students' projects will be reviewed by a faculty committee. *Credit units: 4 ECTS Credit Units: 8, Prerequisite: CTE 403 and CTE 421.*

GRADUATE COURSES

CTE 502 Foundations of Distance Education
Historical development of distance education, definition and function of distance education, technologies used within distance education: TV, VCR, radio, printed materials, computers, and the Internet. Techniques and methods used in planning, development, and implementation of distance education teaching systems. *Credit units: 3 ECTS Credit Units: 5. Aut (C. Kızılduman Yazıcı)*

CTE 504 Material Design and Development

Students will focus on using and integrating technology into teaching-learning processes: visual teaching aids, technology integration issues and interactive materials will be covered from an instructional point of view. The production of such materials and the evaluation of these materials when used in teaching are expected from the student teachers. *Credit units: 3 ECTS Credit Units: 5.*

CTE 508 Information Ethics and Security

Introduction to ethics and security in computer science. Topics include historical milestones; information ethics: privacy and anonymity, computer crime and malware, professional responsibility, intellectual property. Legal and licensing issues, licensing models, usability and authentication, security auditing. *Credit units: 3 ECTS Credit Units: 6.*

CTE 509 Subject Area Education Research Project

Students will be working as small teams under close supervision of a faculty member to produce a software system for educational purposes, or an “instructional system design”/“instructional design” (including instructional technology integration issues). Structures, operations, principles and methods from computer and/or education related courses from previous semesters will be used. Students’ projects will be reviewed by a faculty committee. *Credit units: 3 ECTS Credit Units: 9.*

DEPARTMENT OF ENGLISH TEACHER EDUCATION

M. K. Sands (Chair), N. Akşit, V. Kennedy, G. Kurtuluş, J. Malloy, D. B. Randall, S. Taşkın, E. T. G. Williams.

This is a five-year combined undergraduate and graduate program, which leads to a Masters diploma in teacher education. It is composed of two consecutive parts.

The first seven semesters contain the undergraduate program given by the Department of English Language and Literature. The program helps students to achieve a mature understanding of themselves and the world, through a comprehensive and in-depth survey of major authors, literary works and movements in literature in English. The literature curriculum comprises the analysis and discussion of literary terms and movements, periods of English and American literature, major dramatists, novelists, and poets. Other courses focus on English language, speaking and writing English. The curriculum also includes courses on philosophy and the history of civilization. The whole program emphasizes critical thinking, communication skills and intellectual growth. Students learn to read critically, write clearly, and reason soundly.

The masters-without-thesis program, which follows the undergraduate program, is taken in the Graduate School of Education. It gives not only a Masters diploma but also qualified teacher status. It is designed to prepare well-qualified teachers for high schools in Turkey. It develops the skills and expertise required from teachers in modern classrooms. Students spend one day a week in partner schools, gaining practical experience of up-to-date approaches to teaching, followed by a block practice in a third school. The practical approach to the development of professional teachers is fully supported by the teacher education courses which emphasize student participation in problem solving, case studies, and developmental work.

UNDERGRADUATE CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
ELIT 113	Reading Skills and Appreciation of Lit.Reading Skills	3 / 6
ELIT 115	Oral Expression Discussion and Presentation I	3 / 4
ENG 101	English and Composition I	3 / 6
ENG 117	Advanced English Grammar I	3 / 4
GE 100	Orientation	1 / 1
HCIV 101	History of Civilization I	3 / 6
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
CTE 103	Information Technologies in Education I	3 / 5
ELIT 114	Critical Reading	3 / 6
ELIT 126	Literature for Young Learners	3 / 5
ENG 102	English and Composition II	3 / 6
ENG 118	Advanced English Grammar II	3 / 4
HCIV 102	History of Civilization II	3 / 6
TURK 102	Turkish II	2 / 1

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
ELIT 211	Translation I	3 / 4
ELIT 215	Oral Expression and Public Speaking	3 / 4
ELIT 283	Short Story I	3 / 6
ENG 241	Sophomore Academic English I	3 / 5
ETE 201	Introduction to Linguistics I	3 / 4
HISTR 201	History of Turkish Republic I	2 / 1
PHIL 241	Social and Political Philosophy I	3 / 6

Spring Semester		Credits / ECTS Credits
ELIT 212	Translation II	3 / 4
ELIT 270	Poetry	3 / 6

ELIT 284	Short Story II	3 / 6
ENG 242	Sophomore Academic English II	3 / 5
ETE 202	Introduction to Linguistics II	3 / 4
HISTR 202	History of Turkish Republic II	2 / 1
PHIL 242	Social and Political Philosophy II	3 / 6

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
ELIT 242	Introduction to Drama	3 / 6
ELIT 357	Shakespeare	3 / 4
ELIT 361	Modern British Fiction I (to the 1950s)	3 / 7
ENG 301	Productive Skills in English	3 / 4
ETE 321	Creative Language Skills I	3 / 4
HUM 111	Cultures Civilizations and Ideas I	3 / 4

Spring Semester		Credits / ECTS Credits
AMER 383	American Novel to 1900	3 / 6
ELIT 308	Seminar and Discussion Skills	3 / 6
ELIT 342	Modern Drama	3 / 6
ELIT 362	Modern British Fiction II (1950s to present)	3 / 7
ETE 301	Language Acquisition	3 / 4
HUM 112	Cultures Civilizations and Ideas II	3 / 4

FOURTH YEAR

Autumn Semester		Credits / ECTS Credits
AMER 384	American Novel From 1900	3 / 6
AMER 418	Contemporary American Short Story	3 / 6
ELIT 411	History of English Language	3 / 5
ELIT 473	Modern Poetry	3 / 5
ENG 302	Productive Skills in English II	3 / 4
ETE 421	Creative Language Skills II	3 / 4
	Elective	3 / 6

Spring Semester		Credits / ECTS Credits
TE 501	Introduction to Teaching Profession	3 / 5
TE 502	Development and Learning	3 / 5
TE 506	Planning and Assessment in Teaching	4 / 6
TE 531	English Teaching Methods I	3 / 6

FIFTH YEAR

Autumn Semester		Credits / ECTS Credits
TE 503	Classroom Management	3 / 7
TE 504	Educational Technology and Materials Development	3 / 8
TE 523	Teaching Theory of Knowledge	3 / 6
TE 541	English Teaching Methods II	3 / 6
TE 561	School Experience II in English	3 / 7
	Elective	3 / 6

Spring Semester		Credits / ECTS Credits
ETE 502	Current Trends in English Language Teaching	3 / 6
TE 505	Guidance	3 / 6
TE 507	Subject Area Textbook Review	3 / 6
TE 571	Teaching Practice in English	5 / 8
	Elective	3 / 6

UNDERGRADUATE ELECTIVES

AMER 343	American Theater	3 / 6
AMER 374	American Poetry	3 / 6
AMER 418	Contemporary American Short Story	3 / 6
ELIT 130	Selections from English Literature (to the Restoration)	3 / 5

ELIT 261	The English Novel I (18th Century)	3 / 6
ELIT 262	The English Novel (19th Century)	3 / 6
ELIT 355	Major Writers of the Renaissance	3 / 6
ELIT 441	British Drama I (from the Restoration to the 1950s)	3 / 6
ELIT 442	British Drama II (from the 1950s to present)	3 / 6
ELIT 474	20th Century Poetry	3 / 6
TE 551	School Experience I in English	3 / 6

GRADUATE ELECTIVES

EDEB 506	Literature of the Republic	3 / -
EDEB 524	The Turkish Novel	3 / 6
EDEB 530	Literary Translation	3 / 6
TEFL 501	Second Language Acquisition	3 / 6
TEFL 506	Sociolinguistics	3 / 6
TEFL 510	Language Testing	3 / 6

COURSE DESCRIPTIONS*

UNDERGRADUATE COURSES

ETE 101 Academic Skills in English I
This course prepares students for academic study with a focus on critical thinking, reading, speaking and writing in an integrated manner. They are required to read interdisciplinary texts and write essays following appropriate academic and language conventions. *Credit units: None ECTS Credit Units: 10.*

ETE 102 Academic Skills in English II
This course aims to consolidate language and skills introduced in ETE 101. In addition, the course intends develop students' ability to conduct basic, independent research. *Credit units: None ECTS Credit Units: 10.*

ETE 201 Introduction to Linguistics I
The course provides a foundation in linguistics. It emphasises basic terminology and concepts. The main topics include phonetics and phonology, morphology, syntax, semantics, and pragmatics. Students will be asked to consider the relevance of these areas as applied to second language acquisition and foreign language teaching, especially to the teaching of English in Turkey. *Credit units: 3 ECTS Credit Units: 4.*

ETE 211 Language Acquisition
The course considers, with practical applications, the theories of second language acquisition. There will be analysis and discussion of the research into second language, and application to learning activities and procedures. *Credit units: 3 ECTS Credit Units: 6.*

ETE 301 Language Acquisition
The course considers, with practical applications, the theories of second language acquisition. There will be analysis and discussion of the research into second language acquisition, and application to learning activities and procedures. *Credit units: 3 ECTS Credit Units: 4.*

ETE 302 Introduction to Linguistics II
The course continues the study of phonetics and phonology, morphology, syntax, semantics, and pragmatics begun in Introduction to Linguistics, I, with further applications to second language acquisition and foreign language teaching. *Credit units: 3 ECTS Credit Units: 6.*

ETE 311 English Support I
The course aims to improve students' receptive and productive language skills. It particularly focuses on he development of oral and written communication. The course also places emphasis on accurate and fluent use of English in academic and professional contexts. *Credit units: 4 ECTS Credit Units: 4.*

ETE 321 Creative Language Skills I
The course concentrates on the development of oral and written English. Students will be involved in reading and presenting drama, and reflection on and analyzing characterization, plot and themes. they will also engage in oral activities which necessitate the development of an argument and its presentation to others as, for example, in debates. In the second half of the course, they will, in groups, make their own movie clips or write their own plays and perform them. *Credit units: 3 ECTS Credit Units: 4. Aut (J. Malloy)*

* For description of ELIT courses see the Catalog Section for the Department of English Language and Literature

ETE 401 Language Syllabus Development

This course aims to equip students with the knowledge and skills needed to develop and evaluate a language syllabus. The students will be engaged in needs assessment, writing objectives, and selection, organisation and preparation of learning experiences. *Credit units: 3 ECTS Credit Units: 6.*

ETE 421 Creative Language Skills II

The course focuses on the development of oral and written English. Students will be involved in reading and presenting drama, comparing the dramatisation of the play on film, reflecting on and analyzing characterization, plot and themes. They will also engage in oral activities which develop debating skills. In the second half of the course, students will in groups write their own plays with a view to performing and filming them. Throughout the course students will consider the application of their studies to the high school context. *Credit units: 3 ECTS Credit Units: 4.*

GRADUATE COURSES

ETE 501 Development of Instructional Materials

The course gives an overview of the principles of analysing, adapting, developing and evaluating materials for varied instructional purposes. It also provides many hands-on opportunities for designing materials for secondary and grades 6-8 school students. Participants will be expected to try their materials produced for English language and literature teaching during their Teaching Practice course in schools, and to evaluate and improve them. *Credit units: 3 ECTS Credit Units: 6.*

ETE 502 Current Trends in English Language Teaching

This course examines current trends in English language teaching. Trends will be discussed and evaluated with regards to their appropriateness, timeliness and impact. Students will research and read from a variety of current ELT journals, and will be able to critically evaluate trends in their own teaching context. Topics include; talk for learning, English as an international language, discourse and power, the common European framework post-method period, teacher development, lexical approaches, task-based learning. *Credit units: 3 ECTS Credit Units: 6.*

MA PROGRAM IN CURRICULUM AND INSTRUCTION

N. Akşit (Head), C. Alacacı, G. Crippin, E. T. G. Williams.

The program is designed for school teachers with at least two years teaching experience. They may be in positions of middle management, or intending shortly to move to such positions, and thus become educational leaders. It will enable participants to develop the knowledge and skills to improve their own practice and assist in the professional development of colleagues within their area. Those seeking positions of responsibility in a school will be able to offer an extended informed theoretical and practical background of relevance to their duties in such positions.

CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
CI 501	Learning Development and Cultural Context for Teaching	3 / 6
CI 502	Managing the Classroom	3 / 6
Spring Semester		Credits / ECTS Credits
CI 503	Educational Leadership and School Development	3 / 6
CI 504	Contemporary Issues in Curriculum Development and Evaluation	3 / 6

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
CI 505	Supervision and Mentoring	3 / 6
CI 509	Thesis Seminar I	- / -
TEFL 555	Written Academic Discourse	3 / 6
Spring Semester		Credits / ECTS Credits
CI 507	Educational Research	3 / 6
CI 508	Assessing Student Learning and Progress	3 / 6
CI 510	Thesis Seminar II	- / -

COURSE DESCRIPTIONS

CI 401 Basic Quantitative Concepts and Modeling
Set theory, metric spaces, limits, continuity, functions, derivatives, integral, matrices and basic linear algebraic concepts, mathematical modeling. *Credit units: 3 ECTS Credit Units: 6. Aut (C. Alacacı)*

CI 402 Probability Theory
Descriptive statistics. Basic concepts of probability. Combinatorics (methods of counting). Conditional probability. Random variables, univariate and bivariate distributions. Expected value, variance, covariance and correlation. Discrete and continuous probability distributions, law of large numbers, central limit theorem. *Credit units: 3 ECTS Credit Units: 6.*

CI 403 Statistics
Sampling and sampling distribution. Induction. Point and interval estimation. Hypothesis testing. t, chi-square, F distributions. Introduction to variance analysis. Regression. Non-parametric methods. Statistical software applications. *Credit units: 3 ECTS Credit Units: 6.*

CI 501 Learning Development and Cultural Context for Teaching
The course will focus on the holistic development of school students in their current cultural context. Topics for study include the development of cognitive abilities, critical, creative, and imaginative thinking, Gardner's multiple intelligences, and cognitive and affective taxonomies. The sociology of educability will be considered: the effect of the family and home environment on a child's development and ability to learn and achieve, as well as the impact of other social factors on development. *Credit units: 3 ECTS Credit Units: 6. Aut (E. T. G. Williams)*

CI 502 Managing the Classroom
The course will give a general overview of the social and psychological factors which determine or affect student behavior in educational settings. It includes systems for classroom management to maximize student learning outcomes, and techniques for meeting the varied needs of learners in a classroom, with a view to increasing

motivation, managing groups, orienting students, and allowing the quality use of time in the classroom. *Credit units: 3 ECTS Credit Units: 6. Aut (G. Crippin)*

CI 503 Educational Leadership and School Development

This course provides candidates with insights into managing the school as an organization and looks at defining goals and objectives for the school as well as how to carry out strategic and operational planning. The course will explore ways of creating an effective learning and teaching environment from an administrative perspective. Emphasis will be given to the process of introducing successful innovation within schools and to improving the processes of decision making and communication. *Credit units: 3 ECTS Credit Units: 6.*

CI 504 Contemporary Issues in Curriculum Development and Evaluation

The course will examine curriculum theory for elementary and high school courses of study. It will consider current trends and issues in curriculum development, the determinants of the curriculum, and conditions for curriculum change. The evaluation of the implementation of new curricula will be included. The role of the teacher, the school, other members of the school community, and the values and attitudes of society, in curriculum implementation will be studied. *Credit units: 3 ECTS Credit Units: 6.*

CI 505 Supervision and Mentoring

The course gives an in-depth introduction to the principles and techniques of clinical supervision, giving a counseling-based approach to help teachers improve and grow in self confidence. Students will critique the performances of videoed classroom teachers and later will work with a small number of school teachers, in clinical settings in schools, on improving instructional delivery. It is particularly relevant in assisting those who will act as mentors for pre-service student-teachers, those who work with newly-qualified teachers in a supportive peer relationship, or who are involved in appraisal. *Credit units: 3 ECTS Credit Units: 6.*

CI 506 IB and IGCSE Curricula

International education programs. The nature of the International Baccalaureate Diploma Program. Students requirements for obtaining the IB Diploma. Planning IB Diploma courses. teaching IB Diploma courses. The nature of the International General Certificate of Secondary Education. Student requirements for obtaining IGCSE certificates. Planning IGCSE courses. teaching IGCSE courses. critical thinking and Theory of Knowledge. Community Service. School structure and authorization for offering IB and IGCSE programs. *Credit units: 3 ECTS Credit Units: 6.*

CI 507 Educational Research

The course is designed to introduce key concepts in quantitative and qualitative research in general. It will explore the different research methods used in educational research. Topics will include formulating research questions, reviewing the literature, synthezising sources, selecting appropriate research designs, sampling, designing valid and reliable instruments for data gathering, and analyzing data. Action research as a qualitative approach to research will be given particular emphasis. *Credit units: 3 ECTS Credit Units: 6. Aut (N. Akşit)*

CI 508 Assessing Student Learning and Progress

The course will focus on formative and summative evaluation at elementary and high school levels. It will review fundamental concepts, principles and uses of testing and evaluation for monitoring the progress and achievement of school students of all ages. Participants will gain experience of devising effective means of formative assessment and recording progress, and in writing specific learning outcomes. They will compose tests, writing items to measure objective and complex outcomes, and analyzing items and examinations to guide student learning and to inform practice. *Credit units: 3 ECTS Credit Units: 6.*

CI 509 Thesis Seminar I

The first seminar of the two thesis seminars is intended to guide the Masters students in their thesis work. Research methods, literature reviews, elaboration of topics, organization of material in relation to each student's research will be discussed, leading to a thorough consideration of, and guidance in, the preparation of the thesis. Students will make presentations of their research to date in order to share their progress and learn from each other. *Credit units: None ECTS Credit Units: None. Aut (E. T. G. Williams)*

CI 510 Thesis Seminar II

The second seminar of the two thesis seminars is intended to guide the Masters students in their thesis work. Research methods, literature reviews, elaboration of topics, organization of material in relation to each student's research will be discussed, leading to a thorough consideration of, and guidance in, the preparation of the thesis. Students will make presentations of their research to date in order to share their progress and learn from each other. *Credit units: None ECTS Credit Units: None.*

MA PROGRAM IN EDUCATION MANAGEMENT

S. Phipps (Head), F. T. Akşit, B. Clark, H. I. Işık-Mengü, J. O'Dwyer, E. Uzel Şen.

The M.A. in Education Management is offered as a part-time program consisting of three modules: managing the organization; managing the curriculum; and managing teaching.

Program Goals

The program is designed for administrators currently working in positions of responsibility in educational institutions and for practising teachers considering such positions. It will enable participants to develop the knowledge and skills to play a key role in school management, curriculum management and staff development, as well as to develop effective teaching skills to a high level. The program aims:

- to give participants the necessary knowledge, skills, and practice to meet the needs of educational institutions and students in the university, secondary and primary education sectors in Turkey;
- to allow participants to make an effective and contemporary contribution to quality education within the institutions in which they work;
- to permit participants to continue working in their institutions and obtain a higher degree through extended, modular study.

In the longer term the program aims to exchange students and teachers with European universities as part of a linked network in the Socrates-Erasmus European program.

CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
EM 511	Introduction to Development and Learning	3 / 6
EM 527	Linguistics and Lexical Studies	3 / 6
Spring Semester		Credits / ECTS Credits
EM 522	Managing Learning Methods I	3 / 6
EM 524	Developing Practice I	3 / 6

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
EM 512	Managing the Curriculum I	3 / 6
EM 523	Managing Learning Methods II	3 / 6
EM 526	Classroom Management in Action	4 / 7
Spring Semester		Credits / ECTS Credits
EM 521	Managing the Classroom	3 / 6
EM 525	Developing Practice II	3 / 6

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
EM 501	Managing Organizational Processes	3 / 6
EM 502	Human Resources Management	3 / 6
EM 513	Managing the Curriculum II	3 / 6
	Restricted Elective (1)	3 / 6
Spring Semester		Credits / ECTS Credits
EM 503	Accounting, Financial Management and School Administration	3 / 6
EM 504	Computing for Organizational Needs	2 / 4
EM 531	Masters Project	- / 24

ELECTIVES

EM 505	Management in Action	3 / 6
EM 506	Research Methods in Education	3 / 6
EM 514	Materials Development for Language Teaching	3 / 6

COURSE DESCRIPTIONS

EM 501 Managing Organizational Processes
This course provides candidates with insights into managing the school as an organization and looks at defining goals and objectives for the school as well as how to carry out strategic and operational planning. The course will explore ways of creating an effective learning and teaching environment from an administrative perspective. Emphasis will be given to the process of introducing successful innovation within schools and improving the processes of decision making and communication. *Credit units: 3 ECTS Credit Units: 6. Aut (S. Phipps)*

EM 502 Human Resources Management
This course looks at theories of effective organizations, particularly schools, and relates these to effective human resource management. Areas for study will include leadership, motivation, training and development, team work, as well as the issues of accountability, job planning and description, appraisal systems, recruitment and induction. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

EM 503 Accounting, Financial Management and School Administration
This course looks at financial resource management, accounting principles, budget planning and monitoring and putting these into practice. In addition, the marketing of the school with parents, and other stakeholders, project management, management evaluation, as well as practical skills to do with meetings, time management, and presentations will be covered. *Credit units: 3 ECTS Credit Units: 6.*

EM 504 Computing for Organizational Needs
This course aims to give students the necessary skills in word processing, spreadsheets and data base management for educational purposes. The main thread will be to ensure that these skills are applicable to school contexts with a view to allowing computing to play a key role in creating more effective and efficient managers and institutions. *Credit units: 2 ECTS Credit Units: 4.*

EM 505 Management in Action
The course provides students with practical experience of management skills such as chairing and participating in meetings, time management and preparing and giving presentations. Students will be observed by the visiting tutor in meetings and giving presentations. *Credit units: 3 ECTS Credit Units: 6.*

EM 506 Research Methods in Education
This course introduces basic concepts in educational research; scientific and interpretive paradigms in educational research and of their characteristics; the key components in research design and of the relationships among these; devising effective research questions; the purposes of a literature review; different approaches to educational research; procedures for conducting ethical research; the role of sampling in educational research; procedures for collecting data; analysing quantitative and qualitative data; strategies for enhancing the quality of educational research; strategies for effectively disseminating research findings. *Credit units: 3 ECTS Credit Units: 6. Aut (J. L. Mitton)*

EM 511 Introduction to Development and Learning
This course will explore the physical and psychological development of the individual with respect to contemporary theories of learning. This will include consideration of individual learning styles, the growth of cognition, personal traits and the role of affective factors in learning. The implications of these factors for the classroom, and approaches to teaching and learning in general, will be brought to the fore and reflected upon. *Credit units: 3 ECTS Credit Units: 6. Aut (F. T. Akşit)*

EM 512 Managing the Curriculum I
This course will cover concepts, processes and principles of curriculum planning, development and evaluation and is intended to help the student develop the performance competencies needed to engage in curriculum planning and decision-making as an administrator, curriculum specialist or supervisor. *Credit units: 3 ECTS Credit Units: 6.*

EM 513 Managing the Curriculum II
A basic introduction to the field of testing and evaluation. The course covers principles, concepts and processes behind evaluation and test construction and is intended to help develop the performance competencies needed to engage in decision-making for school improvement. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ME 512. Aut (S. Phipps)*

EM 514 Materials Development for Language Teaching
This course provides an in-depth look at theories of evaluation, adaptation and development of materials for language learning. It enables participants to develop their own approaches to the development of principles and procedures for the evaluation, adaptation and development of materials for language learning. It also provides the opportunity for participants to develop effective skills in the application of their principles and procedures for the evaluation, adaptation and development of materials for language learning. *Credit units: 3 ECTS Credit Units: 6.*

EM 521 Managing the Classroom
A general overview of the social and psychological factors which determine or affect student behavior in educational settings. Systems for classroom management to maximise student learning outcomes and techniques for meeting the varied needs of learners in any particular classroom with a view to increasing learning success will be explored. Themes will include increasing motivation, managing groups, orienting students, and the quality use of time in the classroom. *Credit units: 3 ECTS Credit Units: 6.*

EM 522 Managing Learning Methods I
This course explores teaching methods and strategies, with particular relevance for ESL/EFL, and their application to a range of teaching and learning contexts. This will include the evaluation of books which illustrate these methods and their suitability for chosen contexts. Practical application of the methods will be experienced through micro-teaching, simulation and observation. Emphasis will be given to the systematic evaluation of teaching and learning. *Credit units: 3 ECTS Credit Units: 6.*

EM 523 Managing Learning Methods II
This course further explores teaching methods and strategies not covered in Methods I. Again a range of pedagogical materials will be evaluated, which illustrate methods and their suitability for chosen contexts. Application of the methods will be systematically evaluated by course members in practical sessions based on peer observation, micro-teaching and visits to classrooms in a variety of educational institutions. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ME 522. Aut (E. Uzel Şen)*

EM 524 Developing Practice I
This course aims to introduce candidates to school organization and administration, the daily activities of a school, teachers and students, school-parent contacts, meetings, the observation of classes, specific school-related problems, teaching aids, and print resources. The course requires candidates to be attached to experienced teachers/administrators in selected educational establishments. *Credit units: 3 ECTS Credit Units: 6.*

EM 525 Developing Practice II
This course builds on insights gained in Practice I and prepares candidates for the Classroom Management in Action course by introducing them to a systematic program of observation and application related to classroom organization, using available course-books, materials preparation and use, and micro-teaching in the classroom. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ME 524.*

EM 526 Classroom Management in Action
This course requires candidates to teach one full day, or two half days per week, for a minimum of 12 weeks in a selected school, and to take part in post-conference meetings with their tutor to evaluate the lessons taught and share teaching experiences. Taught lessons will be observed by the visiting tutor. *Credit units: 4 ECTS Credit Units: 7. Aut (B. Clark)*

EM 531 Masters Project
This project enables candidates to carry out research into an area of their choosing in consultation with the tutor related to one or more of the areas covered during the MA programme. Candidates are expected to carry out research into an area of their choosing in consultation with the tutor related to one or more of the areas covered during the MA programme. Candidates are expected to review the literature related to their chosen topic, to collect and analyse data, and to write up their findings and conclusions. *Credit units: None ECTS Credit Units: 24.*

MA PROGRAM IN TEACHER EDUCATION

M. K. Sands (Director), N. Akşit, C. Alacacı, A. Ateşkan, G. Crippin, C. Crippin, J. Malloy, R. Martin, G. McDonald, R. Özyürek, E. T. G. Williams.

Part-time: Ö. Bayam, E. Biçer, S. Coşkun, A. İ. İşeri.

The M.A. in Teacher Education is a masters-without-thesis program in five subject areas, biology, English, history, mathematics, and Turkish language and literature. The program, which also gives qualified teacher status, is designed to prepare well-qualified teachers for high schools in Turkey, with the potential to make effective contributions to the teaching profession.

The main aim of the program is to develop the skills and expertise required from teachers in the modern classroom. Students spend one or more days a week in partner schools, gaining practical experience of up-to-date approaches to teaching, extended by a block period in a further school.

The practical approach to the development of professional teachers is fully supported by the teacher education courses which emphasize student participation in problem solving, case studies, and developmental work. To broaden subject knowledge of intending teachers, and thus equip them for their future role in a dynamic education system, subject courses related to their main area are included. A particular aspect of the program is the international approach to teacher education, especially the inclusion of a period in US schools in the second year, working alongside American teachers in their classrooms. The US visit is made possible by the generous support of the US Department of State.

Master of Arts in Teacher Education

CURRICULUM

ENGLISH TEACHING

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
ELIT 126	Literature for Young Learners	3 / 5
TE 502	Development and Learning	3 / 5
TE 503	Classroom Management	3 / 7
TE 541	English Teaching Methods II	3 / 6
TE 561	School Experience II in English	3 / 7

Spring Semester		Credits / ECTS Credits
TE 504	Educational Technology and Materials Development	3 / 8
TE 505	Guidance	3 / 6

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
TE 506	Planning and Assessment in Teaching	4 / 6
TE 507	Subject Area Textbook Review	3 / 6
TE 571	Teaching Practice in English	5 / 8

Spring Semester		Credits / ECTS Credits
ENG 404	English for Philosophy of Education	3 / -
TE 521	History of Political and Educational Philosophy	3 / 6

BIOLOGY TEACHING

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
BTE 501	Biology Curriculum Review I	4 / 8
MBG 452	Practical Biology	3 / 6

TE 509	Developmental Psychology	2 / 4
TE 510	Curriculum and Instruction	2 / 4
TE 528	Introduction to Educational Science	2 / 5
TE 532	Biology Teaching Methods I	3 / 6
TE 552	School Experience I in Biology	3 / 6

Spring Semester		Credits / ECTS Credits
BTE 502	Biology Curriculum Review II	4 / 8
TE 519	Classroom Management	2 / 4
TE 520	Instructional Technology and Material Design	3 / 6
TE 523	Teaching Theory of Knowledge	3 / 6
TE 524	Guidance	2 / 6
TE 542	Biology Teaching Methods II	3 / 6
TE 562	School Experience II in Biology	3 / 7

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
TE 518	Measurement and Evaluation	2 / 4
TE 525	Learning and Teaching: Theory and Approach	2 / 4
TE 572	Teaching Practice in Biology	5 / 8

Spring Semester		Credits / ECTS Credits
ENG 404	English for Philosophy of Education	3 / -
TE 521	History of Political and Educational Philosophy	3 / 6
TE 526	Subject Area Research Project	3 / 7

TURKISH LANGUAGE AND LITERATURE TEACHING

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
TE 509	Developmental Psychology	2 / 4
TE 510	Curriculum and Instruction	2 / 4
TE 528	Introduction to Educational Science	2 / 5
TE 529	Turkish Language and Literature Curriculum Review	3 / 8
TE 533	Turkish Language Teaching Methods	3 / 6
TE 553	School Experience I in Turkish Lang and Lit	3 / 6

Spring Semester		Credits / ECTS Credits
TE 519	Classroom Management	2 / 4
TE 520	Instructional Technology and Material Design	3 / 6
TE 523	Teaching Theory of Knowledge	3 / 6
TE 524	Guidance	2 / 6
TE 530	Turkish Language and Literature Curriculum Review II	3 / 8
TE 543	Turkish Literature Teaching Methods	3 / 6
TE 563	School Experience II in Turkish Lang and Lit	3 / 7

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
TE 518	Measurement and Evaluation	2 / 4
TE 525	Learning and Teaching: Theory and Approach	2 / 4
TE 573	Teaching Practice in Turkish Lang and Lit	5 / 8

Spring Semester		Credits / ECTS Credits
ENG 404	English for Philosophy of Education	3 / -
TE 521	History of Political and Educational Philosophy	3 / 6
TE 526	Subject Area Research Project	3 / 7

HISTORY TEACHING

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
IR 205	Diplomatic History I	3 / 6
IR 439	Turkish Foreign Policy I	3 / 6
TE 509	Developmental Psychology	2 / 4
TE 510	Curriculum and Instruction	2 / 4
TE 528	Introduction to Educational Science	2 / 5
TE 534	History Teaching Methods I	3 / 6
TE 554	School Experience I in History	3 / 6

Spring Semester		Credits / ECTS Credits
IR 440	Turkish Foreign Policy II	3 / 6
TE 519	Classroom Management	2 / 4
TE 520	Instructional Technology and Material Design	3 / 6
TE 523	Teaching Theory of Knowledge	3 / 6
TE 524	Guidance	2 / 6
TE 544	History Teaching Methods II	3 / 6
TE 564	School Experience II in History	3 / 7

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
TE 518	Measurement and Evaluation	2 / 4
TE 525	Learning and Teaching: Theory and Approach	2 / 4
TE 574	Teaching Practice in History	5 / 8

Spring Semester		Credits / ECTS Credits
ENG 404	English for Philosophy of Education	3 / -
TE 521	History of Political and Educational Philosophy	3 / 6
TE 526	Subject Area Research Project	3 / 7

MATHEMATICS TEACHING

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
MTE 501	Mathematics Curriculum Review I	3 / 8
MTE 503	Computer Technology in Mathematics Education	3 / 6
TE 509	Developmental Psychology	2 / 4
TE 510	Curriculum and Instruction	2 / 4
TE 528	Introduction to Educational Science	2 / 5
TE 535	Mathematics Teaching Methods I	3 / 6
TE 555	School Experience I in Mathematics	3 / 6

Spring Semester		Credits / ECTS Credits
MTE 502	Mathematics Curriculum Review II	3 / 8
TE 519	Classroom Management	2 / 4
TE 520	Instructional Technology and Material Design	3 / 6
TE 523	Teaching Theory of Knowledge	3 / 6
TE 524	Guidance	2 / 6
TE 545	Mathematics Teaching Methods II	3 / 6
TE 565	School Experience II in Mathematics	3 / 7

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
TE 518	Measurement and Evaluation	2 / 4
TE 525	Learning and Teaching: Theory and Approach	2 / 4
TE 575	Teaching Practice in Mathematics	5 / 8

Spring Semester		Credits / ECTS Credits
ENG 404	English for Philosophy of Education	3 / -
TE 521	History of Political and Educational Philosophy	3 / 6
TE 526	Subject Area Research Project	3 / 7

COURSE DESCRIPTIONS

UNDERGRADUATE COURSES

TE 116 Introduction to Education Science
Basic concepts in education. Relationship of education to other disciplines (the philosophical, social, legal, psychological, economic and political foundations of education). History of educational science. Major trends in educational science in the 21st century; Research methods in educational science. Structure and characteristics of the Turkish Education System. Role of teachers in education. Characteristics of the teaching profession. Developments and practices in teacher education. *Credit units: 3 ECTS Credit Units: 4.*

GRADUATE COURSES

TE 501 Introduction to Teaching Profession
Characteristics and principles of the teaching profession. The school as an organization. Management, leadership and decision-making in schools. School effectiveness and school improvement. Sociological, psychological and philosophical foundations of educational practice. Classroom and school environments. The curriculum. Learning theories. Domains of learning. The Turkish educational system, its history and current policies. *Credit units: 3 ECTS Credit Units: 5. Aut (C. Crippin)*

TE 502 Development and Learning
Physical, cognitive, psychological and social development of the individual. Learning theories and development. Application of learning theories to educational issues. Analysis of educational research with reference to the classroom and teaching/learning activities, the design of effective instruction. *Credit units: 3 ECTS Credit Units: 5. Aut (R. Martin)*

TE 503 Classroom Management
Classroom organization for effective learning. Development and implementation of effective systems for classroom management to maximize learning. Social and psychological factors which determine or affect students' attitudes, motivation and behavior in schools. Group interactions. Behavioral problems. Techniques for meeting the needs of individual learners. The analysis of events and critical incidents in the classroom. *Credit units: 3 ECTS Credit Units: 7. Aut (G. Crippin)*

TE 504 Educational Technology and Materials Development
The use of technology in teaching: computers, visual teaching aids, and all other interactive materials. The production of such materials by student teachers, and the evaluation of these materials when used in teaching. *Credit units: 3 ECTS Credit Units: 8. Aut (C. Crippin, G. B. Çalıkoğlu)*

TE 505 Guidance
General principles of guidance and counseling in schools. Nature and objectives of guidance services, and their role in education. Procedures to be observed. Special education: the special needs of individual school students, their assessment, and the education of students with such needs. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

TE 506 Planning and Assessment in Teaching
Concepts, processes and principles of curriculum planning and program development. Production of annual, unit and daily plans. Teaching methods and strategies, and the selection of appropriate teaching materials. Introduction to the field of assessment and testing, theoretical background, and practice in test and item construction. Functions and uses of assessment. *Credit units: 4 ECTS Credit Units: 6. Aut (G. B. Çalıkoğlu)*

TE 507 Subject Area Textbook Review
Review of Ministry of Education-approved textbooks. Book review in terms of the school curriculum, sequencing, ease of use by students, readability and other criteria. Contribution to the development of student understanding and skills. *Credit units: 3 ECTS Credit Units: 6.*

TE 508 Introduction to Educational Science
Basic concepts in education. Relationship of education to other disciplines (the philosophical, social, legal, psychological, economic and political foundations of education). History of educational science. Major trends in educational science in the 21st century; Research methods in educational science. Structure and characteristics of the Turkish Education System. Role of teachers in education. Characteristics of the teaching profession. Developments and practices in teacher education. *Credit units: 3 ECTS Credit Units: 6.*

TE 509 Developmental Psychology
Basic concepts and principles of development. Theories of development. Stages of development. Physical, cognitive, personal and moral development during childhood and adolescence. Problems during puberty and coping strategies. *Credit units: 2 ECTS Credit Units: 4. Aut (R. Martin)*

TE 510 Curriculum and Instruction
Basic concepts. Theoretical foundations of curriculum development in education (historical, philosophical, psychological and social foundations). Curriculum design in education and models. The process of curriculum development (planning, preparing a proposal, piloting and evaluating, ensuring continuity) Instructional principles. Importance and benefits of studying regularly and methodically. Planning instruction (unit by unit yearly plans, sample daily plans and activities). Instructional methods and techniques, and their delivery. New trends in education and instruction (for example, effective learning, multiple intelligences, constructivism, lifelong learning, creative thinking). Duties and responsibilities of teachers in improving the quality of teaching. *Credit units: 2 ECTS Credit Units: 4. Aut (J. L. Mitton)*

TE 511 Special Teaching Methods I
There are separate methodology courses for each subject area. Each course explores, with practical examples, and with reference to current research, the teaching of that subject at high school level. It considers all relevant teaching methods, and their application to a range of teaching/learning contexts. Students will engage in extensive reflection on the methods and applications considered. *Credit units: 3 ECTS Credit Units: 6.*

TE 512 Special Teaching Methods II
This course is a continuation of TE 511. There are separate methodology courses for each subject area. Each course continues the developmental work of TE 511 in the teaching of that subject. Students gain further understanding of the teaching and learning methods which may be used with different groups of students, and of the context in which learning is set. There will be further practical applications and classroom experience. *Credit units: 3 ECTS Credit Units: 6.*

TE 513 School Experience I
One day a week in a high school under the daily supervision of an experienced school teacher who acts as mentor. Students use structured activities which involve lesson observation and interviews to understand the organization and daily work of the school. They analyze particular teaching skills, and consider whole school issues. There is a one-hour seminar which consolidates the work done in school. *Credit units: 3 ECTS Credit Units: 6.*

TE 514 School Experience II
Students spend one day a week in a school, under the daily supervision of their mentor. Structured activities enable them to concentrate on particular teaching skills, which students practice in class. There is a one-hour seminar which consolidates the work done in school. *Credit units: 3 ECTS Credit Units: 7.*

TE 518 Measurement and Evaluation
Role and significance of measurement and evaluation in education, fundamental concepts of measurement and evaluation, desirable qualities of measurement tools (reliability, validity, practicality), measurement tools used in education and their characteristics. Traditional tools (written examinations, short-answer tests, true-false tests, multiple choice tests, matching, oral examinations, assignments). Tools which assess multiple facets of student performance (observation, interview, performance-based assessment, portfolios, research papers, research projects, peer assessment, self-assessment, attitude scales). Use of basic statistical tools to process the results of assessment, evaluating learner outcomes, grading, development of subject area specific assessment tools. *Credit units: 2 ECTS Credit Units: 4. Aut (C. Alacacı)*

TE 519 Classroom Management
Fundamental concepts of classroom management, classroom communication and interactions. Definition of classroom management, various aspects of classroom management other than discipline. External and internal factors affecting the classroom climate. Models of classroom management, development and implementation of classroom rules. The physical arrangement of the classroom. Managing undesirable behavior, time management, class organization, developing a class environment conducive to learning (cases and suggestions). *Credit units: 2 ECTS Credit Units: 4.*

TE 520 Instructional Technology and Material Design
Concepts of instructional technology, characteristics of various types of instructional technology. Role and use of instructional technology in teaching, identification of technology needs in the classroom/school. Appropriate planning and management of the use of technology. Using technology to develop 2-D and 3-D materials, developing teaching tools (worksheets, activities, OHP transparencies, slides, visual media tools such as DVD, VCD and computer based tools). Analyzing educational software, evaluating teaching tools of varying quality. Internet and distance education, principles of visual design, research pertaining to the effectiveness of teaching materials. The state of instructional technology for teaching in Turkey and the wider world. *Credit units: 3 ECTS Credit Units: 6.*

TE 521 History of Political and Educational Philosophy
The course introduces students to philosophical thinking about the relation between human nature, society and education. It focuses on the study of key texts in the history of philosophy and educational thought including Aristophanes, Plato, Descartes, Voltaire, Mill and Russell. There is strong emphasis on the development of students critical reasoning skills. Students are encouraged to think about the implications of the views discussed for their own pedagogical practice. *Credit units: 3 ECTS Credit Units: 6. Aut (U. Steinvorth)*

TE 523 Teaching Theory of Knowledge
The course begins with a general introduction to the problem of knowledge and then moves on to examine the central role of language, perception and logic. It thus lays the foundation for the critical examination of truth claims in various disciplines. The areas to be examined will include, but not be limited to, science, mathematics, history, ethics, aesthetics, and psychology. The approach of the course will be hands-on throughout. There will be a variety of readings and audiovisual materials to help students develop their analytical abilities. *Credit units: 3 ECTS Credit Units: 6. Aut (G. Crippin)*

TE 524 Guidance
Fundamental concepts, student support services, the role of guidance and counseling in student support services. Principles of guidance, principles and development of guidance, types of guidance and counseling, services, techniques, organization and personnel. Recent developments in the field. Techniques for getting to know students, counselor-teacher cooperation, guidance duties of the teacher. *Credit units: 2 ECTS Credit Units: 6.*

TE 525 Learning and Teaching: Theory and Approach
Fundamental concepts (theory, principles, law, methods, techniques, strategies, tactics, styles, models and approaches). Theories of learning and teaching, deductive and didactic theories of teaching, theorists in the field, moving from method to strategy. Learning strategies, classifications of learning strategies. Teaching strategies, classifications of teaching strategies, style-strategy interaction, learning-teaching styles and style-centered teaching design. Examples of practical strategies for the provision of effective teaching, approaches such as problem-based learning, project-based learning, story based learning, scenario-based learning, practical applications. *Credit units: 2 ECTS Credit Units: 4. Aut (R. Martin)*

TE 526 Subject Area Research Project
Preparing an academic research project on a topic chosen from the student's subject area. Data collection, data analysis, evaluation, writing up and presentation. *Credit units: 3 ECTS Credit Units: 7. Aut (R. Martin)*

TE 528 Introduction to Educational Science
Basic concepts in education. Relationship of education to other disciplines (the philosophical, social, legal, psychological, economic and political foundations of education). History of educational science. Major trends in educational science in the 21st century; Research methods in educational science. Structure and characteristics of the Turkish Education System. Role of teachers in education. Characteristics of the teaching profession. Developments and practices in teacher education. *Credit units: 2 ECTS Credit Units: 5. Aut (G. J. Cotten)*

TE 529 Turkish Language and Literature Curriculum Review
This course provides students with knowledge and experience to assist them to become effective Turkish Language and Literature (TLL) teachers. The major areas of TLL taught in school will be reviewed in detail and related to high school curriculum and demands made on high school teachers and students. The skills covered include knowledge of the appropriate level of subject area content and relevancy, together with a working knowledge of school TLL text books, and the application of these skills in the classroom. National, IB and IGCSE curricula will be discussed. *Credit units: 3 ECTS Credit Units: 8. Aut (Ö. Bayam)*

TE 530 Turkish Language and Literature Curriculum Review II
This course is a continuation of TE 529. The major areas of Turkish Language and Literature (TLL) taught in school will be reviewed in detail and related to the high school curriculum. Students gain further understanding of the appropriate level of TLL content and relevancy, together with a working knowledge of school text books, and the application of these skills in the classroom. The Ministry of Education, IB and IGCSE syllabuses will be covered. Discussion of national standards in TLL will continue. *Credit units: 3 ECTS Credit Units: 8.*

TE 531 English Teaching Methods I
The course explores, with practical examples, and with reference to current research, the teaching of English at high school level. It considers all relevant teaching methods, and their application to a range of teaching/learning contexts. Students will engage in extensive reflection on the methods and applications considered. *Credit units: 3 ECTS Credit Units: 6. Aut (J. Malloy)*

TE 532 Biology Teaching Methods I
The course explores, with practical examples, and with reference to current research, the teaching of biology at high school level. It considers all relevant teaching methods, and their application to a range of teaching/learning contexts. Students will engage in extensive reflection on the methods and applications considered. *Credit units: 3 ECTS Credit Units: 6. Aut (G. McDonald, M. K. Sands)*

TE 533 Turkish Language Teaching Methods
The course explores, with practical examples, and with reference to current research, the teaching of Turkish language at high school level. It considers all relevant teaching methods, and their application to a range of teaching/learning contexts. Students will engage in extensive reflection on the methods and applications considered. *Credit units: 3 ECTS Credit Units: 6. Aut (R. Özyürek)*

TE 534 History Teaching Methods I
The course explores, with practical examples, and with reference to current research, the teaching of history at high school level. It considers all relevant teaching methods, and their application to a range of teaching/learning contexts. Students will engage in extensive reflection on the methods and applications considered. *Credit units: 3 ECTS Credit Units: 6.*

TE 535 Mathematics Teaching Methods I
The course explores, with practical examples, and with reference to current research, the teaching of mathematics at high school level. It considers all relevant teaching methods, and their application to a range of teaching/learning contexts. Students will engage in extensive reflection on the methods and applications considered. *Credit units: 3 ECTS Credit Units: 6. Aut (C. Crippin)*

TE 536 Computer Teaching Methods I
The course explores, with practical examples, and with reference to current research, the teaching of computer at 6-12 level. It considers all relevant teaching methods, and their application to a range of teaching/learning contexts. Students will engage in extensive reflection on the methods and applications considered. *Credit units: 3 ECTS Credit Units: 6.*

TE 541 English Teaching Methods II
This course is a continuation of TE 531. It continues the developmental work of TE 531 in the teaching of English. Students gain further understanding of the teaching and learning methods which may be used with different groups of students, and of the context in which learning is set. There will be further practical applications and classroom experience. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: TE 531. Aut (N. Akşit, J. Malloy)*

TE 542 Biology Teaching Methods II
This course is a continuation of TE 532. It continues the developmental work of TE 532 in the teaching of biology. Students gain further understanding of the teaching and learning methods which may be used with different groups of students, and of the context in which learning is set. There will be further practical applications and classroom experience. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: TE 542.*

TE 543 Turkish Literature Teaching Methods
This course is a continuation of TE 533. It continues the developmental work of TE 533 in the teaching of Turkish language and literature. Students gain further understanding of the teaching and learning methods which may be used with different groups of students, and of the context in which learning is set. There will be further practical applications and classroom experience. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: TE 533.*

TE 544 History Teaching Methods II
This course is a continuation of TE 534. It continues the developmental work of TE 534 in the teaching of history. Students gain further understanding of the teaching and learning methods which may be used with different groups of students, and of the context in which learning is set. There will be further practical applications and classroom experience. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: TE 534.*

TE 545 Mathematics Teaching Methods II
This course is a continuation of TE 535. It continues the developmental work of TE 535 in the teaching of mathematics. Students gain further understanding of the teaching and learning methods which may be used with different groups of students, and of the context in which learning is set. There will be further practical applications and classroom experience. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: TE 535.*

TE 546 Computer Teaching Methods II
Continuation of Computer Teaching Methods I. Further understanding of the teaching and learning methods with may be used with different groups of school students, and of the context in which learning is set. Further practical applications including microteaching (Preparing lesson plans and teaching materials on selected topics from school curricula, teaching in the classroom environment, evaluating teaching according to the computer teacher competencies). *Credit units: 3 ECTS Credit Units: 6. Aut (S. Tuti)*

TE 551 School Experience I in English
One day a week in a high school under the daily supervision of an experienced school teacher who acts as mentor. Students use structured activities which involve lesson observation and interviews to understand the organization and daily work of the school. They analyze particular teaching skills, and consider whole school issues. There is a one-hour seminar which consolidates the work done in school. *Credit units: 3 ECTS Credit Units: 6. Aut (J. Malloy)*

TE 552 School Experience I in Biology

One day a week in a high school under the daily supervision of an experienced school teacher who acts as mentor. Students use structured activities which involve lesson observation and interviews to understand the organization and daily work of the school. They analyse particular teaching skills, and consider whole school issues. There is a one-hour seminar which consolidates the work done in school. *Credit units: 3 ECTS Credit Units: 6. Aut (M. K. Sands)*

TE 553 School Experience I in Turkish Lang and Lit

One day a week in a high school under the daily supervision of an experienced school teacher who acts as mentor. Students use structured activities which involve lesson observation and interviews to understand the organization and daily work of the school. They analyze particular teaching skills, and consider whole school issues. There is a one-hour seminar which consolidates the work done in school. *Credit units: 3 ECTS Credit Units: 6. Aut (R. Özyürek)*

TE 554 School Experience I in History

One day a week in a high school under the daily supervision of an experienced school teacher who acts as mentor. Students use structured activities which involve lesson observation and interviews to understand the organization and daily work of the school. They analyze particular teaching skills, and consider whole school issues. There is a one-hour seminar which consolidates the work done in school. *Credit units: 3 ECTS Credit Units: 6.*

TE 555 School Experience I in Mathematics

One day a week in a high school under the daily supervision of an experienced school teacher who acts as mentor. Students use structured activities which involve lesson observation and interviews to understand the organization and daily work of the school. They analyse particular teaching skills, and consider whole school issues. There is a one-hour seminar which consolidates the work done in school. *Credit units: 3 ECTS Credit Units: 6. Aut (C. Alacacı)*

TE 556 School Experience I in Computer Teaching

One day a week in a high school under the daily supervision of an experienced school teacher who acts as mentor. Students use structured activities which involve lesson observation and interviews to understand the organization and daily work of the school. They analyse particular teaching skills, and consider whole school issues. There is a one-hour seminar which consolidates the work done in school. *Credit units: 3 ECTS Credit Units: 6. Aut (S. Tuti)*

TE 561 School Experience II in English

Students spend one day a week in a school, under the daily supervision of their mentor. They teach classes, as well as working on structured activities related to teaching and the school environment. There is a one-hour seminar which consolidates the work done in school. *Credit units: 3 ECTS Credit Units: 7, Prerequisite: TE 551. Aut (J. Malloy)*

TE 562 School Experience II in Biology

Students spend one day a week in a school, under the daily supervision of their mentor. They teach classes, as well as working on structured activities related to teaching and the school environment. There is a one-hour seminar which consolidates the work done in school. *Credit units: 3 ECTS Credit Units: 7, Prerequisite: TE 552.*

TE 563 School Experience II in Turkish Lang and Lit

Students spend one day a week in a school, under the daily supervision of their mentor. They teach classes, as well as working on structured activities related to teaching and the school environment. There is a one-hour seminar which consolidates the work done in school. *Credit units: 3 ECTS Credit Units: 7, Prerequisite: TE 553.*

TE 564 School Experience II in History

Students spend one day a week in a school, under the daily supervision of their mentor. They teach classes, as well as working on structured activities related to teaching and the school environment. There is a one-hour seminar which consolidates the work done in school. *Credit units: 3 ECTS Credit Units: 7, Prerequisite: TE 554.*

TE 565 School Experience II in Mathematics

Students spend one day a week in a school, under the daily supervision of their mentor. They teach classes, as well as working on structured activities related to teaching and the school environment. There is a one-hour seminar which consolidates the work done in school. *Credit units: 3 ECTS Credit Units: 7, Prerequisite: TE 555.*

TE 566 School Experience II in Computer Teaching

One day a week in a high school under the daily supervision of an experienced school teacher who acts as mentor. Students use structured activities which involve lesson observation and interviews to understand the organization and daily work of the school. They analyse particular teaching skills, and consider whole school issues. There is a one-hour seminar which consolidates the work done in school. *Credit units: 3 ECTS Credit Units: 6. Aut (G. B. Çalıkoğlu)*

TE 571 Teaching Practice in English

Students spend an extended period in a school, under the supervision of their school mentor and faculty supervisor. Students become members of the school for this period. They work with teachers, they attend meetings and extra-curricular activities, they observe lessons, and teach full lessons in the English department. The course includes tutorials and seminars which assist students in the planning and evaluation of their school work and allows them to share experience. *Credit units: 5 ECTS Credit Units: 8, Prerequisite: TE 561.*

TE 572 Teaching Practice in Biology

Students spend an extended period in a school, under the supervision of their school mentor and faculty supervisor. Students become members of the school for this period. They work with teachers, they attend meetings and extra-curricular activities, they observe lessons, and teach full lessons in the biology department. The course includes tutorials and seminars which assist students in the planning and evaluation of their school work and allows them to share experience. *Credit units: 5 ECTS Credit Units: 8. Aut (M. K. Sands)*

TE 573 Teaching Practice in Turkish Lang and Lit

Students spend an extended period in a school, under the supervision of their school mentor and faculty supervisor. Students become members of the school for this period. They work with teachers, they attend meetings and extra-curricular activities, they observe lessons, and teach full lessons in the Turkish department. The course includes tutorials and seminars which assist students in the planning and evaluation of their school work and allows them to share experience. *Credit units: 5 ECTS Credit Units: 8. Aut (R. Özyürek)*

TE 574 Teaching Practice in History

Students spend an extended period in a school, under the supervision of their school mentor and faculty supervisor. Students become members of the school for this period. They work with teachers, they attend meetings and extra-curricular activities, they observe lessons, and teach full lessons in the history department. The course includes tutorials and seminars which assist students ın the planning and evaluation of their school work and allows them to share experience. *Credit units: 5 ECTS Credit Units: 8.*

TE 575 Teaching Practice in Mathematics

Students spend an extended period in a school, under the supervision of their school mentor and faculty supervisor. Students become members of the school for this period. They work with teachers, they attend meetings and extra-curricular activities, they observe lessons, and teach full lessons in the mathematics department. The course includes tutorials and seminars which assist students in the planning and evaluation of their school work and allows them to share experience. *Credit units: 5 ECTS Credit Units: 8. Aut (C. Alacacı)*

TE 576 Teaching Practice in Computer Teaching

Students spend an extended period in a school, under the supervision of their school mentor and faculty supervisor.. Students become members of the school for this period. They work with teachers, they attend meetings and extra-curricular activities, they observe lessons, and teach full lessons in the English department. The course includes tutorials and seminars which both assist students in the planning and evaluation of their school work and allows them to share experience. *Credit units: 5 ECTS Credit Units: 10. Aut (G. B. Çalıkoğlu)*

MA PROGRAM IN TEACHING ENGLISH AS A FOREIGN LANGUAGE

J. Mathews-Aydınlı (Head), P. Durrant, J. Walters.

Master of Arts Program In Teaching English as a Foreign Language (TEFL)

The M.A. TEFL Program is designed to prepare professional teachers of English as a foreign language by increasing their knowledge of foreign language instructional theory and practice. Students in the program examine the following:

- Linguistics, sociolinguistics, and analysis of the English language;
- Second language acquisition and TEFL research;
- Language teaching methodology, curriculum and materials development, and testing.

M.A. TEFL students discuss and apply instructional models and linguistic theory which relate classroom experiences of EFL students to real-life communicative needs. They also improve their skills in understanding and conducting research in foreign language education.

Admission: Applicants are required to have a B.A. or B.S. degree in Linguistics, English Language Teaching, English, or American Studies. In addition, they are expected to have two years of teaching experience. Applicants must also successfully pass an entrance examination administered as part of the applicant screening process. The exact date and place of the examination is announced each year by the M.A. TEFL Program. (Also refer to the “Graduate Admissions” section in the introduction of this catalog for general graduate admission requirements.)

Degree Requirements:

- Satisfactory completion of 36 credit units of course work;
- A thesis approved by a faculty committee.

Criteria for satisfactory completion of courses are described by each instructor at the beginning of each semester. Criteria for successfully completing theses are presented in three Research Seminar courses. To a considerable extent, instruction is individualized and many opportunities are provided during the M.A. program to allow students to improve work which does not meet the criteria. Failure in one course or failure to complete the program in the allotted time, however, will result in no degree being granted. A grade point average of 3.00 is required to graduate.

CURRICULUM

Autumn Semester		Credits / ECTS Credits
TEFL 501	Second Language Acquisition	3 / 6
TEFL 506	Sociolinguistics	3 / 6
TEFL 521	EFL Methodology I	3 / 6
TEFL 523	Literature and Culture in EFL	3 / 6
TEFL 551	Research Seminar I	3 / 6
TEFL 555	Written Academic Discourse	3 / 6

Spring Semester		Credits / ECTS Credits
TEFL 503	Linguistics: the Nature of Language	3 / 6
TEFL 510	Language Testing	3 / 6
TEFL 528	Curriculum Development and Evaluation	3 / 6
TEFL 530	Materials Development	3 / 6
TEFL 552	Research Seminar II	3 / 6

TEFL 556 Seminar in TEFL ..... 3 / 6
TEFL 557 Written Academic Discourse II ..... 3 / 6

Summer School Credits / ECTS Credits
TEFL 553 Research Seminar III ..... 3 / 6
TEFL 554 Thesis Writing ..... 3 / 24

COURSE DESCRIPTIONS

GRADUATE COURSES

TEFL 501 Second Language Acquisition
Theories of second language acquisition. Students analyze both qualitative and quantitative research studies done in this field during the past 30 years. *Credit units: 3 ECTS Credit Units: 6. Aut (J. Walters)*

TEFL 503 Linguistics: the Nature of Language
Foundations in linguistics with an emphasis on basic terminology, concepts, and analysis. Main topics include phonetics, phonology, morphology, syntax, semantics, and pragmatics. Discussion focuses on their relevance and application to second language acquisition and foreign language teaching. *Credit units: 3 ECTS Credit Units: 6. Aut (J. Walters)*

TEFL 506 Sociolinguistics
Examination of linguistic variation in English among social groups due to region, socio-economic status, gender, ethnicity, and age, especially as this variation relates to language learning. Linguistic registers, standard and non-standard dialects, language attitudes, and attitudes toward language learning are also treated. *Credit units: 3 ECTS Credit Units: 6.*

TEFL 510 Language Testing
Theoretical and practical considerations in the construction, use, and critical evaluation of both classroom and standardized tests of language proficiency. Students are acquainted with basic concepts of validity and reliability, as well as a variety of different kinds of tests and testing techniques. *Credit units: 3 ECTS Credit Units: 6.*

TEFL 521 EFL Methodology I
Discussion of the major foreign language teaching methods in their historical contexts, as well as individual language skills and integrated skills. Current areas of concern in ESL/EFL are also examined, and key EFL/ESL terminology is reviewed. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

TEFL 523 Literature and Culture in EFL
Exploration of various issues involved in the teaching of culture and literature in the TEFL classroom, along with pedagogical implications. Particular focus is on such issues as the appropriate choice of materials and the incorporation of web-based tools to enhance cultural and literacy awareness. *Credit units: 3 ECTS Credit Units: 6.*

TEFL 525 Practicum
Different topics related to classroom teaching and classroom-centered research, including instructional observation, practice teaching, and in-class data collection and analysis. Projects based on these topics are assigned during the semester. *Credit units: 3 ECTS Credit Units: None.*

TEFL 528 Curriculum Development and Evaluation
Principles of course design, implementation, and evaluation. The role of the teacher in the curriculum process is central to the course. Small projects and papers relating to students' experiences will provide skills in developing and evaluating curricula. *Credit units: 3 ECTS Credit Units: 6.*

TEFL 530 Materials Development
Selection, adaptation, development, evaluation, and implementation of lesson plans, textbooks, and other materials for different teaching situations. Students become familiar with a variety of materials. Opportunities are provided for critiquing, developing, and adapting materials for a wide range of contexts and target groups. *Credit units: 3 ECTS Credit Units: 6.*

TEFL 551 Research Seminar I
Introduction to skills in library research and research methodology including the collection, analysis, and processing of data. Issues of methodology are examined for their applicability to critiquing published research and to conducting original research in language-learning environments. Both quantitative and qualitative research traditions are examined. *Credit units: 3 ECTS Credit Units: 6. Aut (J. Mathews-Aydınlı)*

TEFL 552 Research Seminar II
More detailed examination of skills in library research and research methodology including the collection, analysis, and processing of data. Issues of methodology are examined for their applicability to conducting original research in language-learning environments. *Credit units: 3 ECTS Credit Units: 6.*

TEFL 553 Research Seminar III
Advanced skills in library research and research methodology including the collection, analysis, and processing of data. Specific focus is on production of individual theses. *Credit units: 3 ECTS Credit Units: 6.*

TEFL 554 Thesis Writing
Focus on presenting aspects of research findings in an organised and coherent manner. Students receive critical feedback from their peers and their instructor on their theses. The emphasis is on the improvement of academic discourse in order to complete the program thesis successfully. *Credit units: 3 ECTS Credit Units: 24.*

TEFL 555 Written Academic Discourse
Focus on developing essential skills for effective presentation of academic language in written discussion. Meta-discussion of reading and exercises will help develop students' own abilities to teach academic writing. *Credit units: 3 ECTS Credit Units: 6. Aut (P. Durrant, E. T. G. Williams)*

TEFL 556 Seminar in TEFL
In-depth exploration of and innovative approaches to topics of importance in the field of TEFL. The course may be divided into two eight-week seminars to allow expanded coverage of the issues. Specific topics to be determined by the instructor(s). *Credit units: 3 ECTS Credit Units: 6. Aut (P. Durrant)*

TEFL 557 Written Academic Discourse II
Continuation of Written Academic Discourse I, with an emphasis on the academic writing process and its applications for teachers of writing. *Credit units: 3 ECTS Credit Units: 6.*

FACULTY OF ENGINEERING

Mehmet Baray, Ph.D., Dean
Özgür Ulusoy, Ph.D., Asst. Dean

The Faculty of Engineering comprises four academic departments:

- Computer Engineering
- Electrical and Electronics Engineering
- Industrial Engineering
- Mechanical Engineering

The mission of the Faculty of Engineering is not only to impart contemporary engineering and scientific knowledge in the four engineering disciplines but also to inculcate creativity, research techniques, and self development. The graduates of engineering programs are expected to acquire dynamic learning skills and to readily adapt to technological changes as well as to solve fast growing problems of the modern society.

The programs of study in Engineering aim to achieve a productive balance between depth of knowledge acquired in technical areas and breadth of knowledge acquired through humanities, arts and social sciences. Depth involves the intensive study of a subject through specialization in a major field; breadth on the other hand plays an important role to equip the graduate in pursuit of a richer personal and professional life. Hence, the curriculum provides a firm background in the basic sciences through courses in mathematics, computer science, physics, and chemistry. It has a solid syllabus of engineering which lead to specialized courses that are primarily of a technical nature. In order to provide the student with a broad intellectual spectrum, elective courses are offered through the other faculties of the University.

Engineering education is an evolutionary process driven by advances in technology. Hence, the aim of the programs is to develop the ability to learn on a career-long basis.

Physical, mathematical and engineering sciences courses are intended to provide the students with the necessary capability to analyze and model the real world. The courses with design components are to increase innovation and synthesis capability whereas the project courses are to enhance the integrative capability of the students. Students are expected to integrate their basic engineering concepts with in-depth knowledge they obtain in their specialized semester-long projects. Knowledge in humanities, arts and social science will contribute to students' understanding of the society and environment in which the engineering is practiced.

ACADEMIC STAFF

Aybar C. Acar, Instructor
Ph.D., Computer Science, George Mason University, 2008. Databases, information integration, data security and privacy, information quality, machine learning.

Nail Akar, Associate Professor
Ph.D., Electrical and Electronics Engineering, Bilkent University, 1994. Teletraffic analysis, performance evaluation, high-speed telecommunication networks, Internet technologies.

Adnan Akay, Professor
Ph.D., Mechanical Engineering, North Caroline State University, 1976 Applied mechanics, vibrations and acoustics, noise control, friction-induced sounds.

Varol Akman, Professor
Ph.D., Electrical, Computer, and Systems Engineering, Rensselaer Polytechnic Institute, 1985. Artificial intelligence, logic, philosophy of language, philosophy of mind, pragmatics, the Internet and society.

Selim Aksoy, Assistant Professor
Ph.D., Electrical Engineering, University of Washington, 2001. Computer vision, statistical and structural pattern recognition, machine learning, data mining.

Defne Aktaş, Assistant Professor
Ph.D., Electrical Engineering, The Ohio State University, 2002. Space-time coding, information theoretic analysis of multiple antenna systems, coding and medium access control techniques for wireless ad hoc networks.

Özgür Aktaş, Assistant Professor
Ph.D., Electrical and Computer Engineering, University of Illinois at Urbana-Champaign, 2001. Computational modeling of microelectronic and microelectromechanical devices, experimental investigation of semiconductor materials and high-speed devices.

M. Selim Aktürk, Professor
Ph.D., Industrial Engineering, Lehigh University, 1990. Hierarchical planning of large scale systems, cellular manufacturing systems, advanced manufacturing technologies, production scheduling.

Osman Alp, Assistant Professor
Ph.D., Industrial Engineering Department, METU 2000. Inventory models, supply chain management, logistics, transportation of hazardous materials.

Ayhan Altıntaş, Professor
Ph.D., Electrical Engineering, Ohio State University, 1986. Electromagnetic scattering, diffraction, and radiation. Fiber and integrated optics, optical communications.

Erdal Arıkan, Professor
Ph.D., Electrical Engineering and Computer Science, Massachusetts Institute of Technology, 1985. Information theory, communications, data communication networks, cryptography.

Orhan Arıkan, Professor
Ph.D., Electrical and Computer Engineering, University of Illinois at Urbana-Champaign, 1990. Signal processing, remote sensing, communications.

Erol Arkun, Professor
Ph.D., Electrical Engineering, Polytechnic Institute of Brooklyn, New York, 1971. Data and file structures, database systems, microcomputing, programming languages.

Abdullah Atalar, Professor
Ph.D., Electrical Engineering, Stanford University, 1978. Analog and digital integrated circuit design, simulation of large circuits, linear acoustics, acoustic imaging, micromachined sensors.

Ergin Atalar, Professor
Ph.D., Electrical and Electronics Engineering, Bilkent University, 1991. Image guided medical interventions, magnetic resonance imaging, antenna design for MRI.

Cevdet Aykanat, Professor
Ph.D., Electrical and Computer Engineering, Ohio State University, 1988. Parallel computing, algorithms, high performance information retrieval, parallel and distributed web crawling, parallel databases, grid computing.

Orhan Aytür, Professor
Ph.D., Electrical Engineering, Northwestern University, 1991. Optics and photonics, quantum optics, nonlinear optics, lasers, optoelectronics.

Niyazi Onur Bakır, Visiting Instructor
Ph.D., Industrial Engineering, Texas A&M University, 2004.

Mehmet Baray, Professor
Ph.D., Electrical Engineering and Computer Science, University of California, Berkeley, 1970. Computer architecture, parallel processing, computer engineering education.

Billur Barshan, Professor
Ph.D., Electrical Engineering, Yale University, 1991. Sensor-based mobile robotics, sensor data processing, multi-sensor data fusion, inference networks.

Fazlı Can, Visiting Professor
Ph.D., Computer Engineering, Middle East Technical University, 1985. Information Retrieval, Access Methods, Stylometry.

Melih Çakmakçı, Assistant Professor
Ph.D., Mechanical Engineering, University of Michigan, 2009 Dynamic systems and control. Multivariable control systems, nonlinear systems and control, vehicle control systems and smart mechatronic components.

Tolga Çapın, Assistant Professor
Ph.D., Computer Science, Swiss Federal Institute of Technology, Lausanne, 1998. Visual communications, Mobile graphics platforms, Rendering and visualization, Network graphics.

M. Cenk Çavuşoğlu, Visiting Associate Professor
Ph.D., University of California, Berkeley, 2000. Robotics, medical robotics, human-machine interfaces, haptics, virtual environments, modeling and simulation of biosystems, and systems/control theory.

Cengiz Çelik, Instructor
Ph.D., Computer Science, University of Maryland at Collage Park, 2006. Relational database management systems, Multimedia Databases.

Enis Çetin, Professor
Ph.D., Electrical Engineering, University of Pennsylvania, 1987. Image restoration and coding, time series analysis, spectrum estimation, computer vision, VLSI for signal processing, application of polyspectra-based methods to signal and image processing.

İlyas Çiçekli, Lecturer
Ph.D., Computer and Information Science, Syracuse University, 1991. Logic programming, artificial intelligence, computational linguistics, natural language processing.

David Davenport, Lecturer
Ph.D., Electrical Engineering, University of Birmingham, 1980. Artificial intelligence, cognitive science, information retrieval, computer and education, Internet-related issues.

Aynur Dayanık, Instructor
Ph.D., Computer Science, Rutgers University, 2006. Machine Learning, information retrieval, text mining, bioinformatics.

Savaş Dayanık, Assistant Professor
Ph.D., Industrial Engineering and Operations Research, Colombia University, 2002. Stochastic processes and modeling, stochastic dynamic programming, stochastic optimal control. Applications to financial engineering, statistics, and operations management.

Tuğrul Dayar, Professor
Ph.D., Computer Science, North Carolina State University, 1994. Performance modeling and analysis, scientific computing and computer networks.

Hilmi Volkan Demir, Assistant Professor
Ph.D., Electrical Engineering, Stanford University, 2004. Ultrafast photonic switching devices, quantum-confined nano-structures, high-performance semiconductor devices, nano-photonics, ultrafast optoelectronics, integrated photonic circuits, micro-electro-mechanical systems (MEMS), bio-implants, telecommunication systems, and semiconductor nanofabrication.

Ali Doğramacı, Professor
Ph.D., Industrial and Management Engineering, Columbia University, 1975. Production management and productivity analysis.

Uğur Doğrusöz, Associate Professor
Ph.D., Computer Science, Rensselaer Polytechnic Institute, 1995. Graph visualization, bioinformatics, combinatorial algorithms, and graph theory.

Pınar Duygulu, Assistant Professor
Ph.D., Computer Engineering, Middle East Technical University, 2003. Multimedia data mining, information retrieval, computer vision, statistical machine learning, visual perception.

Oya Ekin-Karaşan, Associate Professor
Ph.D., Operations Research, Rutgers University, 1997. Combinatorial optimization, mathematical programming, network flows, theoretical computer science.

Figen Eren, Instructor
M.S., Electrical and Electronics Engineering, Arizona State University, 1994. Control theory, signal processing.

Nesim Erkip, Professor
Industrial Engineering and Engineering Management, Stanford University, 1984. Multi-echelon inventory systems, Analytical models for supply chain management, inventory/production planning under uncertainty.

Vakur B. Ertürk, Associate Professor
Ph.D., Electrical Engineering, Ohio University, 2000. Theoretical and computational electromagnetics, numerical methods, communications.

Mehmet Murat Fadıloğlu, Assistant Professor
Ph.D., Industrial and Systems Engineering, University of Florida, 1998. Stochastic modeling, performance evaluation of production/inventory systems, industrial applications of microcontrollers, industrial automation and control, telecommunications.

Sinan Filiz, Assistant Professor
Ph.D., Mechanical Engineering, Carnegie Mellon University, 2009 Development of intelligent micro-machining centers, integration of micro-machining centers in micro-factories and fabrication of medical micro-devices using micro-machining centers.

Sinan Gezici, Assistant Professor
Ph.D., Electrical Engineering, Princeton University, 2006. Statistical signal processing, ultra-wideband systems, telecommunications, and radar.

Kağan Gökbayrak, Assistant Professor
Ph.D., Manufacturing Engineering, Boston University, 2001. Internet traffic engineering and quality of service, stochastic discrete resource allocation, optimal control of discrete event and hybrid systems.

Uğur Güdükbay, Associate Professor
Ph.D., Computer Engineering and Information Science, Bilkent University, 1994. Computer graphics, physically-based modeling and animation, deformable models, multimedia databases, computational geometry.

Çiğdem Gündüz Demir, Assistant Professor
Ph.D., Computer Science, Rensselaer Polytechnic Institute, 2005. Computational biology, machine learning, pattern recognition for medical application and cancer research, data mining and artificial intelligence.

Levent Gürel, Professor
Ph.D., Electrical and Computer Engineering, University of Illinois at Urbana-Champaign, 1991. Computational electromagnetics, electromagnetic compatibility, wave propagation and scattering, microwave integrated circuits.

Ülkü Gürler, Professor
Ph.D., Statistics, University of Pennsylvania, 1990. Stochastic inventory models, reliability and maintenance survival analysis. Nonparametric estimation, Bayesian, Analysis.

H. Altay Güvenir, Professor
Ph.D., Computer Engineering and Science, Case Western Reserve University, 1987. Artificial intelligence, machine learning, data mining, problem solving strategies, intelligent tutoring systems.

Yusuf Ziya İder, Professor
Ph.D., Biomedical Engineering, Northwestern University, 1979. Electrical impedance tomography, magnetic resonance imaging, acquisition and processing of physiological signals, PC based instrumentation.

İsmail İpek, Instructor
Ed.D., Education, University of Pittsburgh, 1995. Computer languages and applications.

Hazım Murat Karamüftüoğlu, Assistant Professor
Ph.D., Information Science, City University, London, 1998. Design and evaluation of information retrieval systems, computer semiotics, computer mediated communication, philosophical aspects of information systems.

Ezhan Karaşan, Associate Professor
Ph.D., Electrical and Computer Engineering, Rutgers University, 1995. Broadband integrated networks, traffic and switching theory, optical networks, information and coding theory.

Yiğit Karpat, Assistant Professor
Ph.D., Industrial Engineering, Rutgers University, 2007. Manufacturing systems and processes, micro/nano technologies.

İbrahim Körpeoğlu, Assistant Professor
Ph.D., Computer Science, University of Maryland, College Park, 2000. Computer networks, mobile and wireless networks, computer systems.

Hayrettin Köymen, Professor
Ph.D., Electrical Engineering, University of Birmingham, 1979. Acoustic imaging, linear and finite amplitude acoustics, medical instrumentation, processing and modeling of physiological signals.

Ömer Morgül, Professor
Ph.D., Electrical Engineering, University of California, Berkeley, 1989. Linear and nonlinear systems, distributed parameter systems, control of flexible structures, nonlinear dynamics, neural networks.

Ayşe Semra Mumcu, Instructor
M.S., Electrical and Electronics Engineering, Middle East Technical University, 1990. Computer architecture, hardware engineering.

Osman Oğuz, Associate Professor
Ph.D., Management Sciences, University of Waterloo, 1978. Mathematical programming, linear and integer programming, scheduling.

Ali Kemal Okyay, Assistant Professor
Ph.D., Electrical Engineering, Stanford University, 2007. Physics and applications of nanophotonic, integrated nano-biophotonic devices, SiGe-based integrated optoelectronics for monolithic integration.

Levent Onural, Professor
Ph.D., Electrical and Computer Engineering, State University of New York at Buffalo, 1985. Signal and image processing, holography, fractals, computer hardware, signal processing hardware.

Özay Oral, Professor
Ph.D., Electrical Engineering, Middle East Technical University, 1971. Design of multivariable control systems, stabilization of large scale systems, systems theory, formulation of networks and systems.

Hilmi Öncül, Instructor
M.S., Computer Science, University of Wisconsin, 1971. Computers and information processing.

Haldun Özaktaş, Professor
Ph.D., Electrical Engineering, Stanford University, 1991. Optical information processing, signal and image processing, optoelectronic and optically interconnected computing systems.

Ekmel Özbay, Professor
Ph.D., Electrical Engineering, Stanford University, 1992. Photonic band gap materials, physics and applications of nanostructures, photonic devices, micro electro-mechanical devices, ultrafast phenomena, quantum optics.

Hitay Özbay, Professor
Ph.D., Control Sciences and Dynamical Systems, University of Minnesota, 1989. Robust control, distributed parameter systems, aerodynamic flow control, applications of control theory in computer and control communication networks.

Özlem Özgü, Instructor
M.S., Computer Science, Middle East Technical University, 1990. Computer and information processing.

Bülent Özgüç, Professor
Ph.D., Computer Science, University of Pennsylvania, 1978. Computer graphics, user interface design.

A. Bülent Özgüler, Professor
Ph.D., Electrical Engineering, University of Florida, 1982. Decentralized control, stability robustness, realization theory, linear matrix equations.

Özcan Öztürk, Assistant Professor
Ph.D., Computer Science and Engineering, Pennsylvania State University, 2007. On-chip multiprocessors, compiler optimizations, computer architecture, memory optimization, low-power system design, reliability.

Mustafa Ç. Pınar, Professor
Ph.D., Systems Engineering, University of Pennsylvania, 1992. Mathematical programming, quadratic programming, network optimization.

Tarık Reyhan, Senior Lecturer
Ph.D., Electrical Engineering, University of Birmingham, 1981. Radio communication, RF design, thermal imaging, electro-optics.

İhsan Sabuncuoğlu, Professor
Ph.D., Industrial Engineering, Wichita State University, 1989. Simulation, scheduling, heuristics in optimization, advenced manufacturing systems.

Turgay Saracoğlu, Instructor
B.S., Electrical Engineering, Middle East Technical University, 1979. Computer and information processing.

Uluç Saranlı, Assistant Professor
Ph.D., Computer Science: Intelligent Systems, University of Michigan, Ann Arbor, 2002, Formal methods for robot programming, analysis and control of legged locomotion, dynamically dexterous robot behaviors, applications of formal logic and type theory to robot motion planning, physically realistic simulation.

William Sawyer, Instructor
M.S., Electrical Engineering, Northeastern University, 1988. Digital design, CAD tools, computer architecture.

Markus Schaal, Instructor
Ph.D., Distributed Information Systems, Berlin-Brandenburg Graduate School, 2004. Knowledge Sharing, Extraction and Processing, Portal-Based Communities-Participation Mechanisms and Motivation.

Ali Aydın Selçuk, Assistant Professor
Ph.D., Computer Science, University of Maryland, 2001. Cryptography, network security, data compression.

Alper Şen, Assistant Professor
Ph.D., Business Administration, University of Southern California, 2000. Revenue management, inventory theory, supply chain management, machine scheduling.

Mehmet Rüştü Taner, Assistant Professor
Ph.D., North Carolina State University, 2001. Scheduling theory, heuristic methods for discrete optimization, quality and reliability engineering.

Barbaros Tansel, Professor
Ph.D., Industrial and Systems Engineering, University of Florida, 1979. Logistics, network location theory, optimization with imprecise data.

Bedir Tekinerdoğan, Assistant Professor
Ph.D., Computer Science, University of Twente, 2000. Software engineering, software architecture design, software product line engineering, model-driven software development, aspect-oriented software development.

Ayşegül Toptal, Assistant Professor
Ph.D., Industrial Engineering, Texas A&M University, 2003. Inventory theory, supply chain management, machine scheduling.

Özgür Ulusoy, Professor
Ph.D., Computer Science, University of Illinois at Urbana-Champaign, 1992. Data management for mobile systems, Web query languages and data models, multimedia database systems, real-time and active database systems.

Aslı Üstüner, Instructor
M.S., Mechanical Engineering, University of New Hampshire, USA, 1993. B.S. Mechanical Engineering, METU, 1991. CAD Design, Computer Tools.

Hande Yaman, Associate Professor
Ph.D., Operations Research, Université Libre de Bruxelles, 2002. Integer programming, polyhedral theory, location and network design, robust optimization.

Bahar Yetiş, Associate Professor
Ph.D., Industrial Engineering, Bilkent University, 1999. Hub location problems, hazardous materials transportation, bilevel optimization, mathematical programming.

Emre Alper Yıldırım, Associate Professor
Ph.D., Operations Research, Cornell University, 2001. Linear and semidefinite programming, interior point methods, convex optimization.

Heba Yüksel, Instructor
Ph.D., Electrical Engineering, University of Maryland at College Park, 2005. Transmitter/receiver design, atmospheric turbulence, aperture averaging, and image sensing for Free-Space Optical Communication (Optical Wireless) links.

ACADEMIC COORDINATORS

Berrin Keyik Çelik, B.S., Industrial Engineering, Bilkent University, 1997.
Burcu Uslu Özdemir, M.B.A., Management, Bilkent University, 2002.
Johannes Marie Verhoeven, M.S., Philosophy, Groningen University.

PART-TIME ACADEMIC STAFF

Ahmet Reha Botsalı, Ph.D., Industrial and Systems Engineering, Texas A&M University, 2007.
Mete Çakmakcı, Ph.D. Manufacturing Engineering, Syracuse University, 1998.
Kıvanç Dinçer, Ph.D., Syracuse University, 1997.
Ahmet Suat Ekinci, Ph.D., Bilkent University, 1999.
Murat Eskiyerli, Ph.D., University of London, 1998.
Yavuz Oruç, Ph.D., Syracuse University, 1983.
Namık Şengezer, M.S., Bilkent University, 2004.
Onay Urfalıoğlu, Ph.D., Electrical and Electronics Engineering, Leibniz University Hannover, 2006.
Ahmet Şevket Üçer, Ph.D., Mechanical Engineering, University of Manchester, 1970.

DEPARTMENT OF COMPUTER ENGINEERING

H. A. Güvenir (Chair), A. C. Acar, V. Akman, S. Aksoy, E. Arkun, C. Aykanat, M. Baray, F. Can, T. Çapın, C. Çelik, İ. Çiçekli, D. Davenport, A. Dayanık, T. Dayar, U. Doğrusöz, P. Duygulu, U. Güdükbay, Ç. Gündüz Demir, İ. İpek, H. M. Karamüftüoğlu, İ. Körpeoğlu, A. S. Mumcu, H. Öncül, Ö. Özgü, B. Özgüç, Ö. Öztürk, T. Saracoğlu, U. Saranlı, W. Sawyer, M. Schaal, A. A. Selçuk, B. Tekinerdoğan, Ö. Ulusoy, A. Üstüner.

Part-time: K. Dinçer, Y. Oruç.

The Computer Engineering Department offers programs that lead to B.S., M.S., and Ph.D. degrees.

UNDERGRADUATE PROGRAM

Bilkent University has been founded with the aim of establishing a center of excellence in higher education and research. The Department of Computer Engineering is responsible for the implementation of this mission in the area of computer engineering, and is dedicated to serving society and the advancement of knowledge through excellent teaching and scholarship.

Computer Engineering Department is committed to providing its students with the knowledge, skills, and qualities necessary for our graduates to: a) show intellectual maturity in problem solving and design, while being creative, analytical, and critical thinkers, b) possess a strong background in the principles and practices of computer engineering, and demonstrate knowledge that is relevant to technological needs in a competitive global environment, while continuing to learn throughout their career, c) collaborate well with others and demonstrate strong written and oral communication skills, d) pursue advanced studies and/or have successful careers in industry, government, and academia, while demonstrating professional and ethical responsibility.

The objective of the program is to provide students with the fundamental knowledge and interdisciplinary problem solving skills for a fulfilling career in high quality engineering work and advanced research, required in the information based society of the 21st century. The program emphasizes a solid background in basic science and mathematics, a strong preparation in hardware, software and theory towards the analysis, design and application of computers and information-processing techniques to the solution of real world problems. The courses are complemented with laboratory practice with state-of-the-art computing systems. With the help of two summer trainings each of which must be at least four weeks long, junior and senior students practice their knowledge, learn to function in a collaborative and most of the time multi-disciplinary environment, and improve their communication skills. The program also provides the students with a broad intellectual spectrum by including various elective courses in economics, social sciences, humanities and arts. For two semesters in the senior year, students work on a design project that requires creative thinking and present their work at the end of their study in the department.

UNDERGRADUATE CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
CS 101	Algorithms and Programming I	4 / 7
ENG 101	English and Composition I	3 / 6
GE 101	Engineering Orientation	1 / 1
MATH 101*	Calculus I	4 / 7
MBG 110	Introduction to Modern Biology	3 / 6
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
CS 102	Algorithms and Programming II	4 / 7
ENG 102	English and Composition II	3 / 6

MATH 102*	Calculus II	4 / 7
MATH 132	Discrete and Combinatorial Mathematics	3 / 6
TURK 102	Turkish II	2 / 1

* Depending on the result of the calculus placement exam given at the beginning of the first year, students may take MATH 111 - MATH 112 - MATH 116 in place of MATH 101 - MATH 102.

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
CS 201	Fundamental Structures of Computer Science I	3 / 6
CS 223	Digital Design	4 / 8
HISTR 201	History of Turkish Republic I	2 / 1
HUM 111	Cultures Civilizations and Ideas I	3 / 4
PHYS 101	General Physics I	4 / 6

Spring Semester		Credits / ECTS Credits
CS 202	Fundamental Structures of Computer Science II	3 / 6
CS 224	Computer Organization	3 / 6
HISTR 202	History of Turkish Republic II	2 / 1
HUM 112	Cultures Civilizations and Ideas II	3 / 4
MATH 225	Linear Algebra and Differential Equations	4 / 7
PHYS 102	General Physics II	4 / 6

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
CS 299	Summer Training I	- / -
CS 315	Programming Languages	3 / 6
CS 319	Object-Oriented Software Engineering	4 / 6
CS 351	Data Organization and Management	3 / 6
GE 301	Science Technology and Society	2 / 1
MATH 230	Probability and Statistics for Engineers	3 / 6
	Humanities or Social Sciences Elective (1)	3 / 6

Spring Semester		Credits / ECTS Credits
CS 342	Operating Systems	4 / 6
CS 352	Database Management Systems	3 / 6
EEE 212	Microprocessors	4 / 6
EEE 391	Basics of Signals and Systems	3 / 6
	Humanities or Social Sciences Elective (1)	3 / 6

FOURTH YEAR

Autumn Semester		Credits / ECTS Credits
CS 399	Summer Training II	- / -
CS 473	Algorithms I	3 / 6
CS 491	Senior Design Project I	3 / 6
ENG 401	Technical Report Writing and Presentation	2 / 2
IE 400	Principles of Engineering Management	3 / 6
	Restricted Electives (2)	6 / 12

Spring Semester		Credits / ECTS Credits
CS 476	Automata Theory and Formal Languages	3 / 6
CS 492	Senior Design Project II	3 / 6
	Restricted Electives (3)	9 / 18

HUMANITIES and SOCIAL SCIENCES ELECTIVES

A list of approved elective courses is announced at the beginning of each semester by the Department.

RESTRICTED ELECTIVES

CS 411	Software Architecture Design	3 / 6
CS 412	Enterprise Software Systems	3 / 6

CS 413	Software Engineering Project Management	3 / 6
CS 415	Software Product Line Engineering	3 / 6
CS 416	Compiler Design	3 / 6
CS 418	eBusiness Technologies and Business Solutions using eBusiness Patterns and Technologies	3 / 6
CS 421	Computer Networks	3 / 6
CS 422	Wireless Networking Technologies and Applications	3 / 6
CS 423	Computer Architecture	3 / 6
CS 424	Computer Network Programming	3 / 6
CS 431	Embedded Systems	4 / 7
CS 442	Distributed Systems and Algorithms	3 / 6
CS 446	Database Management Systems II	3 / 6
CS 452	Systems Analysis and Design	3 / 6
CS 461	Artificial Intelligence	3 / 6
CS 464	Introduction to Machine Learning	3 / 6
CS 465	Computer Graphics I	4 / 6
CS 466	Computer Graphics II	4 / 6
CS 468	Principles of User Interface Design	3 / 6
CS 470	Introduction to Applied Cryptography	3 / 6
CS 471	Numerical Methods	3 / 6
CS 481	Bioinformatics Algorithms	3 / 6
CS 482	Logic for Computer Science	3 / 6
CS 484	Image Analysis	3 / 6
CS 490	Introduction to Research in Computer Engineering and Science	3 / 6
CS 503	Modeling and Simulation	3 / 6
CS 511	Introduction to Performance Modeling	3 / 7.5
CS 512	Computer Networks	3 / 7.5
CS 513	Implications of the Internet	3 / 7.5
CS 514	Wireless Ad Hoc and Sensor Networks	3 / 7.5
CS 515	Mobile and Wireless Networking	3 / 7.5
CS 518	Capacity Planning for Web Services	3 / 7.5
CS 519	Cryptography and Network Security	3 / 7.5
CS 522	Networks and Algorithms for Parallel Computation	3 / 7.5
CS 524	Algorithm Design for Parallel Computers	3 / 7.5
CS 527	Advances in Switching Networks	3 / 7.5
CS 528	Advances in Switching Networks II	3 / 7.5
CS 531	Advances in Data Management Research	3 / 7.5
CS 532	Database Systems	3 / 7.5
CS 533	Information Retrieval Systems	3 / 7.5
CS 536	Distributed Database Systems	3 / 7.5
CS 540	Parallel Programming Languages-Systems	3 / 7.5
CS 541	Chip Multiprocessors	3 / 7.5
CS 543	Parallel Methods for Scientific Computing	3 / 7.5
CS 546	Advanced Operating Systems	3 / 7.5
CS 548	Robot Motion Control and Planning	3 / 7.5
CS 550	Machine Learning	3 / 7.5
CS 551	Pattern Recognition	3 / 7.5
CS 554	Computer Vision	3 / 7.5
CS 558	Data Mining	3 / 7.5
CS 564	Computational Geometry	3 / 7.5
CS 565	Application of Computer Graphics	3 / 7.5
CS 566	User Interface Design	3 / 7.5
CS 567	Computer Animation	3 / 7.5
CS 568	Advanced Topics in Computer Graphics	3 / 7.5
CS 569	Mobile and Ubiquitous Graphics	3 / 6
CS 570	Graph Theory	3 / 7.5
CS 571	Topics in Graph Theory and Algorithms	3 / 7.5
CS 572	Theory of Computing	3 / 7.5
CS 574	Varieties of Formal Semantics	3 / 7.5

CS 578	Natural Language Processing	3 / 7.5
CS 580	Advanced Finite State Techniques in Language Processing	3 / 7.5
CS 584	Text Retrieval Database Design	3 / 7.5
CS 586	Aspect-Oriented Software Development	3 / 7.5
CS 587	Model-Driven Software Development	3 / 6
CS 661	Philosophical Foundations of Artificial Intelligence	3 / 7.5
CS 670	A Computer Science Introduction to Quantum Computing	3 / 7.5
CS 681	Advance Topics in Computational Biology	3 / 7.5
EEE 424	Digital Signal Processing	4 / 7
EEE 443	Neural Networks	3 / 6
IE 325	Stochastic Models	3 / 6
MATH 202	Complex Analysis	3 / 6
MATH 213	Advanced Calculus I	3 / 6
MATH 253	Introduction to Number Theory	3 / 6
MATH 313	Real Analysis I	3 / 6
MATH 314	Real Analysis II	3 / 6
MATH 318	Fourier Transform and Wavelets	3 / 6
MATH 324	Algebra II	3 / 6
MATH 453	Algebraic Number Theory	3 / 6
MATH 501	Real Analysis I	3 / 6
MBG 209	Principles of Genetics	3 / -
MBG 210	Genetics	4 / 7
MBG 223	Molecular Genetics	4 / 7
MBG 326	Introduction to Bioinformatics	3 / 6
MBG 482	Computational Approaches to Biology	3 / 6

GRADUATE PROGRAMS

The Department of Computer Engineering offers M.S. and Ph.D. degree programs with the possibility of specialization in different areas of research in Computer Engineering. Current research areas are artificial intelligence, commonsense reasoning, computer vision, data mining, embedded systems formal semantics, machine learning, pattern recognition, database systems, object-oriented systems, information storage and retrieval, distributed database systems, graphics, physically based animation, ray tracing, radiosity, user interfaces, image analysis, parallel processing, parallel algorithm design, task assignment, simulation of various applications on multicomputer architectures, parallel methods for scientific computing, computer networks, mobile and wireless networking, cryptography and network security, theory, algorithms, graph theory, graph drawing, graph coloring, computational geometry, Implications of Internet, capacity planning for web services, performance modeling.

Master of Science

Admission: All applicants are required to have a B.S. degree in Computer Engineering or a related field of science and engineering. All Turkish citizens must take the ALES (Akademik Personel ve Lisansüstü Eğitimi Giriş Sınavı - Academic Personnel and Postgraduate Education Entrance Examination) and have a minimum of 55 points in the quantitative section of the exam. GRE scores are required for international applicants. All non-native speakers of English are required to submit a proof of satisfactory knowledge of English. (Also refer to the “Graduate Admissions” section in the introduction of this catalog for the graduate admissions requirements.)

Degree Requirements: In addition to at least 24 credit units of course work, the M.S. degree candidate must take one research course, and prepare and successfully defend a thesis. The normal duration of M.S. study is four semesters. However, this may be extended for up to two more semesters upon approval of the Graduate Institute.

Doctor of Philosophy

Admission: All applicants are required to have a B.S. degree or a M.S. degree in Computer Engineering or a related field of science and engineering. All Turkish citizens must take the ALES

(Akademik Personel ve Lisansüstü Eğitimi Giriş Sınavı - Academic Personnel and Postgraduate Education Entrance Examination) and have a minimum of 55 (70 for applicants with B.S. degree) points in the quantitative section of the exam. GRE scores are required for international applicants. All non-native speakers of English are required to submit a proof of satisfactory knowledge of English. (Also refer to the "Graduate Admissions" section in the introduction of this catalog for the graduate admissions requirements.)

Degree Requirements: Each student's Ph.D. program is individually planned with a faculty advisor. In addition to successful completion of at least 24 credit units of course work above the M.S. level (48 units of course work above B.S. level), the Ph.D. student is expected to pass qualifying examination, and to prepare and defend a dissertation based on original research. The normal duration for Ph.D. study is eight semesters for students with M.S. degree and ten semesters for students with the B.S. degree. However, these durations may be extended for up to two more semesters upon approval of the Graduate Institute.

COURSE DESCRIPTIONS

UNDERGRADUATE COURSES

CS 101 Algorithms and Programming I
Basic computer literacy: terminology, system components and operation. Fundamentals of computer programming: top-down structured design, sequence, decision, repetition, syntax, compilation, debugging and maintenance, object-oriented programming with Java, objects classes, methods, parameters, arrays, layout and style. The emphasis is on an engineering "right-first-time" approach to solving large problems using computers. *Credit units: 4 ECTS Credit Units: 7. Aut (D. Davenport, Ö. Özgü, T. Saracoğlu)*

CS 102 Algorithms and Programming II
Enhanced Object-Oriented Programming with Java. Inheritance and polymorphism, abstract classes and interfaces, graphical-user-interfaces, exceptions. Abstract data structures: lists, stacks, queues and trees. Recursion. Files. Searching and sorting. Hashing. Time and space considerations. Students undertake a large design project involving teamwork, independent learning, writing and presenting of requirements, user-interface design, and project documentation. *Credit units: 4 ECTS Credit Units: 7, Prerequisite: CS 101 or CS 111. Aut (A. C. Acar, M. Schaal)*

CS 111 Introduction to Computing in Engineering and Science
Basic computer literacy: terminology, system components and operation. MATLAB as a technical programming language for solving engineering and scientific problems. Variables, scalars, arrays, scalar and array operations, top-down program design, relational and logical operators, branches, loops, syntax, compilation debugging and maintenance, built-in and user defined functions, function arguments, pass-by-value, plotting, handle graphics, graphical user interface. Introduction to object-oriented programming concepts with Java. *Credit units: 3 ECTS Credit Units: 5. Aut (C. Çelik)*

CS 112 Introduction to Object-Oriented Programming
Object-oriented programming with Java. Writing and enhancing classes, arrays, inheritance and polymorphism, abstract classes and interfaces, graphical user interface, I/O streams, exceptions, data structures, lists, stacks, queues and trees. *Credit units: 4 ECTS Credit Units: 6, Prerequisite: CS 101 or CS 111.*

CS 121 Introduction to Computing for Social Sciences
Students enhance their understanding of office programs, such as Word, Excel, and Access, in this course. This course is taught in a class with a PC and projector. Students apply the topics covered in class in the PC Labs (2 hours per week). A class exercise and a lab exercise are provided every week. Exams are also held in the PC labs. This way, students are expected to be efficient in the use of standard office programs. *Credit units: 3 ECTS Credit Units: 6. Aut (İ. İpek, H. Öncül, A. Üstüner)*

CS 122 Introduction to Programming for Social Sciences
This course encourages students to develop logical thinking skills through the process of programming the computer. It also aims to introduce students to the world of the Internet and its applications in modern business. To this end, students will learn how to use e-mail, how to create their own home page, and how to produce web applications through Java programming. *Credit units: 3 ECTS Credit Units: 5.*

CS 123 Introduction to Computing and Programming for Social Sciences
This course is an introduction to office tools, and MATLAB. Basic operations for creating and editing documents are introduced using the document processing tool Word. Basic operations on spreadsheets, absolute and relative addressing, basic functions, simple database operations, generation of graphs, and macro recorder are

introduced through the spreadsheet tool Excel. Students will learn basic programming concepts, methods to build arrays and refer to elements of an array, basic operations on arrays, loop and conditional commands, generating of simple plots using the MATLAB tool. *Credit units: 3 ECTS Credit Units: None. Aut (A. S. Mumcu, H. Öncül)*

CS 153 Introduction to Computing I

Digital text, video files and executable programs are stored in Web sites. These documents contain cross-references or links to other web documents that are on the same computer or other computers of a network. This course explains HTML (Hyper Text Markup Language) that is to write web documents. Web browsers, such as Netscape, MS Internet Explorer and Mosaic are explained. Web page design and interaction principles are introduced. *Credit units: 3 ECTS Credit Units: 6. Aut (D. Eker)*

CS 154 Introduction to Computing II

A continuation of CS 153, this course will cover the basics of Internet and the World Wide Web, the basic tags, URLs (Uniform Resource Locaters) and cross references, multi media files, data entry forms, image maps, CGI (Common Gateway Interface) programs and the Java language. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CS 153. Aut (M. H. Erdoğ)*

CS 155 Multimedia Authoring System and Standards

Multimedia programming: basic tools and hypertext mark-up language (HTML), innovative applications and multitasking in the multimedia environment. Introduction to authoring systems: Currently used authoring systems. Paradigm structure of the authoring systems: Authoring and script paradigm, iconic/flow paradigm, frame paradigm, card/scripting paradigm and hypermedia linkage paradigm. Authoring process and interface metaphors, multimedia scripting and scripting languages. Communication through multimedia applications: Audio, motion, graphics and user interaction. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CS 154. Aut (M. H. Erdoğ)*

CS 156 Introduction to Advanced User Interfaces

Window management systems. Color-map and true color display procedures. Events, event trapping and buffering. Multi-media data and their display techniques. Designing interfaces for the web. Complexity of an interface as a function of data transfer and response time. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CS 155.*

CS 201 Fundamental Structures of Computer Science I

The course introduces the abstract data types of lists, queues, and stacks, and queues, and shows how one can implement them in C++ using fundamental data structures. It also introduces recursion and studies recursion as a problem solving technique using data abstraction. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CS 102. Aut (S. Aksoy, A. Dayanık)*

CS 202 Fundamental Structures of Computer Science II

The course discusses concepts related with algorithmic efficiency on basic abstract data types. First the course introduces algorithmic efficiency on basic abstract data types and some sorting algorithms that utilize recursion. Then the course discusses the abstract data types of trees, tables, priority queues, and graphs. It also shows how one can implement these abstract data types in C++ using fundamental data structures by emphasizing run-time complexity analysis. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CS 201.*

CS 223 Digital Design

Number systems, data representation and codes. Boolean algebra, canonical forms, logic gates, minimization of logic circuits. Analysis and design of combinational circuits, verification. Decoders, encoders, multiplexers, programmable logic, combinational functional implementation. Arithmetic functions and circuits. Flip-flops, sequential circuit analysis and design. Registers, counters, register transfer and micro operations. Algorithmic state machines, sequencing and hardwired control. Memory technology, SRAM and DRAM. Basic computer organization and design. Representing digital circuits with hardware description language. *Credit units: 4 ECTS Credit Units: 8. Aut (M. Baray, W. Sawyer)*

CS 224 Computer Organization

Instruction set architecture (ISA), ISA design considerations, RISC vs. CISC, assembly and machine language, programming a RISC machine. Computer arithmetic, arithmetic logic unit, floating-point numbers and their arithmetic implementations. Processor design, data path and control implementation, micro programmed control, exception detection. Pipelining, hazards, pipelined processor design, hazard detection and forwarding, branch prediction and exception handling. Memory hierarchy, principles, structure, and performance of caches, virtual memory, segmentation and paging. I/O devices, I/O performance, interfacing I/O. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CS 223.*

CS 281 Computers and Data Organization

File organization and indexing. Sequential and direct file processing techniques. Indexed and hash files. Database management systems. Relational data model. Relational algebra and calculus. SQL query language.

Database design. Database application development. Recovery and concurrency. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CS 101 or CS 111. Aut (U. Güdükbay, Ö. Ulusoy)*

CS 299 Summer Training I

The minimum time for this practice in an organization is four weeks (20 working days). The main objective is to observe a company in an original setting and answer questions on the fundamental areas of Computer Engineering and Information Science. A written report summarizing the training experience is required. *Credit units: None ECTS Credit Units: None. Aut (Staff)*

CS 315 Programming Languages

Language evaluation criteria. Describing syntax and semantics. Tools for constructing lexical and syntactical analyzers. Names, bindings, type checking, and scopes. Data types. Expressions and the assignment statement. Statement-level control structures. Subprograms. Abstract data types. Concurrency. Exception handling. Functional programming languages. Logic programming languages. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CS 102 or CS 112. Aut (P. Duygulu, H. A. Güvenir, U. Saranlı)*

CS 319 Object-Oriented Software Engineering

Principles and stages of object-oriented software development. Overview of object-oriented software modeling with Unified Modeling Language and exposure to CASE tools for object-oriented development. Experience with such tools and environments through programming assignments and/or a term project. *Credit units: 4 ECTS Credit Units: 6, Prerequisite: CS 102 and CS 201. Aut (K. Dinçer, U. Doğrusöz, M. Schaal, B. Tekinerdoğan)*

CS 342 Operating Systems

Introduction to operating systems concepts. The operating system as a resource manager. Command languages. Job management and job scheduling. Process management. Memory management, virtual memory, and paging. Interrupt structures and interrupt processing. Message-driven systems and data management. Device management, I/O systems, and I/O processing. Examples of operating systems such as MS-DOS, UNIX. *Credit units: 4 ECTS Credit Units: 6, Prerequisite: CS 101 and CS 224.*

CS 351 Data Organization and Management

Structure, organization, and processing of files. Physical characteristics of storage media. Sequential file creation and update. Sort/merge algorithms. Direct file processing techniques. Indexed and hash files, creation and update. Secondary key retrieval techniques. File inversion and multiple linked list structures and their maintenance. B^+-trees as index structures and their maintenance. Introduction to database management systems. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CS 202. Aut (E. Arkun, F. Can)*

CS 352 Database Management Systems

Review of relational data model and the relational manipulation language SQL. Additional relational languages: QBE, QUEL. Integrity constraints. Logical database design, dependency theory and normalization. Query processing and optimization. Transaction processing, concurrency control, recovery, and security issues in database systems. An overview of object-oriented and object-relational databases, distributed databases, and emerging database applications. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CS 331 or CS 351.*

CS 399 Summer Training II

The minimum time for this practice in an organization is four weeks (20 working days). The main objective is to observe a company in an original setting and answer questions on the fundamental areas of Computer Engineering and Information Science. A written report summarizing training experience is required. *Credit units: None ECTS Credit Units: None, Prerequisite: CS 299. Aut (Staff)*

CS 411 Software Architecture Design

This course teaches the basic concepts, methods and techniques for designing software architectures. The topics include: rationale for software architecture design, modeling software architecture design, architectural styles/patterns, architectural requirements analysis, comparison and evaluation of architecture design methods, synthesis-based software architecture design, software product-line architectures, domain modeling, domain engineering and application engineering, software architecture implementation, evaluating software architecture designs. *Credit units: 3 ECTS Credit Units: 6.*

CS 412 Enterprise Software Systems

This course will introduce the concept of Enterprise Software by going over its unique properties and requirements while primarily focusing on the J2EEspecification and comparing it to other software development approaches. The topics that will be covered include Multi-tiered application development, J2EE concept, J2EE Application servers, Java RMI, Enterprise Java Beans, Entity beans, Session beans, Message-driven beans, EJB Container Functionality, EJB persistence, bean-managed vs container-managed persistence, EJB Life cycle, EJB Passivation/Activation, Transactions, Locals Distributed, Isolation levels, Two-phase commit protocol, container-managed vs bean-managed transactions. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CS 319 and CS 352.*

CS 413 Software Engineering Project Management

Critical issues in preparation of proposals for technical specifications in software projects. Overview of cost analysis techniques and project management tools. Standards for information technology such as EIA/IEEE J-STD-016-1995. Technical documentation including software requirements specification (SRS), interface requirement specification (IRS), software design description (SDD), database design description (DDD), software test description (STD), software version description (SVD) as well as planning including software development plan (SDP), software test plan (STP), software installation plan (SIP) and software transition plan (STRP). Software code and document revisioning according to software configuration management principles. Preparation of software maintenance documents and user manuals. The course is term project based and requires active involvement in all of the abovementioned software engineering and management processes. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

CS 415 Software Product Line Engineering

Software reuse, SPLE methods, domain engineering, application engineering, commonality and variability analysis, variability modeling, reference architecture, application architecture, software product portfolio management, software product line scoping, testing in SPLE, organization structures for SPLE, risks of SPLE, adoption strategies for SPLE. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CS 319.*

CS 416 Compiler Design

Development of the logical design of a compiler: lexical analyzer, parser, semantic analyzer, code generator, code optimizer, and error recovery routines. Analysis of formal algorithms for each component, description of overall compiler construction techniques. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CS 315. Aut (İ. Çiçekli)*

CS 418 eBusiness Technologies and Business Solutions using eBusiness Patterns and Technologies

This course introduces solution patterns for specific Business solutions like eCommerce, Customer Relationship Management, Supply Chain Management and Business Intelligence. This course also introduces necessary background information like eBusiness Building Blocks and Enterprise Application Integration. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CS 351 and CS 342 and CS 315.*

CS 421 Computer Networks

Basic concepts of data transmission. Overview of networks. ISO-OSI model description. Circuit switching, packet switching. Network topology. Physical link layer. Communication techniques. Data link layer, flow control and error recovery. Network layer. Local area networks. Examples of commonly used networks and their protocols. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: (CS 102 OR CS 112) AND (MATH 230 OR MATH 250). Aut (T. Dayar, E. Karaşan)*

CS 422 Wireless Networking Technologies and Applications

Wireless networking fundamentals. Wireless channel characteristics. Wireless LANs. Medium access control in WLANs. Blue tooth and WPANs. WiFi/Bluetooth coexistence. Ad hoc networks. MANET routing algorithms. Mobile IP, DHCP, NAT. Wireless sensor networks. Real-time OS for wireless sensor applications. Network programming for mobile applications. Energy-efficient routing and scheduling in sensor networks. TCP performance in wireless networks. *Credit units: 3 ECTS Credit Units: 6.*

CS 423 Computer Architecture

Structure of computing systems. Instruction sets and data types. Architectural design issues. Processor evaluation and benchmarking. Principles of RISC architectures. Pipelining and other advanced techniques for performance improvements. Memory systems: virtual memories, caches, and their management. I/O systems. Introduction to parallel computing, interconnection networks, and multiprocessors. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CS 224 or CS 228. Aut (Ö. Öztürk)*

CS 424 Computer Network Programming

Introduction to Sockets, Elementary TCP Sockets, I/O Multiplexing, Socket Options, Elementary UDP Sockets, Name and Address Conversions, Daemon Processes, Advanced I/O Functions, UNIX Domain Protocols, Non-Blocking I/O, Routing Sockets, Broadcasting, Signal Driven I/O, threads, IP Options, Raw Sockets, Datalink Access, Interprocess Communication, Shared Memory, Message Queues. *Credit units: 3 ECTS Credit Units: 6.*

CS 431 Embedded Systems

This course is intended to give the students an understanding of the requirements, constraints and tools associated with the design and implementation of software systems that govern the operation of physical hardware. Since such systems are often combinations of electrical, mechanical and software components, we will learn about important aspects of design and implementation in each of these domains in the context of laboratory sessions and a term project. Specific topics will include real-time operating systems and concepts, microcontrollers and embedded development, communication protocols, data acquisition, sensory signal processing and basic control theory. *Credit units: 4 ECTS Credit Units: 7, Prerequisite: EEE 212.*

CS 442 Distributed Systems and Algorithms
Fundamentals of distributed systems and algorithms. Problems, methodologies and paradigms that are necessary for understanding and designing distributed applications with an emphasis on fault tolerance. Theoretical concepts will be complemented with practical examples of their application in current distributed systems. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CS 342.*

CS 446 Database Management Systems II
Principles of scalable data management with a focus on data warehousing and mining applications, multimedia and biomedical databases; storage and access structures, querying and mining, multi-dimensional indexing, row-store and column-store databases, database performance. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CS 352.*

CS 452 Systems Analysis and Design
A study of the methods used in analyzing needs for information and in specifying requirements for an application system. Implementation of the operational system, integration of computer technology, and aspects of organizational behavior in the design support system are examined. Topics include the concept of the system life cycle, the iterative nature of the processes of analysis and design, and the methodology for developing a logical specification and physical design for an operational system. *Credit units: 3 ECTS Credit Units: 6.*

CS 461 Artificial Intelligence
What is artificial intelligence? Problem-solving techniques: state-space approach, problem-reduction approach, problem model, problem representation, exhaustive search algorithms (breadth-first, depth-first, iterative deepening, and other strategies), heuristic search algorithms (A*). Game-playing. Knowledge representation and reasoning: syntax, semantics, and proof theory (deductive inference) of propositional logic, first-order predicate logic, production systems, semantic nets, and frames. Knowledge base, expert systems, inference engine. Machine learning: inductive inference, analogical inference, abductive inference, learning by instruction, learning from examples, conceptual clustering, explanation-based learning, connectionist learning (neural networks). Vision, robotics. *Credit units: 3 ECTS Credit Units: 6. Aut (V. Akman)*

CS 464 Introduction to Machine Learning
Bayesian decision theory, parametric methods, nonparametric methods, decision trees, linear discrimination, multilayer perceptrons, unsupervised learning and clustering, hidden Markov models, reinforcement learning. *Credit units: 3 ECTS Credit Units: 6. Aut (İ. Çiçekli)*

CS 465 Computer Graphics I
Introduction to computer graphics. The rendering pipeline. Rasterization algorithms. Two-dimensional and three-dimensional transformations. Quaternions. Hierarchical modeling. Animation. Viewing transformations. Rendering basics. Illumination and color models. Geometrical Modeling. Hidden surface elimination problem. *Credit units: 4 ECTS Credit Units: 6. Aut (U. Güdükbay)*

CS 466 Computer Graphics II
This laboratory-lecture course is an advanced application of computer graphics techniques. Shading, deformation, ray tracing, radiosity, texture mapping, fractal representation and various other advanced techniques are discussed. Concepts of motion are introduced for the generation of digital animation. Concepts of graphical workstation design, especially with respect to user interfaces and window managers are introduced. *Credit units: 4 ECTS Credit Units: 6, Prerequisite: CS 465.*

CS 468 Principles of User Interface Design
Introduction and basic concepts in man-machine interaction. Principles of operation of interaction hardware and software. Events, event trapping and buffering. Windows, menus, panels; their inter-communication and interaction techniques. Problems of functionality, clarity, complexity and efficiency in designing interfaces. Robustness and error issues related to user interfaces. *Credit units: 3 ECTS Credit Units: 6. Aut (T. Çapın)*

CS 470 Introduction to Applied Cryptography
This course gives a mild introduction into the field of cryptography and data security by exposing a number of applications. The course begins with an introduction of fundamental building blocks of cryptography such as secret and public-key primitives and cryptographic hash functions. The standard classification of cryptographic attacks is presented. Application examples will include secret sharing, digital cash, coin flipping and fair exchange over the internet, secure multi-party computation. The course will conclude with a brief summary of the politics of cryptography, e.g. export controls, and legal issues surrounding personal privacy. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CS 202.*

CS 471 Numerical Methods
Surveys and applications of numerical techniques related to matrix inversion, systems of linear equations and optimization, finite difference expressions, interpolation and approximation, numerical differentiation and integration. The problems of speed, accuracy and applicability of the topics are examined with related algorithms. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MATH 225.*

CS 473 Algorithms I
Asymptotic notation. Divide and conquer approach. Solving recurrences: substitution method, master method. Bounding summations. Analysis of randomized quicksort. Medians and order statistics. Heaps: heapsort, priority queues. Sorting in linear time. Dynamic programming. Greedy algorithms. Amortized analysis: aggregate, accounting and potential methods, dynamic tables. Elementary graph algorithms: breadth-/depth-first search, topological sort, strongly connected components. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CS 202. Aut (C. Aykanat, U. Doğrusöz)*

CS 476 Automata Theory and Formal Languages
Finite automata, regular expressions, regular languages and their properties, the pumping lemma. Context free grammars and languages, normal forms, pushdown automata, the pumping lemma for the CFLs. Turing machines and their properties. Decidability and undecidable languages. Complexity theory, NP-completeness. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CS 201.*

CS 481 Bioinformatics Algorithms
This course is intended for advanced undergraduates who are interested in learning fundamental methods related to problems in bioinformatics. Some background in algorithms and data structures is required. We will start with algorithms for biomolecular sequence analysis, in particular the Needleman/Wunsch global alignment algorithm, the Smith/Waterman local alignment, pattern matching algorithms and sequence similarity search data structures. We will then move to multiple sequence similarity and alignment, phylogenetic trees, in particular distance based hierarchical clustering and protein and genome sequence database search. We will also talk about the structure of the human genome, genome repeats and problems related to genome sequencing and assembly. We will then move to structural bioinformatics, in particular, the RNA secondary structure prediction problem, and talk about the thermodynamic model. We will also briefly mention problems in systems biology. The computational techniques that will be emphasized include dynamic programming, learning algorithms and in particular those related to Hidden Markov Models, approximation algorithms especially for clustering problems and randomized algorithms and heuristics. Grading will be based on a number of theoretical and practical assignments in addition to one midterm examination and one final exam. *Credit units: 3 ECTS Credit Units: 6.*

CS 482 Logic for Computer Science
Introduction to logic for computer scientists. An elementary exposition, from a computational point of view, of propositional logic, first-order logic, axiomatic theories, and theories with equality. Interpretations, models, validity, proof. There is considerable emphasis on presenting many of the fundamental ideas of first-order logic in the framework of Tarski's World, an educational proprietary software. *Credit units: 3 ECTS Credit Units: 6. Aut (U. Saranlı)*

CS 484 Image Analysis
Image acquisition, sampling and quantization. Spatial domain processing. Image enhancement. Texture analysis. Edge detection. Frequency domain processing. Color image processing. Mathematical morphology. Image segmentation and region representations. Statistical and structural scene descriptions. Applications. *Credit units: 3 ECTS Credit Units: 6.*

CS 490 Introduction to Research in Computer Engineering and Science
The purpose of this course is to introduce students to research techniques in computer engineering and science. Each student is assigned a research topic that is suitable to his/her academic background and interests. Under the supervision of a departmental faculty member, the student will tackle the problem and try to find a satisfactory solution. Written and oral presentations of results are required. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: Consent of the course coordinator. Aut (H. A. Güvenir)*

CS 491 Senior Design Project I
A technical project emphasizing engineering design principles on a specific topic in any field of computer science or engineering to be carried out by the team of senior students under the supervision of a faculty member. Students work within a team of 3 to 5 students. Three formal reports summarizing the specifications, analysis and the high level design of the project are required. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

CS 492 Senior Design Project II
A technical project emphasizing engineering design principles on a specific topic in any field of computer science or engineering to be carried out by the team of senior students under the supervision of a faculty member. Students continue the project they started in CS 491 course, with the same team. Two formal reports summarizing the low level design and the implementation of the project and an oral presentation, including a demo, are required. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CS 491. Aut (Staff)*

GRADUATE COURSES

CS 502 Algorithms II
Minimum spanning trees: algorithms of Kruskal and Prim. Single-source shortest paths: Dijkstra's and Bellman-Ford algorithms, shortest paths in directed acyclic graphs. All-pairs shortest paths: Floyd-Warshall and Johnson's algorithms. Parallel algorithms: pointer jumping, CRCW versus EREW, Brent's theorem, prefix computation. Polynomials and the FFT. String matching: Rabin-Karp algorithm, string matching with finite automata, Knuth-

Morris-Pratt and Boyer-Moore algorithms. Elementary computational geometry algorithms. Approximation algorithms: vertex-cover, traveling salesman and subset-sum problems. *Credit units: 3 ECTS Credit Units: 7.5, Prerequisite: CS 473 or equivalent.*

CS 503 Modeling and Simulation

Introduction to modeling and simulation. Simulation input data analysis. Random variate generation. Simulation output data analysis. Comparing systems via simulation. Discrete event simulations. Specific practices focusing on defense industry and game programming including; overview of some modeling and simulation, High Level Architecture (HLA), behavior modeling, optimization and analysis. *Credit units: 3 ECTS Credit Units: 6.*

CS 511 Introduction to Performance Modeling

Performance modeling with stochastic processes (introduction, Little's law and the M/M/1 queue, stochastic processes), single-server queueing models (M/M/1 queueing models, M/G/1-FCFS queueing models with various scheduling disciplines, G/M/1-FCFS and G/G/1-FCFS queueing models, PH/PH/1 queueing models), queueing network models (open queuing networks, closed queueing networks, BCMP queueing networks), stochastic Petri nets, numerical solution of Markov chains, simulation. *Credit units: 3 ECTS Credit Units: 7.5.*

CS 512 Computer Networks

The uses of computer networks. Network structure and architectures. ISO reference model. Principles of packet and message switching, network topology, virtual circuits, flow control, local area networks, Ethernet, token ring networks, protocols, discussion of some networks and their properties, network planning and management. *Credit units: 3 ECTS Credit Units: 7.5.*

CS 513 Implications of the Internet

Basic concepts and history of the Internet. Origins of the information society. Access to information in the networked world. The Internet as a communications medium. Publishing on the Internet. Selling goods and services on the Internet. Entertainment on the Internet. Educational potential of the Internet. Security and privacy issues. Censorship and politics of the Internet. Tensions between local vs. global, individual vs. corporate, and democracy vs. authoritarianism in the context of Internet. *Credit units: 3 ECTS Credit Units: 7.5.*

CS 514 Wireless Ad Hoc and Sensor Networks

Introduction to ad hoc networks, ad hoc Wireless MAC protocols, ad hoc routing protocols, service discovery, bluetooth and 802.11, introduction to sensor networks, sensor network architectures, hardware and software platforms and tools, topology control and routing in sensor networks, transport protocols, data dissemination and data fusion, data storage and querying in sensor networks, sensor data processing, power management and network lifetime, sensor network applications *Credit units: 3 ECTS Credit Units: 7.5.*

CS 515 Mobile and Wireless Networking

Wireless Link Characteristics, Wireless Media Access, Wireless and Mobile Network Architectures, Mobile Routing, Mobile IP, Transport Protocols over Wireless Networks, Wireless LANs, Bluetooth Technology and Applications, Wireless Cellular Networks, Wireless Application Protocol, Ad-hoc Networks and Routing, Device and Service Discovery, QoS in Mobile Networks, Peer-to-Peer Networks and Applications. *Credit units: 3 ECTS Credit Units: 7.5. Aut (İ. Körpeoğlu)*

CS 518 Capacity Planning for Web Services

Web services rely on large-scale systems that consist of thousands of computers, networks, software components, and users. Large scale systems are inherently complex. The randomness associated with the way users request Web services compounds the problem of managing and planning the capacity of those services. The Web has special features that make its performance problems unique and demand novel approaches to dealing with them. This course presents a sound and practical approach to addressing these challenges using models based on probability fundamentals and the theory of queuing networks. In this way, it provides a quantitative approach to analyzing Web services, which lends, itself to the development of performance and availability predictive models for managing and planning the capacity of Web services. *Credit units: 3 ECTS Credit Units: 7.5.*

CS 519 Cryptography and Network Security

Fundamental concepts of cryptography, block ciphers, stream ciphers, cryptographic hash functions, differential and linear cryptanalysis, publickey encryption, digital signatures, key distribution protocols, key management, authentication systems, security protocol pitfalls, strong password protocols, Kerberos, Internet cryptography, IPsec, SSL/TLS, e-mail security, firewalls. *Credit units: 3 ECTS Credit Units: 7.5. Aut (A. A. Selçuk)*

CS 522 Networks and Algorithms for Parallel Computation

Basic concepts in parallel and systolic computation; elementary algorithms for linear arrays and grids; retiming and systolic conversion theorem; algorithms for meshes of trees, hypercubes, hypercubic networks and product networks; data routing and communication on parallel architectures; graph embedding methods; complexity models for VLSI processor arrays. *Credit units: 3 ECTS Credit Units: 7.5.*

CS 524 Algorithm Design for Parallel Computers
Taxonomy of parallel architectures. Interconnection networks. Basic communication operations. Performance of parallel systems: speedup, efficiency, cost, granularity and data mapping, sources of parallel overhead. Scalability of parallel systems: overhead function, isoefficiency, cost optimality, degree of concurrency. Matrix partitioning schemes. Dense matrix transposition, matrix-vector multiplication, matrix-matrix multiplication, solution of linear system of equations. Solution of sparse linear system of equations: iterative methods, load-balancing and communication minimization, direct methods, scheduling problem. *Credit units: 3 ECTS Credit Units: 7.5.*

CS 527 Advances in Switching Networks
This course will focus on recent advances in circuit and packet switching research. Its main goal is to familiarize the student with the frontier research results and open problems in the field. The format of the course is designed to encourage the students to develop research skills by reading and discussing the research results and techniques that have been described in the articles that are contained in the text and elsewhere in the related literature. The students will be assigned a number of papers for reading, presenting them in class, and evaluating their importance. *Credit units: 3 ECTS Credit Units: 7.5. Aut (Y. Oruç)*

CS 528 Advances in Switching Networks II
This course will focus on recent advances in packet switching research. Its main goal is to familiarize the student with the frontier research results and open problems in the field. The format of the course is designed to encourage the students to develop research skills by reading and discussing the research results and techniques that have been described in the articles that are contained in the text and elsewhere in the related literature. The students will be assigned a number of papers for reading, presenting them in class, and evaluating their importance. *Credit units: 3 ECTS Credit Units: 7.5.*

CS 531 Advances in Data Management Research
Managing and mining biological data (structural bioinformatics, similarity-based analysis of biomolecular sequences and structures, protein folding, gene expressions); high dimensional databases (indexing, similarity searching, multimedia, time-series), bitmap index systems (organization, compression, query processing), data stream management systems. *Credit units: 3 ECTS Credit Units: 7.5.*

CS 532 Database Systems
Serializability theory. Locking, timestamp-ordering, optimistic schedulers. Multiversion and distributed concurrency control. Distributed atomic commitment protocols. Multidatabase systems. Active database systems. Real-time database systems. Object-oriented database systems. *Credit units: 3 ECTS Credit Units: 7.5.*

CS 533 Information Retrieval Systems
Introduction to information storage and retrieval (IR). IR vs. DBMS. User perspective, search models, evaluation of IR systems. Formal IR models. Data structures and techniques including, inverted files, signature files, information filtering, clustering and cluster-based retrieval, hypertext and multimedia systems. IR and the Internet, browsing strategies, search engines, web robots and intelligent agents. *Credit units: 3 ECTS Credit Units: 7.5.*

CS 536 Distributed Database Systems
Database distribution architectures. Distributed query processing. Distributed query optimization. Distributed transaction management. Distributed concurrency control. Distributed reliability protocols. Multidatabase systems. Mobile distributed database management. *Credit units: 3 ECTS Credit Units: 7.5.*

CS 540 Parallel Programming Languages-Systems
Parallel programming models, languages and environments. Fundamental concepts: memory hierarchy, communication, locality, latency, synchronization, load balancing. Parallel programming models: data parallel, shared address space, message passing, data-driven, object oriented, functional. Parallel programming languages and runtime systems: data parallel languages, message passing libraries and language constructs, data-driven object based languages, shared memory programming, multithreading. *Credit units: 3 ECTS Credit Units: 7.5.*

CS 541 Chip Multiprocessors
This advent of large-scale multi-core processors, also known as Chip Multiprocessors (CMPs), will change the way high-performance applications are designed, implemented, and executed. CMPs have advantages over complex uniprocessor systems in terms of ease of validation, power efficiency, and exploiting thread level parallelism. They will not only be the central components of future desktop machines, but they will soon be building blocks for constructing large scale parallel and distributed, computer architectures. Recent chip multiprocessors such as IBM's Cell and Sun's Niagara are an important step in this direction. Among the issues to be studied are chip multiprocessor architectures, motivation and trends, barriers on uniprocessor architectures, cache design and compilation in chip multiprocessors, static and dynamic compilers, future research directions. *Credit units: 3 ECTS Credit Units: 7.5.*

CS 543 Parallel Methods for Scientific Computing
Parallel methods for computations in the areas bionformatics, computational physics, computational chemistry and other disciplines. The theme of the course will be development of parallel/distributed algorithms and/or

software and interdisciplinary projects are emphasized. Students are assumed to be familiar with parallel architectures and parallel programming. *Credit units: 3 ECTS Credit Units: 7.5.*

CS 546 Advanced Operating Systems

Introduction and basic concepts in parallel and distributed operating systems. Synchronization mechanisms: Semaphores, monitors, communicating sequential processes. Deadlocks. Inter-process communication. Theoretical foundations of distributed operating systems: logical clocks, vector clocks, global state and consistency, termination, and agreement protocols. Task Scheduling for Multiprocessor and Distributed Operating Systems. Previous knowledge of operating systems is required. *Credit units: 3 ECTS Credit Units: 7.5.*

CS 548 Robot Motion Control and Planning

Basic concepts of motion planning, representations of state and movement, potential functions, roadmaps, cell decompositions, robot dynamics, basic control, constrained motion, hybrid planning and control, logical reasoning methods for planning. *Credit units: 3 ECTS Credit Units: 7.5.*

CS 550 Machine Learning

Paradigms and issues of machine learning. Introduction to induction, instance and hypothesis spaces, inductive bias, sample complexity, computational complexity. Theory and methodology of induction. A formulation of a general paradigm for inductive inference. Approaches to supervised attribute based induction. Valiant's learning framework. Instance-based learning. Genetic algorithms, genetic-based machine learning, classifier systems. Learning decision trees. Explanation-based learning. Discovery systems. Learning problem solving strategies. Previous knowledge of artificial intelligence is required. *Credit units: 3 ECTS Credit Units: 7.5.*

CS 551 Pattern Recognition

Basics of statistical and structural pattern recognition. Feature extraction and selection. Bayesian decision theory. Parametric and non-parametric density estimation. Clustering. Unsupervised and supervised learning. Classifiers and discriminant functions. Ensemble methods. Syntactic pattern description. Applications. *Credit units: 3 ECTS Credit Units: 7.5.*

CS 554 Computer Vision

Basic concepts in computational vision. Relation to human visual perception. The analysis and understanding of image and video data. Mathematical foundations, image formation and representation, segmentation, feature extraction, contour and region analysis, camera geometry and calibration, stereo, motion, 3-D reconstruction, object and scene recognition, object and people tracking, human activity recognition and inference. *Credit units: 3 ECTS Credit Units: 7.5. Aut (P. Duygulu)*

CS 558 Data Mining

Overview of Data Mining Classification, regression, time series. Measuring predictive performance. Data preparation, data reduction. Mathematical solutions, statistical methods, distance solutions, decision trees, decision rules. Text mining. Case studies. *Credit units: 3 ECTS Credit Units: 7.5. Aut (A. C. Acar)*

CS 564 Computational Geometry

Algorithmic background, data structures, geometric preliminaries, models of computation. Geometric searching, point-location, problems, range-searching problems. Convex hulls, problem statement and lower bounds, convex hull algorithms in the plane, graham's scan, Jarvis's march, QUICKHULL techniques, dynamic convex hull, convex hull in 3D. Proximity problem, a collection of problems, a computational prototype: element uniqueness, lower bounds, the closets-pair problem: a divide-and-conquer approach, the Voronoi diagram, proximity problems solved by the Voronoi diagram triangulation, planar triangulations, Delaunay triangulation, intersections, application areas, planar applications: intersection of convex polygons, star-shaped polygons; intersection of line segments. 3D applications: intersection of 3D convex polyhedra; intersection of half-spaces. *Credit units: 3 ECTS Credit Units: 7.5.*

CS 565 Application of Computer Graphics

Use of computer graphics in various engineering fields. Three dimensional modeling and representation. Color, shading and lighting methods. Representation of surfaces. Graphical databases, graphics standards. Hidden surface problem, motion and animation. Texture mapping, controlled deformations. Previous knowledge of computer graphics is required. *Credit units: 3 ECTS Credit Units: 7.5. Aut (B. Özgüç)*

CS 566 User Interface Design

This course will be a hands-on, advanced class on *human-computer interaction*. It will cover major aspects of human-computer interaction topics in depth: computational models for humans in interaction; input/output technologies and techniques; designing human-computer interactions; UI SW development process; UI experimental design and testing processes. At the end of the course, students will be able to learn recent human-computer interaction solutions, and understand the recent research issues related to interactive computer graphics. *Credit units: 3 ECTS Credit Units: 7.5.*

CS 567 Computer Animation

This course will teach you about current techniques in computer animation. By the end of the course you should be able to: - use the basic animation techniques to produce motion for an animated sequence, - read and critically

evaluate the current literature in computer animation. This course will introduce techniques such as keyframing, morphing, procedural methods, motion capture, and simulation. The course will also explore state-of-the-art research topics in computer animation such as dynamic simulation of flexible and rigid objects, automatically generated control systems, and evolution of behaviors. *Credit units: 3 ECTS Credit Units: 7.5. Aut (H. A. Güvenir)*

CS 568 Advanced Topics in Computer Graphics

Advanced Topics in Computer Graphics, such as simulation of natural phenomena, are discussed. Students are expected to do research on a particular subject, design and implement software, and write a document in an official paper format, discussing the theories, design considerations, and implementation details of their projects. A good prior knowledge of graphics such as formerly having taken CS 466 or CS 565 or CS 567 is expected. *Credit units: 3 ECTS Credit Units: 7.5.*

CS 569 Mobile and Ubiquitous Graphics

Mobile graphics architectures. Mobile rendering and optimization techniques. Mobile user interaction design and implementation techniques. User-centered studies. Camera-based or sensor-based user interaction. Streaming mobile multimedia. Intelligent aware, proactive, and attentive environments, user perception, and modeling of the environment. *Credit units: 3 ECTS Credit Units: 6. Aut (B. Tekinerdoğan)*

CS 570 Graph Theory

Fundamental concepts and methods of graph theory and its applications in various areas of computing and the social and natural sciences. Topics include paths and searching, trees, networks, cycles, planarity, matching, and independence. Certain NP-complete graph problems and their approximation algorithms are discussed. Special topics such as graph drawing and graph coloring are covered. In addition, extremal graph theoretical problems are introduced. Previous knowledge of algorithms is required. *Credit units: 3 ECTS Credit Units: 7.5.*

CS 571 Topics in Graph Theory and Algorithms

A course on special topics in Graph Theory and Algorithms. Presents a detailed study of current research topics in these areas. Prior knowledge of fundamentals of algorithm design and analysis and graph theory required. Special permission from the instructor required. *Credit units: 3 ECTS Credit Units: 7.5.*

CS 572 Theory of Computing

Theory of computational complexity, intractability, unsolvability results. Classification of solvable problems according to their complexities. The class of NP-complete problems. Approximate, online, distributed algorithms, and some impossibility results. *Credit units: 3 ECTS Credit Units: 7.5.*

CS 573 Algorithms I

Asymptotic notation. Divide and conquer: Strassen's algorithm for matrix multiplication, quicksort. Solving recurrences: substitution method, master method. Bounding summations. Randomized quicksort: analysis. Medians and order statistics. Heaps: heapsort, priority queues. Sorting in linear time. Dynamic programming: matrix-chain multiplication, longest common subsequence, O/1 Knapsack problem, resource allocation problem. Greedy algorithms: activity selection problem, Hufmann codes, task scheduling problem. Amortized analysis: aggregate, accounting and potential methods, dynamic tables. *Credit units: 3 ECTS Credit Units: 7.5. Aut (C. Aykanat)*

CS 574 Varieties of Formal Semantics

Beginning model theory. Non-classical logics. Brief review of the pioneering works of Frege, Russell, Tarski et al. in philosophical logic and semantics. Determiners. Quantifiers. Conditionals. Tense and modality. Counterfactuals. Montague's Intensional Logic. Compositionality. Partiality. Nonexistent objects. Situation theory and situation semantics. Discourse representation theory. Paradoxes. Model theory of common knowledge. Situated set theory. *Credit units: 3 ECTS Credit Units: 7.5.*

CS 578 Natural Language Processing

Brief history and overview of natural language processing. Computational morphology, Context-free grammars, unification and unification based grammars such as DCG, PATR, etc. Top-down/bottom-up parsing, chart parsing. Features and the lexicon, semantics, natural language generation. Natural language processing applications. CS 461 or equivalent, and CS 476 or equivalent. *Credit units: 3 ECTS Credit Units: 7.5. Aut (İ. Çiçekli)*

CS 580 Advanced Finite State Techniques in Language Processing

Overview of the theory of finite-state recognizers, transducers and regular languages. Regular relations as mapping between regular languages. Advanced finite state operators and calculus. Finite state applications in natural language processing: computational morphology, disambiguation and tagging, light parsing, information retrieval. *Credit units: 3 ECTS Credit Units: 7.5, Prerequisite: Consent of the instructor.*

CS 584 Text Retrieval Database Design

Principals of document retrieval; Controlled and free-text indexing, Boolean and best match retrieval systems; Probabilistic text retrieval; The nature of human interaction in retrieval systems; Evaluation of text retrieval systems; Knowledge discovery by text retrieval. *Credit units: 3 ECTS Credit Units: 7.5.*

CS 586 Aspect-Oriented Software Development
Aspect-oriented software development (AOSD) is an advanced technology for separation of concerns, which provides explicit concepts to modularize concerns that tend to be more systemic, crosscut a broader set of modules and as such cannot be easily specified in single modules. This course will provide an in-depth analysis of the basic concepts of AOSD and teach the state -of-the-art AOSD techniques. The important topics in this course are following: separations of concerns; software evolution problems; component-oriented software development; examples of crosscutting aspects; aspect-oriented programming using Aspect-J, Composition Filters, Hyper J, Cosmos and Demeter; aspect-oriented modeling; aspects at the requirements and architecture design level; reflection and delegation techniques; design space modeling, composition anomalies. *Credit units: 3 ECTS Credit Units: 7.5. Aut (B. Tekinerdoğan)*

CS 587 Model-Driven Software Development
Software evolution problems, motivation for Model-Driven Software Development (MDSD), domain modeling, meta-modeling, model-driven architecture (MDA), model-driven engineering methods, model-to-text transformations, model-to-model transformations, domain specific languages, software factories, MDSD tools, Architecture-Driven Modernization (ADM), adaption strategies for setting up a model-driven approach, obstacles of MDSD. *Credit units: 3 ECTS Credit Units: 6.*

CS 590 Research Topics
This is a seminar course for graduate students. Faculty and students meet once a week for presentations and discussions. Topics of presentations are chosen by the mutual consent of the supervisors and the students. *Credit units: None ECTS Credit Units: 4. Aut (Staff)*

CS 599 Master's Thesis
Credit units: None ECTS Credit Units: 56. Aut (Staff)

CS 661 Philosophical Foundations of Artificial Intelligence
Action and agency; behaviorism; belief; computational models of mind; concepts; consciousness; content; context; Davidson and anomalous monism; Dreyfus's criticisms; folk psychology; functionalism; Goedel's theorem; intentionality; the Language of Thought; mental representation; naturalism; perception; possible worlds; practical reasoning; propositional attitudes; rationality; reasons and causes; reference; Searle and Chinese Room; the self; thought and language; Turing Test; Weak AI vs. Strong AI. Previous knowledge of artificial intelligence is required. *Credit units: 3 ECTS Credit Units: 7.5.*

CS 670 A Computer Science Introduction to Quantum Computing
This is course is intended as an introduction to the fundamentals of quantum computing to computer scientists. We start by introducing the conceptual background and the mathematical framework of quantum states. Notions such as quantum evolution, measurement, entanglement, and quantum parallelism are introduced. This is followed by the treatment of popular applications of quantum computing: Shor's order finding/factoring algorithm, and Grover's database search algorithm, quantum teleportation and key exchange and quantum error correction. The course is self-contained and requires no prior exposure to the subject matter or advanced level physics. *Credit units: 3 ECTS Credit Units: 7.5.*

CS 681 Advance Topics in Computational Biology
This course is intended for graduate students and advanced undergraduates who would like to learn more about computational methods for solving fundamental problems related to molecular biology. We will talk about genome repeats, their discovery and evolutionary analysis, genome sequence analysis and motif discovery, in particular regulatory element, transcription factor binding site and non-coding RNA identification and search, topics in structural bioinformatics, in particular novel approaches to ncRNA structure prediction, alignment and interaction prediction, small molecule bioinformatics, in particular topics in functional identification, biomolecular networks, their topological properties, evolution and dynamics and other emerging topics in computational molecular biology. The computational techniques that will be covered are both combinatorial and probabilistic; we will also cover many novel machine learning techniques. Grading will be based on class participation, presentations and a final exam. We will have a number of Problem Based Learning sessions to help students improve their collaborative learning, team building and presentation skills. *Credit units: 3 ECTS Credit Units: 7.5.*

CS 690 Advanced Research Topics
This is a seminar course for Ph.D. students. Faculty and students meet once a week for presentations and discussions. Topics of presentations are chosen by the mutual consent of the supervisors and the students. *Credit units: None ECTS Credit Units: 4. Aut (Staff)*

CS 699 Ph.D. Dissertation
Credit units: None ECTS Credit Units: 56. Aut (Staff)

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

A. Altıntaş (Chair), N. Akar, D. Aktaş, Ö. Aktaş, E. Arıkan, O. Arıkan, A. Atalar, E. Atalar, O. Aytür, B. Barshan, M. C. Çavuşoğlu, E. Çetin, H. V. Demir, V. B. Ertürk, S. Gezici, L. Gürel, Y. Z. İder, E. Karaşan, H. Köymen, Ö. Morgül, A. K. Okyay, L. Onural, Ö. Oral, H. Özaktaş, E. Özbay, H. Özbay, A. B. Özgüler, T. Reyhan, H. Yüksel.

Part-time: A. S. Ekinci, M. Eskiyerli, N. Şengezer, O. Urfalıoğlu.

The Department of Electrical and Electronics Engineering offers programs that lead to B.S., M.S., and Ph.D. degrees.

UNDERGRADUATE PROGRAM

Electrical and Electronics Engineering Department will provide a program of the highest quality to produce leader engineers who can address the challenges of the new century and excel at an international level.

With this vision, the mission of the Electrical and Electronic Engineering Department is to provide its graduates with the knowledge and skills needed for high quality engineering work as well as advanced engineering research and to equip its graduates with a broad intellectual spectrum in order to prepare them for diverse and competitive career paths.

As individuals and as members of a team, Electrical and Electronics Engineering majors will have a solid mathematical and scientific background, a strong foundation in engineering areas relevant to current industry needs, an ability to apply design processes discipline to provide resourceful and innovative engineering solutions, an ability to communicate effectively, and to act with social, ethical, and professional responsibility. Our majors will also be equipped with an ability to use computers as a tool for analysis, design, simulation, and control, strong laboratory skills, an understanding of a need for lifelong learning and critical thinking as well as an understanding of social, business, industrial, and human aspects as a complement to their engineering background.

UNDERGRADUATE CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
CS 101	Algorithms and Programming I	4 / 7
ENG 101	English and Composition I	3 / 6
GE 101	Engineering Orientation	1 / 1
MATH 101*	Calculus I	4 / 7
PHYS 101	General Physics I	4 / 6
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
CS 102	Algorithms and Programming II	4 / 7
ENG 102	English and Composition II	3 / 6
MATH 102*	Calculus II	4 / 7
PHYS 102	General Physics II	4 / 6
TURK 102	Turkish II	2 / 1

* Depending on the result of the calculus placement exam given at the beginning of the first year, students may take MATH 111 - MATH 112 - MATH 116 in place of MATH 101 - MATH 102.

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
EEE 102	Introduction to Digital Circuit Design	4 / 6
EEE 211	Analog Electronics	4 / 7
HISTR 201	History of Turkish Republic I	2 / 1

HUM 111	Cultures Civilizations and Ideas I	3 / 4
MATH 241	Engineering Mathematics I	4 / 7

Spring Semester Credits / ECTS Credits

EEE 202	Circuit Theory	4 / 7
EEE 212	Microprocessors	4 / 6
HISTR 202	History of Turkish Republic II	2 / 1
HUM 112	Cultures Civilizations and Ideas II	3 / 4
MATH 242	Engineering Mathematics II	4 / 6

THIRD YEAR

Autumn Semester Credits / ECTS Credits

EEE 299	Summer Training I	- / -
EEE 313	Electronic Circuit Design	4 / 7
EEE 321	Signals and Systems	4 / 7
EEE 351	Engineering Electromagnetics	3 / 5
	Technical Elective (1)	2-4 / 6
	Humanities or Social Sciences Elective (1)	3 / 6

Spring Semester Credits / ECTS Credits

EEE 342	Feedback Control Systems	3 / 6
ENG 400	Technical and Professional Composition	3 / 6
MATH 250	Introduction to Probability	3 / 6
	Restricted Elective (1)	3-4 / -
	Technical Elective (1)	2-4 / 6
	Humanities or Social Sciences Elective (1)	3 / 6

FOURTH YEAR

Autumn Semester Credits / ECTS Credits

EEE 399	Summer Training II	- / -
EEE 491	Senior Project I	3 / 6
GE 301	Science Technology and Society	2 / 1
	Restricted Electives (2)	6-8 / 8
	Unrestricted Elective (1)	0-3 / 6
	Technical Elective (1)	2-4 / 6

Spring Semester Credits / ECTS Credits

GE 304	Technology Society and Professional Development Seminar	1 / 1
	Restricted Elective (3)	9-12 / 24
	Unrestricted Elective (1)	0-3 / 6

RESTRICTED ELECTIVES

CS 421	Computer Networks	3 / 6
CS 431	Embedded Systems	4 / 7
EEE 314	Digital Electronics	4 / 7
EEE 352	Applied Electromagnetics	3 / 6
EEE 405	Introduction to Numerical Analysis	3 / 6
EEE 411	Telecommunication Electronics	4 / 7
EEE 412	Microwave Electronics	4 / 7
EEE 414	Introduction to CMOS VLSI Design	3 / 6
EEE 415	Analog CMOS Integrated Circuits	3 / 6
EEE 416	Principles of Applied Superconductivity	3 / 6
EEE 417	Theory and Modelling of Advanced Nanodevices	3 / 6
EEE 418	Principles of Electronic Devices	4 / 7
EEE 424	Digital Signal Processing	4 / 7
EEE 427	Digital Coding of Waveforms	3 / 6
EEE 428	Optics	4 / 7
EEE 429	Photonics	3 / 6
EEE 431	Telecommunications I	3 / 6
EEE 432	Telecommunications II	3 / 6
EEE 434	Wireless Communications	3 / 6

EEE 436	Wireless Networking Technologies and Applications	3 / 6
EEE 442	Nonlinear Systems	3 / 6
EEE 443	Neural Networks	3 / 6
EEE 444	Robust Feedback Theory	3 / 6
EEE 445	Sampled Data Systems	3 / 6
EEE 447	Introduction to Robotics	3 / 6
EEE 451	Microwave Engineering	4 / 7
EEE 452	Antenna Engineering	4 / 7
EEE 473	Medical Imaging	3 / 6
EEE 474	Foundations of Magnetic Resonance Imaging	3 / 6
EEE 480	Advanced Optoelectronics: Innovative Design	3 / 6
EEE 481	Biomedical Signals and Instrumentation	3 / 6
EEE 492	Senior Project II	3 / 6
EEE 495	Project Rayleigh	3 / -
EEE 520	Multirate Signal Processing and Wavelet Theory	3 / -
EEE 549	Nanoscale Fabrication Technologies for Semiconductors	3 / 7.5
EEE 638	Current Topics in Computer and Communication Networks	3 / 7.5
GE 401	Innovative Product Design and Development I	3 / 6
GE 402	Innovative Product Design and Development II	3 / 6

Students may take at most two EEE 500 or higher coded courses.

GRADUATE PROGRAMS

Graduate programs focus on those fields which are heavily in demand worldwide. Current research areas are signal and image processing, VLSI design, optics, acoustics, electromagnetics, fiber optics, telecommunications, biomedical imaging, and system and control theory. The department emphasizes research with the support of excellent laboratories, computing facilities, and libraries. These facilities are continuously upgraded through various grants from national and international resources. Currently there are image processing, signal processing, optics, robotics and microwave electronics laboratories.

Master of Science

Admission: All applicants are required to have a B.S. degree in Electrical and Electronics Engineering or a related field of science and engineering. All Turkish citizens must take the ALES (Akademik Personel ve Lisansüstü Eğitimi Giriş Sınavı - Academic Personnel and Postgraduate Education Entrance Examination) and have a minimum of 55 points in the quantitative section of the exam. GRE scores are required for international applicants. All non-native speakers of English are required to submit a proof of satisfactory knowledge of English. (Also refer to the “Graduate Admissions” section in the introduction of this catalog for the graduate admissions requirements.)

Degree Requirements: In addition to at least 24 credit units of course work, the M.S. degree candidate must take one research course, and prepare and successfully defend a thesis. The normal duration of M.S. study is four semesters. However, this may be extended for up to two more semesters upon approval of the Graduate Institute.

Doctor of Philosophy

Admission: All applicants are required to have a B.S. degree or a M.S. degree in Electrical and Electronics Engineering or a related field of science and engineering. All Turkish citizens must take the ALES (Akademik Personel ve Lisansüstü Eğitimi Giriş Sınavı - Academic Personnel Postgraduate Education Entrance Examination) and have a minimum of 55 (70 for B.S. degree applicants) points in the quantitative section of the exam. GRE scores are required for international applicants. All non-native speakers of English are required to submit a proof of satisfactory knowledge of English. (Also refer to the “Graduate Admissions” section in the introduction of this catalog for the graduate admissions requirements.)

Degree Requirements: Each student's Ph.D. program is individually planned with a faculty advisor. In addition to successful completion of at least 24 credit units of course work above the M.S. level (48 units of course work above B.S. level), the Ph.D. student is expected to pass qualifying examination, and to prepare and defend a dissertation based on original research. The normal duration for Ph.D. study is eight semesters for students with M.S. degree and ten semesters for students with the B.S. degree. However, these durations may be extended for up to two more semesters upon approval of the Graduate Institute.

COURSE DESCRIPTIONS

UNDERGRADUATE COURSES

EEE 102 Introduction to Digital Circuit Design
Number systems and conversions, data representation, analysis and design of combinational logic circuits, Boolean algebra, logic gates, minimization techniques, sequential logic, flip-flops, registers, clocked circuits, clock generation, counters, shift registers, arithmetic circuits. *Credit units: 4 ECTS Credit Units: 6, Prerequisite: CS 101 or CS 111. Aut (Y. Z. İder, H. Yüksel)*

EEE 202 Circuit Theory
Matrix formulation of KCL, KVL. Resistive circuits, tableau and node equations. Two ports, circuit theorems, thevenin, Norton equivalent circuits, superposition. Simple nonlinear circuits. Operational amplifiers. 1st and 2nd order circuits. General circuit analysis. Sinusoidal steady state. Application of Laplace transform to circuits. *Credit units: 4 ECTS Credit Units: 7, Prerequisite: EEE 211 and (MATH 241 or MATH 225). Aut (M. C. Çavuşoğlu)*

EEE 211 Analog Electronics
Fundamental analog electronics is studied in this course. The course is structured on a scenario of designing a HF radio transceiver. Topics in analog electronics in the frequency range of 100 Hz to 30 MHz range are covered. Block diagram concept, passive electronic components (R, L, C, diode, crystals, etc.) and integrated circuits, as active devices, are discussed. Filters, power supplies, audio amplifiers, speakers, microphones, radio amplifiers, oscillators, mixers, noise intermodulation, and antennas are progressively introduced towards the construction of the transceiver. *Credit units: 4 ECTS Credit Units: 7, Prerequisite: PHYS 102. Aut (Ö. Aktaş, A. Atalar)*

EEE 212 Microprocessors
Introduction to microprocessors and microcontrollers. 8051 microcontroller. 8051 Assembly Language and C Programming. Input/output interfacing. Interrupt programming. *Credit units: 4 ECTS Credit Units: 6, Prerequisite: CS 223 or EEE 102. Aut (H. Yüksel)*

EEE 299 Summer Training I
The minimum time for this practice in an organization is four weeks (20 working days). The main objective is to observe a company in an original setting and work on questions relevant to the company on the fundamental areas of Electronic Engineering. *Credit units: None ECTS Credit Units: None. Aut (Staff)*

EEE 313 Electronic Circuit Design
Diode circuits. Transistors and biasing. Basic transistor amplifiers. Frequency response. Transistor current sources. Differential amplifiers. Multistage amplifiers. Digital circuits and logic gates. *Credit units: 4 ECTS Credit Units: 7, Prerequisite: EEE 202 and EEE 211. Aut (O. Aytür, A. K. Okyay)*

EEE 314 Digital Electronics
MOSFET digital inverters (VTC & Transients). Principles of CMOS circuits and logic layout design. CMOS Gate Circuits and the Analysis. Junction diodes, switching transient, and diode digital circuits. BJT switching transient & Charge-control analysis. Digital DTL & TTL GateCircuits. ECL, Schottky) I^2L, & Bi-CMOS Gates. Regenerative Logic Circuits. Semiconductor Memories and the Circuit Analysis. Sample and Hold Circuits and Data Converters. *Credit units: 4 ECTS Credit Units: 7, Prerequisite: EEE 313.*

EEE 321 Signals and Systems
Basic discrete and continuous signals and systems, linear time-invariant systems, Fourier analysis for continuous and discrete signals and systems, filtering, sampling of continuous time signals, elementary modulation techniques. *Credit units: 4 ECTS Credit Units: 7, Prerequisite: EEE 202. Aut (L. Onural)*

EEE 342 Feedback Control Systems
Use of Feedback: open loop and closed loop control systems. Mathematical Models of Dynamical Systems: State equations, transfer functions. Block diagram manipulations. Bounded Input Bounded Output Stability, Routh-Hurwitz and Nyquist stability test. Relative stability and stability margins. Bode plots. The Root locus method. Design of Feedback controllers. Sensitivity and robustness. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: EEE 321. Aut (Ö. Morgül)*

EEE 351 Engineering Electromagnetics
Review of vector analysis. Static electric fields, electric potential, boundary conditions and capacitances. Steady electric currents. Static magnetic fields, vector magnetic potential, boundary conditions and inductances. Faraday's law of electromagnetic induction. Maxwell's equations. Time-harmonic fields. Plane electromagnetic power and Poynting vector. Reflection of plane waves from plane boundaries. Introduction to transmission lines. *Credit units: 3 ECTS Credit Units: 5, Prerequisite: PHYS 102 and (MATH 102 or MATH 116). Aut (A. Altıntaş, L. Gürel)*

EEE 352 Applied Electromagnetics
Review of static electric and magnetic fields. Dielectric and magnetic materials. Electrostatic and magnetostatic energy and forces. Magnetic circuits, transformers and electromagnetic energy conversion. Basic of electric machinery. Review of Maxwell's equations and plane waves. Reflection and transmission of plane waves at plane boundaries. Transmission lines, Smith chart and impedance matching. Waveguides and cavity resonators. Electromagnetic radiation and antennas. Antenna arrays, effective aperture, Friis transmission formula and radar equation. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: EEE 351.*

EEE 391 Basics of Signals and Systems
Basic discrete and continuous signals, linear time-invariant systems, Fourier analysis for continuous-time and discrete signals. Frequency responses of LTI systems. Continuous and discrete-time filtering. AM modulation, single-sideband modulation, narrow-band FM. Sampling of continuous-time signals, sampling theorem, discrete-time processing of continuous-time signals. Laplace transform, Z-transform. Linear feedback systems. *Credit units: 3 ECTS Credit Units: 6.*

EEE 393 Basic Electrical Engineering
Circuit elements, Kirchhoff's laws, techniques for analyzing linear circuits, linearity and superposition principle Thevenin and Norton equivalent circuits, first-order and second-order circuits, introduction to systems, system components: semiconductors, transistors and integrated circuits, logic element, digital devices, microprocessors, operational amplifiers, transformers, device modeling. *Credit units: 3 ECTS Credit Units: 6.*

EEE 399 Summer Training II
The minimum time for this practice in an organization is four weeks (20 working days). The main objective is to observe a company in an original setting and work on questions relevant to the company on the fundamental areas of Electronic Engineering. *Credit units: None ECTS Credit Units: None, Prerequisite: EEE 299. Aut (Staff)*

EEE 405 Introduction to Numerical Analysis
This course will provide a comprehensive introduction to numerical analysis for students not specializing in computer science or numerical analysis. The emphasis will be on making a broad review, so that the students will be able to choose the appropriate methods and apply them to their problems of interest. The topics to be covered will include direct and iterative numerical methods for systems of linear equations, least squares problems, determination of eigenvalues and singular values, methods for nonlinear equations, optimization problems, interpolation, numerical integration and differentiation, and numerical solution of ordinary and partial differential equations. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MATH 225.*

EEE 411 Telecommunication Electronics
Nonlinear controlled sources: piece-wise linear, square law, exponential and differential pair characteristics. Low level amplitude modulation and analog multiplication. Nonlinear loading of tuned circuits. Sinusodial oscillators. Frequency mixers. High level amplitude modulation techniques. *Credit units: 4 ECTS Credit Units: 7, Prerequisite: EEE 313. Aut (T. Reyhan)*

EEE 412 Microwave Electronics
Microstrip and stripline techniques. Transistor and amplifier measurement techniques. Small and large signal high frequency amplifier design. Noise considerations in amplifiers. RF power amplifiers. Neutralization in RF amplifiers. Computer-aided design of amplifiers. *Credit units: 4 ECTS Credit Units: 7, Prerequisite: EEE 313 and EEE 351.*

EEE 414 Introduction to CMOS VLSI Design
Introduction to CMOS circuits, MOS transistor theory, CMOS processing technology, CMOS circuit characterization. CMOS VLSI circuit design, clocking strategies, case studies. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: EEE 313.*

EEE 415 Analog CMOS Integrated Circuits
Review of MOS device physics, single stage amplifiers, differential amplifiers, current mirrors, frequency response of amplifiers, Miller effect, noise in amplifiers, feedback, operational amplifiers, slew rate, power supply rejection, stability and frequency compensation, band gap references, switched capacitor circuits, nonlinearities, linearization, offset, oscillators, phase locked loops. *Credit units: 3 ECTS Credit Units: 6.*

EEE 416 Principles of Applied Superconductivity
Principles of conductivity, superconductivity phenomenon, properties of superconductors, large scale applications. Type I and type II superconductors and magnetic properties, transport properties, electrodynamics of superconductors, complex conductivity, principles of microscopic theories and applications, superconductor-normal and superconductor-superconductor tunneling, Josephson Junctions and electrical characteristics, RF effects in Josephson Junctions, principles of superconductive interference devices and applications. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: EEE 202 and EEE 351.*

EEE 417 Theory and Modelling of Advanced Nanodevices
Advanced nanodevices course will concentrate on the state-of-the-art in nanoelectronic device concepts. At the beginning of the course, a brief introduction to the physical principles needed to understand the devices to be discussed will be given. Then, the "classical" nanoelectronic devices (HEMT, HBT, nanometer scale MOSFET, and polymer/organic thin-film-transistors) will be discussed. These devices will be investigated through analytical models and using two-dimensional device simulations. In the later part of the course, we will concentrate on novel concepts in molecular/organic devices (nanotubes, molecular-atomic junctions), nanobiodevices (ion-channels, microarrays), spintronics, and data storage systems. *Credit units: 3 ECTS Credit Units: 6.*

EEE 418 Principles of Electronic Devices
Crystal structure and Growth techniques. Foundations of modern electronics. Energy bands in solids. Tunneling. Carrier concentrations and transport properties in semiconductors. Equilibrium states of PN junctions. Transient analysis of PN junction diodes. SS, MS, SIS junction characteristics and principles of special purpose diodes. BJT equilibrium states and Ebers-Moll static model. Secondary effects and transient states in BJTs. Small signal model. JFET characteristics and equilibrium states. Principles of metal-insulator-semiconductor transistors and dc characteristics. *Credit units: 4 ECTS Credit Units: 7, Prerequisite: EEE 202 and EEE 211 and PHYS 102. Aut (Ö. Aktaş)*

EEE 424 Digital Signal Processing
Discrete-time signals and systems. Review of the z-transform. DFT and its compilation. Some other linear transform. DCT, DST, Hartley, Hilbert, Walsh, Hadamard, etc. Digital filters (FIR and IIR) and filtering. Introduction to multirate signal processing. Introduction to time-frequency representations. Inverse problems. *Credit units: 4 ECTS Credit Units: 7, Prerequisite: EEE 321. Aut (O. Urfalıoğlu)*

EEE 428 Optics
Geometrical, scalar wave, and electromagnetic wave theories of light. Gaussian beam propagation. Signals and systems concepts for analyzing optical systems (Fourier optics). Interference, diffraction, imaging, frequency domain filtering, and holography. Polarization, propagation in anisotropic media, optical waveguides, fibers, resonators, and their applications. Temporal and spatial coherence. *Credit units: 4 ECTS Credit Units: 7, Prerequisite: EEE 321 and EEE 351. Aut (H. Özaktaş)*

EEE 429 Photonics
Photon theory of light with matter. Spontaneous emission, absorption, and stimulated emission. Principles of laser amplifiers. Semi-conductor lasers, light emitting diodes, and light detectors. Electro-optics, accousto-optics, and their applications. Introduction to nonlinear optics. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: EEE 428.*

EEE 431 Telecommunications I
Time and frequency domain analysis of signals and systems. Amplitude modulation (AM); modulation and demodulation of double, single and vestigial sideband AM signals. Frequency division multiplexing (FDM). Angle modulation: modulation and demodulation of narrowband frequency modulation (FM); wideband FM; and phase modulation (PM) signals. Superheterodyne receivers. TV systems. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: EEE 321 and MATH 250. Aut (D. Aktaş, S. Gezici)*

EEE 432 Telecommunications II
Pulse modulation: modulation and demodulation of pulse-amplitude modulation (PAM); pulse code modulation (PCM); differential pulse code modulation (DPCM); and delta modulation (DM) signals. Time division multiplexing (TDM). Random processes. Mathematical representation of noise. Noise performance of analog and digital communication systems. Discussion of some of the basic technological aspects of telecommunication systems such as satellite systems and data networks. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: EEE 431.*

EEE 434 Wireless Communications
Evolution of radio communications and broadcast systems, new trends, economics of radio communications. Spectrum usage. Cellular concept, coverage, frequency reuse, interference. Traffic modelling and calculation. Radio propagation. Large scale path loss, small scale fading and multipath. Modulation techniques for mobile radio and broadcast. Multiple access techniques for wireless communications. Networking and planning. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: EEE 431 and MATH 250.*

EEE 436 Wireless Networking Technologies and Applications
Wireless networking fundamentals. Wireless channel characteristics. Wireless LANs. Medium access control in WLANs. Bluetooth and WPANs. WiFi/Bluetooth coexistence. Ad hoc networks. MANET routing algorithms.

Mobile IP, DHCP, NAT. Wireless sensor networks. Real-time OS for wireless sensor applications. Network programming for mobile applications. Energy-efficient routing and scheduling in sensor networks. TCP performance in wireless networks. *Credit units: 3 ECTS Credit Units: 6.*

EEE 442 Nonlinear Systems

Linear versus nonlinear. Basic nonlinear analysis. Nonlinear ordinary differential equations. Second order systems; Poincare-Bendixon theorem, limit cycles. Stability in the sense of Lyapunov. Input-output stability, passivity, small gain theorem. Singular pertubations. Differential geometric methods. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: EEE 342.*

EEE 443 Neural Networks

The structure of the brain. Learning in machines. Pattern recognition. Classification techniques. Linear classifiers. Basic Neuron. Modeling the single neuron. The perceptron. The multilayer perceptron. Kohonen self-organizing network. Hopfield network. Neural network classifiers. Adaptive resonance theory. Cellular neural networks. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: EEE 342. Aut (Ö. Morgül)*

EEE 444 Robust Feedback Theory

Review of time and frequency domain analysis and design of feedback systems. Internal stability, asymptotic tracking, performance. Robust stability and robust performance. Stabilization. Parametrization of stabilizing controllers. Loopshaping. Model matching. Introduction to H-infinity control. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: EEE 342.*

EEE 445 Sampled Data Systems

Theory of sampling. State-space and frequency domain representations of single-rate multivariable sampled-date systems. Deadbeat and ripple-free deadbeat control. Generalized hold functions. Synthesis of digital controllers. Multi-rate sampled-data systems: state-space representation, transfer function matrices, stability analysis. Decentralized control of multi-rate systems. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: EEE 342.*

EEE 447 Introduction to Robotics

Robot arm kinematics; robot arm dynamics; planning of manipulator trajectories; Range sensing (time-of-flight and triangulation systems), proximity sensing (optical, magnetic, capacitive, inductive, ultrasonic), tactile sensing, force and torque sensing. Mobile robots (map building, path planning, navigation, obstacle avoidance, target identification and tracking). *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MATH 241 and PHYS 102. Aut (B. Barshan)*

EEE 451 Microwave Engineering

Transmission lines and waveguides. Circuit theory for waveguiding systems, scattering matrix formulation. Excitation of waveguides. Impedance transformation and matching. Smith chart. Passive microwave devices. *Credit units: 4 ECTS Credit Units: 7, Prerequisite: EEE 352. Aut (V. B. Ertürk)*

EEE 452 Antenna Engineering

Fundamentals of electromagnetic radiation. Antennas and antenna impedance. Small and finite size dipole antennas. Ground interference effects. Loop antennas. Aperture antennas. Parabolic reflectors. Microstrip antennas. Other practical antenna configurations. Analysis and synthesis of linear arrays. Self impedance. Moment methods. Radio wave propagation. *Credit units: 4 ECTS Credit Units: 7, Prerequisite: EEE 351.*

EEE 473 Medical Imaging

The course teaches the fundamentals and applications of four medical imaging techniques: magnetic resonance imaging, ultrasound, nuclear medicine X-ray computed tomography. *Credit units: 3 ECTS Credit Units: 6.*

EEE 474 Foundations of Magnetic Resonance Imaging

Nuclear magnetic resonance signals were first detected in 1945. Since then, research on this amazing phenomenon continues at an increasing pace. In this course, the basic principles of magnetic resonance imaging (MRI), instrumentation, and various methods used in MRI are taught. Various research areas in this highly active field are discussed. *Credit units: 3 ECTS Credit Units: 6. Aut (E. Atalar)*

EEE 480 Advanced Optoelectronics: Innovative Design

Review of physics of optoelectronic devices. Heterostructures. Optical absorption, emission and refraction processes. Junction theory. Light emitting diodes. Laser diodes. Photodetectors. Solar cells. Modulators. Photonic switches. Integrated photonic devices. Nano-scale photonic devices. Innovative optoelectronic devices. *Credit units: 3 ECTS Credit Units: 6.*

EEE 481 Biomedical Signals and Instrumentation

Biophysics of cell membranes, models of neuron membrane potential, Hodgkin-Huxley equations for the action potential, propagation of the action potential, neurocommunication, simple neural networks which explain behavior, volume conductor fields, theory of Electrocardiography (ECG), ECG amplifiers and instrumentation ECG signal processing, EEG, EMG, and other bioelectric signals, model of the cardiovascular system, model of the

respiratory system, model of the neurocardiac control system, transducers for bioelectric, cardiovascular and respiratory measurements, preconditing circuits and instrumentation techniques. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: EEE 313 and EEE 321 and EEE 351.*

EEE 491 Senior Project I
A technical project emphasizing engineering design principles on a specific topic in any field of electrical engineering to be carried out by the senior student under the supervision of a faculty member. *Credit units: 3 ECTS Credit Units: 6. Aut (Ö. Aktaş, Y. Z. İder, H. Köymen, T. Reyhan)*

EEE 492 Senior Project II
A technical project emphasizing engineering design principles on a specific topic in any field of electrical engineering to be carried out by the senior student under the supervision of a faculty member. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

EEE 495 Project Rayleigh
A senior design project involving design and implementation of a complete system. Project includes different disciplines such as analog and digital electronic design, signal acquisition and processing, measurement techniques and telecommunication systems design. The project is divided into 2 or 3 sub projects, each of which is carried out by a member of the team. *Credit units: 3 ECTS Credit Units: None.*

GRADUATE COURSES

EEE 501 Linear System Theory
Mathematical preliminaries: linear spaces, linear transformations, matrix algebra, normed linear spaces, inner product spaces, differential equations, distributions, Fourier transform. Dynamical system concepts: state, response, equivalence, linearity, time-invariance. Linear differential systems: solution, impulse response, stability, controllability and observability, time-invariant systems, periodically varying systems. Discrete-time systems. Some applications: linear quadratic optimization, estimation, filtering identification. *Credit units: 3 ECTS Credit Units: 7.5. Aut (A. B. Özgüler)*

EEE 505 Introduction to Numerical Analysis
This course will provide a comprehensive introduction to numerical analysis for students not specializing in computer science or numerical analysis. The emphasis will be on making a broad review, so that the students will be able to choose the appropriate methods and apply them to their problems of interest. The topics to be covered will include direct and iterative numerical methods for systems of linear equations, least squares problems, determination of eigenvalues and singular values, methods for nonlinear equations, optimization problems, interpolation, numerical integration and differentiation, and numerical solution of ordinary and partial differential equations. Recent methods in numerical analysis. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 511 Telecommunication Electronics
Resonant circuits, impedance matching, filter sections. Bandwidth estimation, open circuit time constants, short circuit time constants. RF amplifiers. Nonlinear circuits. Oscillators. Mixers. Phase locked loop. *Credit units: 3 ECTS Credit Units: 7.5. Aut (T. Reyhan)*

EEE 512 Microwave Electronics
Microstrip and stripline techniques. Transistor and amplifier measurement techniques. Small and large signal high frequency amplifier design. Noise considerations in amplifiers. RF power amplifiers. Neutralization in RF amplifiers. Computer-aided design of amplifiers. Recent topics in microwave electronics. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 514 Introduction to CMOS VLSI Design
Introduction to CMOS circuits, MOS transistor theory, CMOS processing technology, CMOS circuit charactearization. CMOS VLSI circuit design, clocking strategies, case studies. Recent topics and developments in Introduction to CMOS VLSI Design. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 515 Analog CMOS Integrated Circuits
Review of MOS device physics, single stage amplifiers, differential amplifiers, current mirrors, frequency response of amplifiers, Miller effect, noise in amplifiers, feedback, operational amplifiers, slew rate, power supply rejection, stability and frequency compensation, bandgap references, switched capacitor circuits, nonlinearities, linearization, offset, oscillators, phase locked loops. Recent topics in CMOS design. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 516 Principles of Applied Superconductivity
Principles of conductivity, superconductivity phenomenon, properties of superconductors, large scale applications. Type I and type II superconductors and magnetic properties, transport properties, electrodynamics of superconductors, complex conductivity, principles of microscopic theories and applications, superconductor-normal and superconductor-superconductor tunneling, Josephson Junctions and electrical characteristics, RF effects Josephson Junctions, principles of superconductive interference devices applications. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 517 Theory and Modelling of Advanced Nanodevices
Advanced nanodevices course will concentrate on the state-of-the-art in nanoelectronic device concepts. At the beginning of the course a brief introduction to the physical principles needed to understand the devices to be discussed will be given. Then, the "classical" nanoelectronic devices (HEMT, HBT, nanometer scale MOSFET, and polymer/organic thin-film transistors) will be discussed. These devices will be investigated through analytical models and using two-dimensional device simulations. In the latter part of the course, we will concentrate on novel concepts in molecular/organic devices (nanotubes, molecular-atomic junctions), nanobiodevices (ion-channels, microarrays), spintronics, and data storage systems. recent topics on nanodevices. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 518 Principles of Electronic Devices
Crystal structure and growth techniques. Foundations of modern electronic. Energy bands in solids. Tunneling. Carrier concentrations and transport properties in semiconductors. Equilibrium states of PN junctions. Transient analysis of PN junction diodes. SS, MS, SIS junction characteristics and principles of special purpose diodes. BJT equilibrium states and Ebers-Moll static model. Secondary effects and transient states in BJT's. Small signal model. JFET characteristics and equilibrium states Principles of metal-inslator-semiconductor transistors and dc characteristics. *Credit units: 3 ECTS Credit Units: None. Aut (Ö. Aktaş)*

EEE 520 Multirate Signal Processing and Wavelet Theory
Sampling Theory, Upsampling, Downsampling, Decimation, and Interpolation, Perfect reconstruction filterbanks and subband coding. Wavelet basis of L2 (R). Orthogonal wavelets and the relation between the perfect reconstruction filterbanks and wavelets. Biorthoghonal filterbanks, lifting structures. Applications: Image coding and JPEG-2000, MPEG Audio Coding, Signal Analysis using wavelets. *Credit units: 3 ECTS Credit Units: None.*

EEE 521 Introduction to Radar Signal Processing
Radar Fundamentals, radar equation, range and Doppler, system losses. Radar Cross Section of simple objects and models. CW and Pulsed Radars. Radar detection. Radar waveform analysis. Matched filter and ambiguity function. Pulse Compression. Pulse Compression. Radar Wave propagation. Clutter and moving target detection. Radar antennas. Single and multiple target tracking. Synthetic Aperture Radars and their applications. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 523 Speech Processing
Modeling of speech production, short-time Fourier analysis of speech, linear predictive coding (LPC), pitch estimation, code excited linear prediction (CELP) speech synthesis, introduction to speech recognition. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 524 Digital Signal Processing
Discrete-time signals and systems. Review of the z-transform. DFT and its computation. Some other linear transforms. DCT, DST, Hartley, Hilbert, Walsh, Hadamard, etc. Digital filters (FIR and IIR) and filtering. Introduction to multirate signal processing. Introduction to time-frequency representations. Inverse problems. Recent topics and developments in digital signal processing. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 525 Advanced Signal Processing
Signal spaces, signal representation and approximation, wavelets, signal modeling: AR, MA, ARMA models, adaptive filters, iterative and recursive methods in signal processing, spectrum estimation, beam forming and array processing, inverse problems. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 526 Digital Image Processing
Two-dimensional system fundamentals, image sampling and quantization, multi-dimensional transforms: DFT, Sine and Cosine, Hadamard, Walsh, KL transforms. Image models, image enhancement, image filtering and restoration, image analysis and computer vision. Image reconstruction from projections, image data compression. Inverse problems. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 527 Digital Coding of Waveforms
Sampling of band limited waveforms; characteristics of speech and image waveforms; quantization of discrete time signals. Pulse code modulation (PCM), differential PCM. Vector quantization, tree and Trellis coders. Subband coding, KL transform, DCT, DHT, OWHT, transform coding. Run-length coding of binary waveforms. Recent topics on digital coding. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 528 Optics
Geometrical, scalar wave and electromagnetic wave theories of light. Gaussian beam propagation. Signals and systems concepts for analyzing optical systems (Fourier optics). Interference, diffraction, imaging, frequency domain filtering, and holography. Polarization, propagation in anisotropic media, optical waveguides, fibers, resonators, and their applications. Temporal and spatial coherence. recent topics and developments in optics. *Credit units: 3 ECTS Credit Units: 7.5. Aut (H. Özaktaş)*

EEE 529 Photonics
Photon theory of light and interaction of light with matter. Spontaneous emission, absorption, and stimulated emission. Principles of lasers and laser amplifiers. Semi-conductor lasers, light emitting diodes, and light detectors. Electro-optics, acousto-optics, and their applications. Introduction to nonlinear optics. Recent topics in photonics. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 530 Digital Communications Theory
Physical layer aspects of digital communication systems. Signal representations, power spectrum. Optimum receivers for Gaussian noise channels. Linear modulations with memory: Channel coding, sequence detection. Carrier recovery and timing estimation. Communication in dispersive channels: Signal design, optimum receivers, equalization. Communication in fading channels: Channel models, diversity techniques, maximum ratio combining receivers. *Credit units: 3 ECTS Credit Units: 7.5. Aut (D. Aktaş)*

EEE 531 Quantum Communications and Information Processing I
Quantization of electromagnetic field. Quantum states of light; coherence; squeezing. Quantum noise. Quantum information and entropy. Classical and quantum measurement of photons; Mandel's formula; teleportation. Entanglement in atomic systems; Ball's inequalities; Zeilinger protocol. Entanglement and quantum cryptography. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 532 Quantum Communications and Information Processing II
Entropy and mutual information. Asymptotic equipartition. Shannon's theorems on classical source and channel coding. Von Neuman entropy. Quantum source coding. Accessible information: Holevo bound. Quantum channel coding theorem. Teleportation, superdense coding. Entanglement assisted communication. Quantum error correction. Quantum computation; Shor's algorithm. Quantum cryptography. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 533 Random Processes
A first year graduate course on theory and applications of random processes. Review of probability theory. Random sequences. Autocorrelation and covariance. Ergodicity and stationarity. Stochastic calculus. Poisson process. Gaussian process. Brownian motion/Wiener process. Markov process. Shot noise process. Linear systems driven by stochastic inputs. Elementary queueing theory. *Credit units: 3 ECTS Credit Units: 7.5. Aut (N. Akar)*

EEE 534 Wireless Communications
Evolution of radio communications and broadcast systems, new trends, economics of radio communications. Spectrum usage. Cellular concept, coverage, frequency re-use, interference. Broadcast concepts. Radio propagation. Large scale path loss, small scale fading and multipath. Modulation techniques for mobile radio and broadcast. Multiple access techniques for wireless communications. Networking and planning. Recent topics on wireless communications. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 535 Optical Networks
Introduction to optical networks; propagation of signals in optical fiber; components in optical networks; Wavelength-Division Multiplexing; Routing and wavelength assignment; algorithms for network design; virtual topology design; optical protection and restoration; optical burst and packet switching. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 536 Internet Architecture and Protocols
Internet architecture. Hubs, switches, and routes. Data link layer protocols. Traffic engineering. Transport protocols: UDP, TCP. Quality of Service. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 537 Wireless and Mobile Networks
This course introduces graduate students to fundamental techniques and protocols in first and second generation and emerging next generation wireless networks. Topics covered include fundamentals of radio propagation and channel models, transmission techniques for wireless communication, medium access control protocols, cellular network planning, mobility management, GSM system, mobile data networks (CDPD, SMS, GPRS), ad-hoc networks, wireless LANs (IEEE 802.11), wireless personal area networks (Bluetooth). *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 538 Communication Network Analysis
Layered network architecture. Point-to-point protocols and links. Queuing models. Networks of queues. Multiple access communications. Routing. Flow control. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 539 Detection and Estimation Theory
Graduate course on the theory of detection and estimation. Hypothesis testing: Bayesian, minimax and Neyman-Pearson approaches. Signal detection in discrete time: Detector structures and performance evaluation. Parameter estimation: Bayesian estimation, nonrandom parameter estimation, maximum likelihood estimation. Signal estimation in discrete time: Linear estimation theory and Kalman-Bucy filtering. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 542 Nonlinear Systems
Linear versus nonlinear. Basic nonlinear analysis. Nonlinear ordinary differential equations. Second order systems; Poincare-Bendixon theorem, limit cycles. Stability in the sense of Lyapunov. Input-output stability, passivity, small gain theorem. Singular Perturbations. Differential geometric methods. Recent topics on nonlinear systems. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 543 Neural Networks
The structure of the brain. Learning in machines. Pattern recognition. Classification Techniques. Linear classifiers. Basic Neuron. Modeling the single neuron. The perceptron. The multiplayer perceptron. Kohonen self-organizing network. Hopfield network. Neural network Classifiers. Adaptive resonance theory. Cellular neural network. Recent topics and developments in neural networks. *Credit units: 3 ECTS Credit Units: 7.5. Aut (Ö. Morgül)*

EEE 544 Robust Feedback Theory
Review of time and frequency domain analysis and design of feedback systems. Internal stability, asymptotic tracking, performance. Robust stability and robust performance. Stabilization. Parametrization of stabilizing controllers. Loopshaping. Model matching. Introduction to H-infinity control. Recent topics and developments Feedback Control Theory. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 545 Sampled Data Systems
Theory of sampling. State-space and frequency domain representations of single-rate multivariable sampled-data systems. Deadbeat and ripple-free deadbeat control. Generalized hold functions. Synthesis of digital controllers. Multi-rate sampled-data systems: state-space representation, transfer function matrices, stability analysis. Recent topics in sampled data systems. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 547 Introduction to Robotics
Robot arm kinematics; robot arm dynamics; planning of manipulator trajectories; Range sensing (time-of-flight and triangulation systems) proximity sensing (optical, magnetic, capacitive inductive, ultrasonic) tactile sensing force and torque sensing Mobile robots (map building, path planning, navigation, obstacle avoidance, target identification and tracking). Recent topics and developments in sensing. *Credit units: 3 ECTS Credit Units: 7.5. Aut (B. Barshan)*

EEE 549 Nanoscale Fabrication Technologies for Semiconductors
This course will introduce the nanoscale fabrication methods used for semiconductor devices and VLSI technology. The following topics will be covered: review of Semiconductor Technology, Review of Semiconductor Device Physics, Outline of a nanoscale CMOS fabrication process, Crystal Growth, Semiconductor Manufacturing, Clean rooms and wafer cleaning, Nanolithography, Oxidation, Diffusion, Ion Implantation, Thin film deposition, Etching, and Backend technology. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 551 Microwave Engineering
Transmission lines and waveguides. Circuit theory for waveguiding systems, scattering matrix formulation. Excitation of waveguides. Impedance transformation and matching. Smith chart. Passive microwave devices. recent topics and developments in microwave engineering. *Credit units: 3 ECTS Credit Units: 7.5. Aut (V. B. Ertürk)*

EEE 552 Antenna Engineering
Fundamentals of electromagnetic radiation. Antennas and antenna impedance. Small and finite size dipole antennas. Ground interference effects. Loop antennas. Aperture antennas. Parabolic reflectors. Microstrip antennas. Other practical antenna configurations. Analysis and synthesis of linear arrays. Self impedance. Moment methods. Radio wave propagation. Recent topics on antenna engineering. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 554 High Frequency Techniques in Electromagnetics
High frequency solutions to Maxwell's equations. Geometrical optics (GO), the geometrical theory of diffraction (GTD), the uniform geometrical theory of diffraction (UTD), equivalent current methods (ECM) and their application. Aperture integration, physical theory of diffraction (PTD). Curved surface diffraction. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 556 Computational Methods in Electromagnetics
Classification of Electromagnetics Problems, Finite Difference Schemes, Finite Difference Time Domain Method, Finite Element Method, Method of Moments. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 557 Acoustic Waves and Devices
Plane waves in fluids, acoustic wave equation; transient and steady-state reflection and transmission; lumped elements; refraction; strings, membranes, and cavities; ray acoustics; absorption and dispersion; source theory; vibrating piston, transducers; diffraction. *Credit units: 3 ECTS Credit Units: 7.5. Aut (H. Köymen)*

EEE 560 Nanoengineering and Nanodevices
Fundamentals of nanophotonics and nanoelectronics, with emphais on applications in modern semiconductor devices based on quantum properties of light and matter. Topics include: Schrödinger's eauation, elements

of quantum mechanics (including quantum confined structures, simple periodic structures), tunneling, semiconductor fundamentals, review of Maxwell's equiations, light propagation, and reflection from dielectrics, photonic crystals, advanced electronic devices. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 573 Medical Imaging
The course teaches the fundamentals and applications of four medical imaging techniques: magnetic resonance imaging, ultrasound, nuclear medicine and X-ray computed tomography. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 574 Foundations of Magnetic Resonance Imaging
Nuclear magnetic resonance signals were first detected in 1945. Since then, research on this amazing phenomenon continues at an increasing pace. In this course, the basic principles of magnetic resonance imaging (MRI), instrumentation, and various methods used in MRI are taught. various research areas in this highly active field are discussed. Students are introduced to the literature on magnetic resonance imaging. *Credit units: 3 ECTS Credit Units: 7.5. Aut (E. Atalar)*

EEE 580 Advanced Optoelectronics: Innovative Design
Review of physics of optoelectronic devices. Heterostructures. Optical absorption, emission and refraction processes. Junction theory. Light emitting diodes. Laser diodes. Photodetectors. Solar cells. Modulators. Photonic switches. Integrated photonic devices. Nano-scale photonic devices. Innovative optoelectronic devices. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 581 Biomedical Signals and Instrumentation
Biophysics of cell membranes, models of neuron membrane potential, Hodgkin-Huxley equations for the action potential, propagation of the action potential, neurocommunication, simple neural networks which explain behavior, volume conductor fields, theory of Electrocardiography (ECG), ECG amplifiers and instrumentation, ECG signal processing, EEG, EMG, and other bioelectric signals, model of the cardiovascular system, model of the respiratory system, model of the neurocardiac control system, transducers for bioelectric, cardiovascular an respiratory measurements, preconditioning circuits and instrumentation techniques. Recent topics and developments in biomedical signals and instrumentation. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 591 Seminar
Seminars on recent topics in electrical and electronics engineering. *Credit units: None ECTS Credit Units: 4. Aut (D. Aktaş)*

EEE 592 Seminar
Seminars on recent topics in electrical and electronics engineering. *Credit units: None ECTS Credit Units: 4. Aut (D. Aktaş)*

EEE 599 Master's Thesis
Credit units: None ECTS Credit Units: 56. Aut (Staff)

EEE 603 Advanced Electromagnetic Theory I
Fundamentals of electrostatic and magnetostratic. Time varying fields Maxwell's equations. Plane, cylindrical, and spherical electromagnetic waves and boundary value problems. Waveguides and resonant cavities. Radiating systems and diffraction. Introduction to special relativity. *Credit units: 3 ECTS Credit Units: 7.5. Aut (L. Gürel)*

EEE 604 Advanced Electromagnetic Theory II
Electric-field, magnetic-field, and combined-field integral equations. Electromagnetic scattering from arbitrarily shaped conducting objects. Surface and volume integral equations for dielectric objects. Discretization of integral equations. basis and testing functions. Iterative solutions of matrix equations. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 621 Fundamentals of Three-Dimensional Television Systems
3D surface and line representations, rigid motion, rotation matrix, translation, projection. Techniques for capturing 3D visual information: multiple and single camera techniques and holographic techniques. Techniques for representing 3D visual information: introduction to 3D computer graphics, mesh representations, texture mapping. Basics of video compression and popular video standards: MPEG-4, object-based coding, lossy compression of 3D objects. Basics of video streaming: protocols, quality of service measures. Introduction to Fourier optics, inverse problems, multi-dimensional signal expansions, fast algorithms. 3D cues and human visual system, stereoscopic vision, stereoscopic display techniques. Fundamentals of holographic display techniques, holographic video. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 633 Coding Theory
This course covers error correction techniques used to protect digital information against noise. Topics covered include: (i) Algebraic coding techniques, including BCH and RS codes and theBerlekamp-Massey decoding algorithm. (ii) Convolutional codes and the Viterbi decoding algorithm.(iii) Turbo and LDPC codes and the message passing decoding algorithm. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 634 Information Theory

Fundamental information-theoretic concepts: Entropy, mutual information, asymptotic equipartition property. Lossiess data compression: Kraft inequality, Huffman codes. Shannon's coding theorem. Gaussian channel capacity. Network information theory: Multiple user channel capacity. Lossy data compression: Rate distortion theory. *Credit units: 3 ECTS Credit Units: 7.5. Aut (E. Arıkan)*

EEE 638 Current Topics in Computer and Communication Networks

A selection of topics are covered from network routing in IP networks, traffic engineering, Qos routing, congestion control, performance evaluation of computer and communication networks, optical communications, optical networks, wireless/wireline access network, ad hoc networks, wireless mesh networks, routing in multi-hop wireless networks. *Credit units: 3 ECTS Credit Units: 7.5.*

EEE 699 Ph.D.Dissertation

Credit units: None ECTS Credit Units: 56. Aut (Staff)

DEPARTMENT OF INDUSTRIAL ENGINEERING

İ. Sabuncuoğlu (Chair), M. S. Aktürk, O. Alp, N. O. Bakır, S. Dayanık, A. Doğramacı, O. Ekin-Karaşan, F. Eren, N. Erkip, M. M. Fadıloğlu, K. Gökbayrak, Ü. Gürler, Y. Karpat, O. Oğuz, M. Ç. Pınar, A. Şen, M. R. Taner, B. Tansel, A. Toptal, H. Yaman, B. Yetiş, E. A. Yıldırım.

Part-time: A. R. Botsalı, M. Çakmakcı.

The Department of Industrial Engineering offers B.S., M.S. and Ph.D. degrees in Industrial Engineering.

UNDERGRADUATE PROGRAM

Industrial Engineering (IE) is the scientific discipline that is concerned with how best to organize people, information, money, and materials to produce and distribute services and products efficiently. It draws upon specialized knowledge and skills in the mathematical, physical, and social sciences together with the principles and methods of engineering analysis and design to specify, predict, and evaluate the results to be obtained from such systems.

The mission of the Industrial Engineering Program is to foster a world-class academic environment for industrial engineering research and education in collaboration with industry. The department is committed to graduate competent industrial engineers equipped with the proficiency to adapt to technological and societal changes, and who are poised to excel in the field. The educational objectives are: 1) impart a basic understanding of industrial engineering principles, including analytical and systems thinking and problem solving, 2) provide the proficiency to analyze, design, develop, implement and improve systems in production and service organizations, 3) build a strong formation in research skills to enable the graduates to contribute to knowledge expansion by carrying out scholarly research for the advancement of the profession, 4) foster intellectual maturity by emphasizing professional and ethical responsibility as well as lifelong learning and communication skills.

A necessary condition for the realization of this goal is to provide a solid preparation in foundations through courses in mathematics, computers, and basic sciences. The undergraduate IE curriculum is well supplemented in such foundational courses. To this is added a solid preparation in fundamentals of engineering through various specialized courses. Through the course work, the student acquires the necessary skills in modeling and analysis of engineering systems and learns to develop insightful approaches to problem solving. With a number of technical elective courses, students build up additional strength in engineering. To provide the student with a broad intellectual spectrum, electives in economics, social sciences and humanities are offered. Additional courses in communication, history, and professional ethics help develop self-confidence, articulation skills, and professional attitude in business and social environments. A special research course at the senior level allows higher achieving students to participate in a research project under the guidance of a faculty member. Design experience is incorporated in the courses as the student progresses through the program. A capstone two course sequence in system design in the fourth year gives the student the experience of how to integrate and use in creative ways the various modeling skills and analysis techniques he/she has acquired in designing real world manufacturing or service systems. This course sequence addresses real world problems supplied each year to the department by various companies in Turkey. These problems are studied and solved by students under the guidance of company officials and faculty members from the department. This hands-on experience gives students the unique opportunity to work on challenging problems and produce solutions of good quality within an imposed deadline.

UNDERGRADUATE CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
CS 101	Algorithms and Programming I	4 / 7
ENG 101	English and Composition I	3 / 6
GE 101	Engineering Orientation	1 / 1
MATH 101*	Calculus I	4 / 7
PHYS 101	General Physics I	4 / 6
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
CS 102	Algorithms and Programming II	4 / 7
ENG 102	English and Composition II	3 / 6
MATH 102*	Calculus II	4 / 7
PHYS 102	General Physics II	4 / 6
TURK 102	Turkish II	2 / 1

* Depending on the result of the calculus placement exam given at the beginning of the first year, students may take MATH 111 - MATH 112 - MATH 116 in place of MATH 101 - MATH 102.

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
HISTR 201	History of Turkish Republic I	2 / 1
HUM 111	Cultures Civilizations and Ideas I	3 / 4
IE 261	Computer-Aided Manufacturing	2 / 4
IE 271	Operations Analysis and Design	3 / 6
MATH 225	Linear Algebra and Differential Equations	4 / 7
MATH 250	Introduction to Probability	3 / 6

Spring Semester		Credits / ECTS Credits
HISTR 202	History of Turkish Republic II	2 / 1
HUM 112	Cultures Civilizations and Ideas II	3 / 4
IE 202	Introduction to Modeling and Optimization	3 / 6
IE 262	Manufacturing Processes	4 / 6
MATH 260	Introduction to Statistics	3 / 6
	Math and Science Elective	3 / 6

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
CS 281	Computers and Data Organization	3 / 6
GE 301	Science Technology and Society	2 / 1
IE 299	Summer Training I	- / -
IE 303	Modeling and Methods in Optimization	3 / 6
IE 325	Stochastic Models	3 / 6
IE 342	Engineering Economic Analysis	3 / 6
IE 375	Production Planning	3 / 6

Spring Semester		Credits / ECTS Credits
ENG 400	Technical and Professional Composition	3 / 6
IE 324	Simulation	3 / 7
IE 376	Production Information Systems	3 / 7
IE 380	Quality Assurance and Reliability	3 / 6
	Engineering Elective	3 / 6

FOURTH YEAR

Autumn Semester		Credits / ECTS Credits
IE 399	Summer Training II	- / -
IE 477	Production Systems Design-Synthesis	3 / 6

	IE Restricted Elective (2)	6 / 12
	Humanities and Social Sciences Elective	3 / 6
	Man/Econ Elective	3 / 6

Spring Semester		Credits / ECTS Credits
IE 478	Production Systems Design-Practice	3 / 6
IE 496	Seminar in Production Systems	- / 4
	IE Restricted Elective	3 / 6
	Humanities and Social Sciences Elective	3 / 6
	Man/Econ Elective	3 / 6
	Technical Elective	3 / 6

ELECTIVE COURSES

A list of approved elective courses is announced at the beginning of each semester by the Department. Humanities/Social Sciences electives are any approved courses offered by the Faculty of Humanities and Letters or the Faculty of Art, Design and Architecture or the Faculty of Economics and Administrative and Social Sciences. Technical electives are any approved courses offered by the Faculty of Engineering, Faculty of Science, Faculty of Economics, Administrative and Social Sciences or the Faculty of Business Administration.

GRADUATE PROGRAMS

The overall objective of the graduate program in the department is to conduct fundamental research in industrial engineering and operations research in accordance with scientific and technological developments, and to provide the students with a strong analytical basis for advanced theoretical work or for development of new approaches to applications. Current research areas are optimization theory/mathematical programming (linear and non-linear optimization, combinatorial and integer optimization, graph theory and network optimization, location theory, large scale optimization and parallel computing), stochastic systems (queueing models, maintenance, reliability and inventory control, modeling and optimization), simulation, statistics (estimation in stochastic systems, non-parametric analysis, Bayesian methods, analysis of censored and truncated data), manufacturing systems (advanced manufacturing technologies, robotics, flexible manufacturing systems, cellular manufacturing systems, machine scheduling, modeling and analysis of production systems), supply chain management, scheduling, production planning and control systems, operations research methods in finance.

Master of Science

Admission: Applicants are required to have a B.S. degree in Industrial Engineering or a related field of science and engineering. Turkish citizens must take the ALES (Akademik Personel ve Lisansüstü Eğitimi Giriş Sınavı - Academic Personnel and Postgraduate Education Entrance Examination) and have a minimum of 55 points in the quantitative section of the exam. GRE scores are required for international applicants. Non-native speakers of English are required to submit a proof of satisfactory knowledge of English. Admission is granted based on grade point average, ALES or GRE scores, letters of recommendation, statement of purpose, interview, and availability of a faculty member who is willing to supervise the student's research. Scholarships are provided for students with better credentials. (Also refer to the "Graduate Admissions" section in the introduction of this catalog for the graduate admissions requirements).

Degree Requirements: In addition to at least 24 credit units of course work, the M.S. degree candidate must take one research course, and prepare and successfully defend a thesis. The normal duration of M.S. study is four semesters. However, this may be extended for up to two more semesters upon approval of the Institute of Engineering and Science.

Doctor of Philosophy

Admission: Applicants are required to have a B.S. degree or a M.S. degree in Industrial Engineering or a related field of science and engineering. Turkish citizens must take the ALES (Akademik

Personel ve Lisansüstü Eğitimi Giriş Sınavı - Academic Personnel and Postgraduate Education Entrance Examination) and have a minimum of 55 (70 for B.S. degree applicants) points in the quantitative section of the exam. GRE scores are required for international applicants. Non-native speakers of English are required to submit a proof of satisfactory knowledge of English. Admission is granted based on grade point average, ALES or GRE scores, letters of recommendation, statement of purpose, interview, and availability of a faculty member who is willing to supervise the students research. Scholarships are provided for students with better credentials. (Also refer to the "Graduate Admissions" section in the introduction of this catalog for the graduate admissions requirements).

Degree Requirements: Each student's Ph.D. program is individually planned with a faculty advisor.

The students who are admitted to the Ph.D. program with a M.S. degree should successfully complete one seminar course and 8 courses of 24 credit units, pass a qualifying examination, and prepare and defend a dissertation based on original research. The qualifying exam must be passed within the first three semesters of entry into the program. The maximum duration for Ph.D. study for applicants with M.S. degree is 8 semesters but can be extended up to four semesters under special circumstances by the approval of the Institute of Engineering and Science.

The students who are admitted to the Ph.D. program with a B.S. degree should successfully complete two seminar courses and 16 courses of 48 credit units, pass a qualifying examination, and prepare and defend a dissertation based on original research. The qualifying exam must be passed within the first five semesters of entry into the program. The maximum duration for Ph.D. study for applicants without a M.S. degree is 10 semesters but can be extended up to four semesters under special circumstances by the approval of the Institute of Engineering and Science.

COURSE DESCRIPTIONS

UNDERGRADUATE COURSES

IE 202 Introduction to Modeling and Optimization
A general overview of operations research, with selected applications from engineering and management systems, and interdisciplinary areas. The methodology of mathematical modeling and its relation to problems in industrial, commercial, and public systems. Introduction to linear programming: the simplex method, duality, sensitivity analysis, and related topics. Network models and project scheduling. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MATH 220 or MATH 225. Aut (E. A. Yıldırım)*

IE 261 Computer-Aided Manufacturing
Principles of engineering graphics with emphasis on laboratory use of AutoCAD software programs. Plane geometry, joining of arcs, principles of orthographic projection, isometric and oblique drawing, principles of sectioning, Wire-frame Modeling. *Credit units: 2 ECTS Credit Units: 4. Aut (F. Eren)*

IE 262 Manufacturing Processes
Survey of machining, welding and finishing processes. Analysis of product and process design together with material selection for manufacturing. Special emphasis given to economics of metal cutting. Introduction to numerical control, automation and manufacturing systems. Laboratory use of traditional manufacturing processes, CNC programming, robotics, FMS cell controller, and related software. *Credit units: 4 ECTS Credit Units: 6, Prerequisite: IE 261.*

IE 271 Operations Analysis and Design
The course is designed to expose the student to traditional industrial engineering concepts and functions in the design, improvement, and analysis of man-machine systems in the context of a manufacturing and production environment. Topics covered are: industrial organization, work measurement procedures, motion and time study, and production and operation charts. Facilities planning and layout design with computer applications. Laboratory use of related software. *Credit units: 3 ECTS Credit Units: 6. Aut (O. Alp, Y. Karpat, M. R. Taner)*

IE 299 Summer Training I
A minimum of four weeks (20 working days) for this practice is required in a manufacturing organization. The main objective is to observe a manufacturing company in an original setting. The details of the requirements and further information can be found at: http://www.ie.bilkent.edu.tr/∼ie299 *Credit units: None ECTS Credit Units: None, Prerequisite: IE 262 and IE 271. Aut (F. Eren)*

IE 303 Modeling and Methods in Optimization
Extension of linear programming to different methodologies including network models, integer programming and dynamic programming. Discrete optimization: local search heuristics. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: IE 202. Aut (O. Ekin-Karaşan, M. Ç. Pınar)*

IE 324 Simulation
Use and misuse of simulation as a decision tool. The design and analysis of simulation. The use of simulation for estimation, and comparison of policies. Emphasis is primarily on applications in the areas of production management. Topics include modeling and programming simulations, random number and variate generation, statistical analysis of simulation output data. *Credit units: 3 ECTS Credit Units: 7, Prerequisite: CS 102 or CS 112.*

IE 325 Stochastic Models
Markov chains. Basic queuing models and applications. Stochastic inventory models: periodic and continuous review. Introduction to stochastic maintenance models. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MATH 250. Aut (S. Dayanık, N. Erkip, M. M. Fadıloğlu)*

IE 342 Engineering Economic Analysis
Analysis of engineering decisions; principles and methodology of comparing decision alternatives, such as various engineering designs, manufacturing equipment, or industrial projects. Dealing with uncertainty and risk; rational decision making when future outcomes are uncertain. Concepts of time value of money. Effects of depreciation, inflation, and taxation on economic decisions. Cost-benefit analysis of public projects. Replacement analysis. Introduction to financial engineering. *Credit units: 3 ECTS Credit Units: 6. Aut (N. O. Bakır, K. Gökbayrak)*

IE 375 Production Planning
Design of production planning systems using mathematical, computational and other modern analytical techniques. Areas investigated will include forecasting; integrated production-inventory systems; deterministic inventory and lot-sizing models; multi-echelon supply networks; machine scheduling and capacity planning. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: IE 202. Aut (O. Alp, A. Şen, A. Toptal)*

IE 376 Production Information Systems
The role of computers and data bases in production systems. Fundamental concepts in developing integrated production management systems including ERP, lean production and JIT with emphasis on inventory, lead time, work-order management, shop floor control and group technology based parts classification and coding systems. *Credit units: 3 ECTS Credit Units: 7, Prerequisite: CS 281 and IE 375.*

IE 380 Quality Assurance and Reliability
Concepts and statistical methods employed in the assurance of product conformance to specification limits. Emphasis is planed to statistical process control, total quality management, acceptance sampling, process design and reliability. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MATH 260.*

IE 399 Summer Training II
This training can be held either in a manufacturing or service organization for a minimum of four weeks (20 consecutive working days). It is required to formulate an IE problem and offer a solution. The details of the requirements and further information can be found at: http://www.ie.bilkent.edu.tr/~ie399 *Credit units: None ECTS Credit Units: None, Prerequisite: IE 299. Aut (Staff)*

IE 400 Principles of Engineering Management
This course is designed to introduce the engineering students to economic and management concepts. Topics will include economic concepts such as; cash flow, interest rates, rate of return, demand supply relations, product pricing, taxes, inflation, and related subjects; and management analysis such as management layers, network analysis, project management via CPM/PERT networks, optimization concepts, linear programming, and decision analysis. The course also includes use of related software. *Credit units: 3 ECTS Credit Units: 6. Aut (N. O. Bakır, O. Oğuz)*

IE 411 Mathematical Programming
Nonlinear optimization, convexity, Karush-Kuhn-Tucker conditions, line search, constrained optimization, quadratic, programming, large scale linear programming and decomposition, polyhedral analysis. *Credit units: 3 ECTS Credit Units: 6.*

IE 412 Large Scale Optimization and Applications
The aim of this course is to present decomposition based methods to solve linear and integer programming problems of large sizes that we encounter in practice. The course covers methods like Lagrangian relaxation, cutting plane, Dantzig-Wolfe decomposition, column generation, and Benders's decomposition with applications in production planning, location, routing, network design, workforce scheduling, and capacity allocation. *Credit units: 3 ECTS Credit Units: 6.*

IE 420 Heuristics in Optimization
Fundamental concepts of heuristics in solving various optimization problems with emphasis on meta-heuristics such as simulated annealing, tabu search, genetic algorithms, and ant algorithms. The basic material on heuristics will be covered in regular lectures. The students will be required to present a variety of application papers on different subjects related to the course. In addition, as a project assignment, the students will design a heuristic, write a code of an appropriate algorithm for the problem and evaluate its performance. *Credit units: 3 ECTS Credit Units: 6. Aut (İ. Sabuncuoğlu)*

IE 421 Introduction to Stochastic Processes
Random variables, conditional expectation. Bernoulli and poisson processes. Discrete time Markov chains: classification of states, ergodic properties. Random walks, branching processes. Continuous time Markov processes. Kolmogorov differential equations. Birth and death processes, renewal process. *Credit units: 3 ECTS Credit Units: 6.*

IE 422 Dynamic Programming
Deterministic and discrete-time stochastic dynamic programming; principle of optimality, forward and backward formulations, Markov decision processes under discounted and average payoff criteria, bandit problems, stochastic games. Applications; shortest path problems, resource allocation, stock options, inventory control, maintenance problems, knapsack and assignment problems. *Credit units: 3 ECTS Credit Units: 6.*

IE 423 Forecasting Methods and Applications
Basic quantitative methods of forecasting are introduced. Time series decomposition, Regression methods, exponential smoothing and ARIMA models will be covered. Judgemental forecasting will also be briefly mentioned. Applications in Engineering will be emphasised. *Credit units: 3 ECTS Credit Units: 6.*

IE 424 Introduction to the Concepts and Dynamics of Innovation
Introduction to care concepts. Evolution and economics of innovation within markets. Strategies for and commercialization of innovation. Organizational and social concepts; networks and clusters. Relations with entrepreneurship, financial models, and venture capital. A number of case studies will be examined. *Credit units: 3 ECTS Credit Units: 6. Aut (M. Çakmakcı)*

IE 428 Project Scheduling
Introduction to project network analysis with CPM and PERT. Time-cost trade-off and learning curve analysis in relation to makespan minimization. Mathematical programming models for resource allocation and scheduling under resource constraints. Financial aspects including cash flow management. Exact and heuristic methods for solving the scheduling and resource management problems. *Credit units: 3 ECTS Credit Units: 6.*

IE 434 Stochastic Models in Operations Research
Review of conditional probability; Markov chains, example models, Markov Chains with rewards; Markov decision processes, solution algorithms; an introduction to renewal theory and applications; queueing models, example applications in service systems; reliability models; other topics. *Credit units: 3 ECTS Credit Units: 6. Aut (N. Erkip)*

IE 441 Cost Analysis and Control
Fundamentals of managerial cost accounting practices applied to manufacturing and service organizations. Cost terms, cost-volume-profit analysis, job costing, activity based costing as bases of accounting systems. Master budgets and flexible budgets for planning and control. Determination of cost behaviour and pricing decisions, cost allocation and revenues for profitability analysis. *Credit units: 3 ECTS Credit Units: 6. Aut (A. R. Botsalı)*

IE 442 Introduction to Financial Engineering
Financial markets (bonds, stocks, futures, forwards, options, interest rates and their term structures), models of security prices (Brownian motion, geometric Brownian motions, Ornstein-Uhlenbeck processes, Cox-Ross-Rubinstein binomial model, Merton-Black-Scholes model), pricing and hedging financial derivatives (Ito's rule, stochastic integration, diffusion processes, probabilistic solutions of PDEs, no-arbitrage pricing in a complete market of futures, forwards, European and American type options, pricing in incomplete markets), Hedging with futures and options, bond hedging, numerical methods (pricing using trees, Monte-Carlo simulations, finite-difference methods), mean-variance analysis of portfolios, value at risk, optimal consumption and portfolio strategies (formulations and solutions of appropriate dynamic programming models and Hamilton-Jacobi-Bellman equations). *Credit units: 3 ECTS Credit Units: 6.*

IE 443 Multi-Objective Decision Analysis
This course is designed to cover quantitative decision analysis. The course begins with the structuring of objectives and value hierarchies, and determination of value functions. After introducing consistent characterization of preferences under certainty, it proceeds with value analysis under uncertainty including expected value analysis, utility theory, multi-attribute risk aversion, certainty equivalent calculations and the analytical hierarchy process. *Credit units: 3 ECTS Credit Units: 6. Aut (M. R. Taner)*

IE 444 Operations Research in Finance
This course aims to introduce industrial engineering students to mainstream optimization tools and models used in modern finance. It will begin with a review of pertinent optimization technology, and develop from scratch basic financial optimization models. GAMS and XPRESS-MP modeling and optimization software systems will be used in homework assignments. *Credit units: 3 ECTS Credit Units: 6.*

IE 446 Introduction to Continuous Time Finance
This course aims to introduce students with no or little background on finance to the rudiments of continuous time financial option evaluation. The treatment is at an elementary level. The topics covered are Brownian Motion, Geometric Brownian Motion with Drift, Ito's Lemma, Black-Scholes Analysis, Hedging in Continuous Time, American options, Portfolio Optimization in Continuous Time, Merton's Problem, and Monte Carlo Methods if time permits. *Credit units: 3 ECTS Credit Units: None.*

IE 460 Quantitative Models in Supply Chain Management
The purpose of this course is to introduce the quantitative models to analyze buyer-vendor relations across different functions and stages of supply chain. The topics covered include quantity and transportation discounts, multi-stage inventory and production systems, decentralized and centralized modeling approaches, strategic games in supply chains, and contracting. *Credit units: 3 ECTS Credit Units: 6. Aut (A. Toptal)*

IE 461 Supply Chain Management
A supply chain consists of all stages involved, directly and indirectly, in fulfilling a customer request. Supply chain management deals with the management of materials, information and financial flows in the supply chain to maximize total profitability. The topics that are covered in this course include review of inventory management and risk pooling, logistics network configuration, the value of information in supply chains, distribution strategies and strategic alliances, supply chain contracts, international issues in supply chain management, coordinated product and supply chain design, information technology for supply chain management. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: IE 460.*

IE 462 Introduction to Advanced Manufacturing Technologies
A study of the present impact of computers and automation on manufacturing. product design technologies. Concepts and principles of computer aided design and process planning; automated production lines; group technology; cellular manufacturing; flexible manufacturing systems; automated material handling. Introduction to robotics technology, work cell design and applications. *Credit units: 3 ECTS Credit Units: 6.*

IE 463 Operations Scheduling
This course is designed to provide an introduction to the area of scheduling. Selected problems from a variety of manufacturing and service applications including job shop problems, assembly systems, reservation systems, timetabling problems, and workforce and crew scheduling will be presented. Exact and approximate techniques and approaches to modeling and solving these problems will be discussed. A brief overview of the current trends and future directions will be included. *Credit units: 3 ECTS Credit Units: 6.*

IE 464 Inventory Theory
This course focuses on various inventory control problems in service and manufacturing environments. First, deterministic models and their extensions are introduced. Single and multi item problems, quantity discount case, effect of inflation, classification of inventories are discussed. Second part of the course focuses on finite and infinite horizon problems with stochastic demand. Models for periodic and continuous review policies, coordinated replenishment problems, perishable items are examined. Finally, multi echelon inventory problems in supply chain context are introduced. *Credit units: 3 ECTS Credit Units: 6.*

IE 465 Modeling and Analysis of Production Systems
This course covers fundamental concepts for describing and analyzing production systems dynamics. Several performance measures of production systems, such ascycle time, throughput, WIP, fill rate, utilization etc. are analyzed through several quantitative tools. The influence of variability on such systems and the causes and types of variability are analyzed in details. Analysis and comparison of push and pull production systems, including a comparison of CONWIP, Kanban, and MRP approaches, are also covered. *Credit units: 3 ECTS Credit Units: 6.*

IE 474 Facility Layout and Location
This course addresses issues that arise in facilities planning. Main issues addressed include optimally choosing the locations of single or multiple facilities and layout design. The focus is on analytical methods for solving such problems. *Credit units: 3 ECTS Credit Units: 6. Aut (B. Tansel)*

IE 477 Production Systems Design-Synthesis
This course is a project based synthesis of the techniques and methodologies of operations research and industrial engineering covered in other courses. The projects are concerned with the design of complex systems and may involve modeling and analysis of manufacturing and service systems based on demand, resource, capacity, location, computer integration, and information requirements. In addition, this course aims to improve communication, organizational, and group skills of the students, and emphasizes the role of Internet and Web

in continuing professional development and technical collaboration. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: IE 324 and IE 325 and IE 376. Aut (O. Alp, İ. Sabuncuoğlu, B. Yetiş)*

IE 478 Production Systems Design-Practice
The purpose of this interactive course is to apply the methods, studied in earlier courses and synthesized in the prerequisite course IE 477, to solve real world problems. The problems are jointly determined by the department and representatives from the industry. They may include: Design of production information systems, inventory problems, capacity expansion and bottleneck identification, schedule operations, distribution requirements planning, etc. Students are required to carry out a semester long industrial project in teams. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: IE 477.*

IE 479 Distribution Logistics
This course focuses on the distribution of goods and services from their points of creation to their customers. Designing the logistics network with main emphasis on location models will constitute the first part of the course. In the second part of the course planning and controlling of freight-transportation will be covered. Practical aspects of the models and methodologies covered will be emphasized through computational assignments. *Credit units: 3 ECTS Credit Units: 6. Aut (B. Yetiş)*

IE 490 Introduction to Research in IE and OR
The purpose of this course is to introduce students to research techniques in industrial engineering and operations research. Each student is assigned a research topic that is suitable to his/her academic background and interests. Under the supervision of a departmental faculty member, the student will tackle the problem and try to find a satisfactory solution. Written and oral presentations of results are required. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: Consent of the Department.*

IE 491 Introduction to Research in IE and OR II
This course is a continuation of IE 490 Introduction to Research in IE and OR. It is designed for students who want to continue to work on the same problem to get deeper and extended results. The work will continue under the supervision of the same faculty member who has previously supervised the student's work in IE 490. The course will be offered in the spring semester and is open only to students who have completed the required work in IE 490 and who have obtained the approval of the supervising faculty member for continuation of the work. *Credit units: 3 ECTS Credit Units: 6.*

IE 492 Applications of IE in Bioinformatics
Introductory research in bioinformatics with emphasis on the use and development of algorithms and tools from the broad field of Industrial Engineering on specific biological applications. Examples include design and analysis of experiments for microarrays; dynamic programming and hidden Markov models for sequence alignment; and data mining for gene expression, DNA and protein data. *Credit units: 3 ECTS Credit Units: None.*

IE 496 Seminar in Production Systems
A series of seminars on issues of current interest to the practice of industrial engineering. *Credit units: None ECTS Credit Units: 4, Prerequisite: Senior standing in IE.*

GRADUATE COURSES

IE 500 Mathematics of Operations Research
Introduction to methods of proof, sets and functions, metric spaces, functions on metric spaces, differential and integral equations, fundamentals of linear algebra. *Credit units: 3 ECTS Credit Units: 7.5. Aut (E. A. Yıldırım)*

IE 505 Mathematical Programming
The course aims to give a comprehensive introduction to mathematical programming techniques for graduate students who are expected to become intelligent users of modern optimization tools and software. Subjects covered include linear and network programming, convexity, Karush-Kuhn-Tucker conditions in nonlinear programming and quadratic programming. The emphasis is on modeling and solution of problems of relevance to engineers rather than on theory. The course involves programming exercises using high level modeling languages GAMS and/or AMPL. *Credit units: 3 ECTS Credit Units: 7.5. Aut (B. Yetiş)*

IE 513 Linear Programming
Theory, algorithms, and computational aspects of linear programming. Formulation of problems as linear programs. Development of simplex algorithm, geometry of simplex method, duality theory, and economic interpretations. Sensitivity analysis. Variants of simplex method. *Credit units: 3 ECTS Credit Units: 7.5.*

IE 514 Network Flows
Flow problems on networks. Transportation and assignment problems, special purpose algorithms and advanced computational techniques. Maximum flow problem, theory, algorithms, and applications. Shortest paths. Minimum cost flows. Network simplex method. Multicommodity flow problems. Generalized networks. *Credit units: 3 ECTS Credit Units: 7.5.*

IE 515 Convex Analysis
Convex sets in IR and their basic properties, separation of convex sets, properties of convex polyhedra (and polytones). Convex functions continuity and differentiability properties, subdifferentiability, duality of convex sets,

Fenchel dual of a convex function, bipolar theorem. Convex programming, dual convex programs, perturbation and lagrangian approaches to duality, the connection between the two approaches, saddle point theorems. Applications of convex analysis: inequalities, interior-point methods, approximation, merit functions. *Credit units: 3 ECTS Credit Units: 7.5. Aut (M. Ç. Pınar)*

IE 516 Global Optimization

Introductions; workshop objectives operation research, optimization models, and solution techniques the relevance of nonlinear and global optimization traditional (local) nonlinear optimization methods the global optimization model and several important special cases exact and heuristic GO algorithms modeling environments global (and local) nonlinear optimization software implementations software demonstrations modeling tips and solver tuning for better performance numerical tests and benchmarking of optimization software. *Credit units: 3 ECTS Credit Units: 7.5.*

IE 518 Discrete Optimization

The models and methods of integer programming. Structure of integer programs, pure integer and mixed integer programming problems. Zero-one programming, branch and bound methods. Cutting plane and polyhedral approach. Lagrangean relaxation. Applications to combinatorial optimization, heuristic methods and dynamic programming. Applications in resource allocation, facility location, scheduling, capital budgeting. Computer implementation. *Credit units: 3 ECTS Credit Units: 7.5.*

IE 519 Approximation Algorithms

The course covers combinatorial and mathematical programming techniques to derive approximation algorithms for np-hard optimization problems. Possible topics include greedy algorithms for vertex/set cover, approximation schemes via dynamic programming, rounding LP relaxations of integer programs, and semi definite relaxations. The course is complemented by the implementation of selected algorithms using a high-level language such as matlab. *Credit units: 3 ECTS Credit Units: 7.5.*

IE 520 Stochastic Calculus

Multivariate normal random variables and accompanying linear algebra. The central limit theorem for iid random variables. Brownian motion. Conditional expectations and conditional probabilities. The relationship between Brownian motion and partial differential equations. Hittings probabilities and the reflection principle. Sets of paths, partial information, and conditional expectation as projections. martingales and the martingale property of conditional expectations. Progressively measurable functions. The Ito integral with respect to Brownian motion. Ito's lemma and Dynkin's theorem as tools for solving Ito differantial equations and Ito integrals. Partial differential equations for transition probabilities and conditional expectations for general Ito differential equations. Change of measure Feynman Kac, and Girsanov's theorem. Convergence of random walks and tree models to Ito processes. Applications in finance. Black-Scholes model. *Credit units: 3 ECTS Credit Units: 7.5.*

IE 521 Stochastic Processes

Stochastic processes with independent increments, Wiener process and Poisson process. Non-homogeneous and compound Poisson processes. Discrete time Markov chains (classification of states, ergodic properties), random walks, branching processes. Continuous-time Markov processes, Kolmogorov's differential equations. Birth and death processes, applications to Markov queueing models. Non-Markov processes, renewal process, renewal reward process, alternating and regenerative processes, ergodic theorems. Semi-Markov processes. Applications in reliability and inventory models. Selected topics from stationary processes and time-series. *Credit units: 3 ECTS Credit Units: 7.5.*

IE 522 Queuing Systems

Classification of queueing systems. Markov processes in discrete and continuous time. Birth and death processes. Markov queueing systems M/M/k/m. Little's formula. Bulk arrival and service systems. Non-Markov queueing systems. Semi-Markov processes. System $M/G/1/\infty$ (stationary regime, Pollaczek-Khinchin formula, waiting time and busy period). Systems $G/M/1/\infty$ and $G/G/1/\infty$. Jackson's type queueing networks, balance equations, stationary distribution. Approximate methods in queueing models. Application in manufacturing, computer networks, information systems and simulation. *Credit units: 3 ECTS Credit Units: 7.5.*

IE 523 Probabilistic Analysis

Axiomatic construction of probability theory, properties of probability, conditional probability, independence. Discrete and continuous random variables and vectors (distribution function, expectation, variance, moments). Chebyshev inequality and law of large numbers. Conditional expectation. Transformations of random variables. Generating and characteristics functions. Asymptotic methods in probability theory, types of convergence of random variables. Sums of independence random variables, central limit theorem, Poisson theorem. Selected topics. *Credit units: 3 ECTS Credit Units: 7.5. Aut (M. M. Fadıloğlu)*

IE 524 Simulation

The design and analysis of simulations. The use of simulation for estimation, comparison of policies, and optimization. Variance estimation techniques including the regenerative methods, time series methods, and batch means. Variance reduction. Statistical analysis of output of simulations, applications to modeling stochastic systems in computer science, engineering and operations research. *Credit units: 3 ECTS Credit Units: 7.5.*

IE 525 Advanced Statistics
Basic statistical definitions. Notion of statistical estimator, unbiased, consistent, asymptotically normal estimators. Empirical distribution function. Efficient estimators, Cramer-Rao inequality. Sufficient statistics. Confidence intervals. Moment and maximum likelihood methods. Method of least squares. Regression, linear and multiple regression. Testing hypotheses. Goodness of fit tests. Chi-square test, hypothesis of independence. Neyman-Pearson theorem. Selected topics from factor analysis, classification theory and cluster analysis. Elements of time series analysis and design of experiment. *Credit units: 3 ECTS Credit Units: 7.5.*

IE 530 Logistics Modeling and Optimization
Logistics involve making goods and services available at the right points, at the right times and in the right quantities. It is a wide rangeing human activity that gives rise to a host problems including distrubition, location, transportation, scheduling and routeing. The course gives various mathematical techniques to model and optimize logistical systems. *Credit units: 3 ECTS Credit Units: 7.5.*

IE 534 Stochastic Models in Operations Research
Review of conditional probability; Markov chains, example models, Markov Chains with rewards; Markov decision processes, solution algorithms; an introduction to renewal theory and applications; queueing models, example applications in service systems; reliability models; other topics. *Credit units: 3 ECTS Credit Units: 6. Aut (N. Erkip)*

IE 542 Investment Decision Modeling
The meaning of investment process in general and for creating systems to produce products and services in particular. Classification of investment decision problems with respect to context and the precision of informational support, i.e. certainty, risk and uncertainty. A general mathematical structure for modeling for investment decisions. Deterministic, stochastic, combinatorial, sequential and dynamic investment decision models, and optimization techniques used for their solutions. A mathematical basis for deriving suitable value measures for evaluating investment alternatives and derivation of such measures. Types of risk taking as the fundamental dimension of a class of investment decision making situations. *Credit units: 3 ECTS Credit Units: 7.5.*

IE 546 Introduction to Continuous time Finance
This course aims to introduce students with no or little background on finance to the rudiments of continuous time financial option evaluation. The treatment is at an elementary level. The topics covered are Brownian Motion, Geometric Brownian Motion with Drift, Ito's Lemma, Black-Scholes Analysis, Hedging in Continuous Time, American options, Portfolio Optimization in Continuous Time, Merton's Problem, and Monte Carlo Methods if time permits. *Credit units: 3 ECTS Credit Units: None.*

IE 561 Manufacturing Systems
Application of systems analysis and industrial engineering to the design, planning, and analysis of manufacturing systems. Characteristics of flexible manufacturing systems (FMS). Elements of systems and their interaction with each other. Consideration of technical and economic aspects of equipment and process design. Integration aspects of the elements of manufacturing systems. *Credit units: 3 ECTS Credit Units: 7.5.*

IE 563 Game Theory With Applications in Operations Management
Introduction to Game Theory: Pre-commitment, the normal form, the extensive form; static games with complete information: pure strategy nash equilibrum, mixed strategy nash equilibrum; dynamic games with complete information: sub-game perfect equilibrum; games with incomplete information: bayesian nash equilibrum, perfect bayesian nash equilibrum; applications: oligopoly, supply chain management, queuing, competitive location. *Credit units: 3 ECTS Credit Units: 7.5, Prerequisite: Familiarity with probability and optimization and instructor's permission.*

IE 564 Inventory Management
This course focuses on various inventory control problems in service and manufacturing environments. First, deterministic models and their extensions are introduced. Single and multi item problems, quantity discount case, effect of inflation, classification of inventories are discussed. Second part of the course focuses on finite and infinite horizon problems with stochastic demand. Models for periodic and continuous review policies, coordinated replenishment problems, perishable items are examined. Finally, multi echelon inventory problems in supply chain context are introduced. *Credit units: 3 ECTS Credit Units: 7.5.*

IE 566 Supply Chain Management
Supply chain management deals with the management of materials, information and financial flows in a network logistics consisting of suppliers, manufacturers, distributors, and customers. the topics that are covered in this course include network configuration of the supply chain using contracts and other mechanisms, distribution strategies for the supply chain and product design for supply chain efficiency. *Credit units: 3 ECTS Credit Units: 7.5.*

IE 571 Analytical Models for Supply Chain Management
Theoretical and practical issues in the design and management of the supply chain. Logistic network configuration, risk pooling and multi-echelon inventory systems, value of information and bullwhip effect in supply chains,

coordination of the supply chain using contracts, distribution strategies and strategic alliances for the supply chain and product design for supply chain efficiency. *Credit units: 3 ECTS Credit Units: 7.5.*

IE 572 Production Planning Systems Design
Theoretical and practical issues in the design of systems for planning and control of production activity. Critical examination of tools and techniques of industrial engineering and operations research applicable to integrated manufacturing management. *Credit units: 3 ECTS Credit Units: 7.5.*

IE 573 Theory of Machine Scheduling
An overview of computational complexity, heuristic problem solving, and implicit enumeration. Deterministic machine scheduling problems: single stage, open shop, flow shop, and job shop problems with single and parallel machines. Dynamic scheduling problems and priority dispatching. A survey of other scheduling problems. Applications in manufacturing systems. *Credit units: 3 ECTS Credit Units: 7.5.*

IE 574 Location and Layout Optimization
Single or multiple facilities location in the plane with minimum or minimax criteria. Discrete or continuous layout optimization. Single facility network location. Applications in public service, production, distribution, warehousing, emergency service, flexible manufacturing. *Credit units: 3 ECTS Credit Units: 7.5.*

IE 576 Network Design
This course deals with network design problems arising in telecommunications, transportation and supply chains. It gives an overview of optimization models and solution techniques for basic problems. It covers multicommodity flows, common topologies like cliques, paths, trees and rings, fixed charge network design problems, capacity planning and quality issues. *Credit units: 3 ECTS Credit Units: 7.5.*

IE 577 Facility Location on Networks
Applications, modeling, theory and algorithms for optimal location of service facilities on distribution, transportation, communication networks. The course progresses from simple models to complex models. Well known median and center problems as well as other models will be covered. The course ends with a discussion of areas open to research. *Credit units: 3 ECTS Credit Units: 7.5. Aut (B. Tansel)*

IE 579 Selected Topics in Locational Research
The primary emphasis of this course is to involve interest in various topics in locational research. Topics covered in the course depend on the research interests of the instructor and may include some well-known location problems as well as lesser known but more contemporary topics. The course will focus both on modeling aspects and solution algorithms. In each topic the primary emphasis will be a research frontiers and directions. *Credit units: 3 ECTS Credit Units: 7.5.*

IE 580 Design and Analysis of Experiments
Basic design for scientific and industrial experiments: single-factor, and multiple-factor, completely randomized designs, randomized blocks, incomplete blocks, orthogonal contrasts, general regression approach, Latin squares, quantitative factors. use of statistical packages. *Credit units: 3 ECTS Credit Units: 7.5.*

IE 585 Special Topics in Mathematical Programming
This course is designed for advanced master's students and PhD Students with a strong foundation in linear algebra and advanced calculus who wish to pursue research in mathematical programming. Varying topics in linear and nonlinear optimization, discrete optimization, and combinatorial optimization may be offered. *Credit units: 3 ECTS Credit Units: 7.5.*

IE 590 Research Topics in IE and OR
The purpose of this series of seminars is to illustrate and discuss research interests of faculty members and research groups within the Department of Industrial Engineering. A faculty member, or guest will present his/her research interests and discuss the current status and future research areas in that field. *Credit units: None ECTS Credit Units: 4. Aut (Staff)*

IE 599 Master's Thesis
Credit units: None ECTS Credit Units: 56. Aut (Staff)

IE 613 Advanced Linear Programming
Theory of simplex method. Duality. Polyhedral theory. Theorems of alternatives. Parametric analysis. Dantzig-Wolfe decomposition. Generalized and variable upper bounding. LU decomposition and stable implementation of simplex method. Non-simple approaches to LP, ellipsoidal and interior point algorithms. *Credit units: 3 ECTS Credit Units: 7.5.*

IE 614 Nonlinear Programming
Local and global optima. Newton-type, quasi-Newton, and conjugate gradient methods for unconstrained optimization. Kuhn-Tucker theory and Lagrangean duality. Algorithms for linearly constrained optimization, including steepest ascent and reduced gradient methods with applications to linear and quadratic programming. Nonlinearly constrained optimization including penalty and barrier function methods, reduced and projected gradient methods, Lagrangean methods. Computer implementation. *Credit units: 3 ECTS Credit Units: 7.5.*

IE 660 Performance Analysis of Manufacturing Systems

The design and performance issues in production, transfer lines, production/inventory systems, network of production/inventory systems, and flexible manufacturing systems. Phase type processing times, failures and service completion processes. Buffering and blocking issues. Decomposition methods. Control policies in pure inventory and production/inventory systems. *Credit units: 3 ECTS Credit Units: 7.5.*

IE 690 Advanced Research Topics in IExOR

The purpose of this series of seminars is to illustrate and discuss research intersets of faculty members and research groups within the Department of Industrial Engineering. A faculty member, or guest will present his/her research interests and discuss the current status and future research areas in that field. *Credit units: None ECTS Credit Units: 4.*

IE 699 Ph.D. Dissertation

Credit units: None ECTS Credit Units: 56. Aut (Staff)

DEPARTMENT OF MECHANICAL ENGINEERING

A. Akay (Chair), M. Çakmakçı, S. Filiz.

The Mechanical Engineering Department offers programs that lead to B.S., M.S., and Ph.D. degrees.

The mission of our department is to provide our students with a rich environment for learning by providing them a broad-based education in the scientific and applied foundations of engineering and a solid foundation in problem solving, design and communication skills that they will need to pursue and meet the challenges of their individual career goals.

The ME program provides the students a strong foundation in engineering sciences through thermo-fluids, mechanics and materials and dynamics and control tracks, which emphasize students' analytical abilities. These are combined with courses on design and manufacturing that address from component to system-level design and emphasize the creativity of students.

The mission of the ME program is to prepare engineers for the global environment in which they can make responsible decisions while serving societal needs. The program emphasizes communication skills, knowledge of humanities, and ability to work in teams. The program also recognizes the significant rolemechanical engineering can have in life sciences and thus the need for familiarity with molecular biology.

The mission of the Department is to develop future engineers as life-long learners by encouraging them to select courses of interest among many electives. The ME program offers numerous electives to respond to the different needs and interests of our students.

UNDERGRADUATE CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
CS 111	Introduction to Computing in Engineering and Science	3 / 5
ENG 101	English and Composition I	3 / 6
GE 101	Engineering Orientation	1 / 1
MATH 101*	Calculus I	4 / 7
ME 101	Fundamentals of Mechanical Engineering	1 / 2
PHYS 105	Engineering Physics I	4 / 8

Spring Semester		Credits / ECTS Credits
CS 112	Introduction to Object-Oriented Programming	4 / 6
ENG 102	English and Composition II	3 / 6
MATH 102*	Calculus II	4 / 7
ME 102	Introduction to Systems Engineering	3 / 2
PHYS 106	Engineering Physics II	4 / 8

* Depending on the result of the calculus placement exam given at the beginning of the first year, students may take MATH 111 - MATH 112 - MATH 116 in place of MATH 101 - MATH 102.

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
HISTR 201	History of Turkish Republic I	2 / 1
HUM 111	Cultures Civilizations and Ideas I	3 / 4
MATH 220	Linear Algebra	3 / 6
ME 211	Thermo-Fluids Engineering I	4 / 7
ME 231	Mechanics and Materials I	4 / 7
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
HISTR 202	History of Turkish Republic II	2 / 1
HUM 112	Cultures Civilizations and Ideas II	3 / 4
MATH 240	Differential Equations	3 / 6

ME 212	Thermo-Fluids Engineering II	4 / 7
ME 232	Mechanics and Materials II	4 / 6
TURK 102	Turkish II	2 / 1

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
ENG 400	Technical and Professional Composition	3 / 6
GE 301	Science Technology and Society	2 / 1
MATH 230	Probability and Statistics for Engineers	3 / 6
MBG 110	Introduction to Modern Biology	3 / 6
ME 299	Summer Practice I	- / -
ME 341	Dynamics and Control I	4 / 7
	Mechanical Engineering Elective	3 / 6

Spring Semester		Credits / ECTS Credits
CHEM 201	Materials Science and Technology	3 / 6
ME 342	Dynamics and Control II	4 / 7
ME 371	Measurement and Instrumentation	3 / 6
ME 381	Design and Manufacturing	3 / 6
ME 384	Mechatronic Systems	3 / 6
	Humanities or Social Science Elective	3 / 6

FOURTH YEAR

Autumn Semester		Credits / ECTS Credits
ME 399	Summer Practice II	- / -
ME 481	Engineering Project I	3 / 6
	Mechanical Engineering Electives (2)	6 / 12
	ENG Elective	3 / 6
	Humanities or Social Science Elective	3 / 6

Spring Semester		Credits / ECTS Credits
ME 482	Engineering Project II	3 / 6
	Mechanical Engineering Elective	3 / 6
	Elective	3 / 6
	ENG Elective	3 / 6
	Science Elective	3 / 6

MECHANICAL ENGINEERING ELECTIVES

ME 343	Mechanical Vibrations	3 / 6
ME 361	Numerical Methods for Engineers	3 / 6
ME 362	Finite Elements	3 / 6
ME 363	Computer-Aided Design	3 / 6
ME 401	Acoustics and Noise Control	3 / 6
ME 402	Waves and Oscillations	3 / 6
ME 432	Applied Thermodynamics	3 / 6
ME 433	Gas Dynamics	3 / 6
ME 435	Environmental Thermal Engineering	3 / 6
ME 436	Energy Conversion Systems	3 / 6
ME 437	Heat Engines	3 / 6
ME 440	Automotive Engineering	3 / 6
ME 442	Machinery Dynamics	3 / 6
ME 446	Application of Solid Mechanics	3 / 6
ME 451	Applications of Fluid Mechanics	3 / 6

GRADUATE PROGRAMS

The Department of Mechanical Engineering offers M.S. and Ph.D. degree programs with the possibility of specialization in different areas of research in Mechanical Engineering.

Master of Science

Admission: All applicants are required to have a B.S. degree in Mechanical Engineering or a related field of science and engineering. All Turkish citizens must take the ALES (Akademik Personel ve Lisansüstü Eğitimi Giriş Sınavı - Academic Personnel and Postgraduate Education Entrance Examination) and have a minimum of 55 points in the quantitative section of the exam. GRE scores are required for international applicants. All non-native speakers of English are required to submit a proof of satisfactory knowledge of English. (Also refer to the "Graduate Admissions" section in the introduction of this catalog for the graduate admissions requirements.)

Degree Requirements: In addition to at least 24 credit units of course work, the M.S. degree candidate must take one research course, and prepare and successfully defend a thesis. The normal duration of M.S. study is four semesters. However, this may be extended for up to two more semesters upon approval of the Graduate Institute.

Doctor of Philosophy

Admission: All applicants are required to have a B.S. degree or a M.S. degree in Mechanical Engineering or a related field of science and engineering. All Turkish citizens must take the ALES (Akademik Personel ve Lisansüstü Eğitimi Giriş Sınavı - Academic Personnel and Postgraduate Education Entrance Examination) and have a minimum of 55 (70 for applicants with B.S. degree) points in the quantitative section of the exam. GRE scores are required for international applicants. All non-native speakers of English are required to submit a proof of satisfactory knowledge of English. (Also refer to the "Graduate Admissions" section in the introduction of this catalog for the graduate admissions requirements.)

Degree Requirements: Each student's Ph.D. program is individually planned with a faculty advisor. In addition to successful completion of at least 24 credit units of course work above the M.S. level (48 units of course work above B.S. level), the Ph.D. student is expected to pass qualifying examination, and to prepare and defend a dissertation based on original research. The normal duration for Ph.D. study is eight semesters for students with M.S. degree and ten semesters for students with the B.S. degree. However, these durations may be extended for up to two more semesters upon approval of the Graduate Institute.

COURSE DESCRIPTIONS

UNDERGRADUATE COURSES

ME 101 Fundamentals of Mechanical Engineering
Introduction to Mechanical Engineering. Analysis of real engineering problems using mechanical engineering principles. *Credit units: 1 ECTS Credit Units: 2. Aut (A. Akay)*

ME 102 Introduction to Systems Engineering
Treatment of engineering problems from a systems perspective and a unified application of mechanical engineering principles, introduction to and use of CAD systems and group projects. *Credit units: 3 ECTS Credit Units: 2.*

ME 211 Thermo-Fluids Engineering I
Unified development of the principles of thermodynamics, fluid mechanics and heat transfer and their applications with examples. Emphasis is on the first and second laws of thermodynamics. Heat, work, entropy and irreversibility are covered. *Credit units: 4 ECTS Credit Units: 7.*

ME 212 Thermo-Fluids Engineering II
Emphasizes hydrostatics and fluid mechanics, and applied to control volume, mass, momentum, and energy conservation, Euler and Bernoulli equations are developed, and topics such as internal and external flows, viscous flow, laminar flow systems, turbulence are covered. Thermodynamics, fluid mechanics and heat transfer

principles are applied in a unified manner to analysis and design of systems. Heat transfer in laminar and turbulent flows and heat exchangers are also covered. *Credit units: 4 ECTS Credit Units: 7.*

ME 231 Mechanics and Materials I
Statically indeterminate problems; two and three dimensional problems. Analysis of bending, twisting, shear and axial combined stresses. Introduction to energy methods. *Credit units: 4 ECTS Credit Units: 7.*

ME 232 Mechanics and Materials II
Use of engineering materials in design, analysis of combined loads and stresses and failure theories. Fatigue, impact and plastic deformation are covered. *Credit units: 4 ECTS Credit Units: 6.*

ME 299 Summer Practice I
A minimum of four weeks (20 working days) for this practice is required in a manufacturing organization. The main objective is to observe a manufacturing company in an original setting. The details of the requirements and further information can be found at: http://www.me.bilkent.edu.tr/∼me299 *Credit units: None ECTS Credit Units: None.*

ME 341 Dynamics and Control I
Modeling and control of dynamical systems. Particles, groups of particles and motion of solids, effects of forces, kinematics, Lagrange equations. Solutions in time and frequency domains. *Credit units: 4 ECTS Credit Units: 7.*

ME 342 Dynamics and Control II
Parametric modeling of systems and their analysis and control. Linear system theory, Laplace Transforms, transfer functions, introduction to feedback controls, root-locus analysis. *Credit units: 4 ECTS Credit Units: 7.*

ME 343 Mechanical Vibrations
Free and forced vibrations of single- and multi-degree-of-freedom systems. Fundamentals of modal analysis, damping and vibration control methods. Vibration measurement and anaylsis. *Credit units: 3 ECTS Credit Units: 6.*

ME 361 Numerical Methods for Engineers
Application of numerical methods in engineering problems. Applications are selected from different areas. *Credit units: 3 ECTS Credit Units: 6.*

ME 362 Finite Elements
Formulation of differential and integral equations from variational formulations. Different finite elements, integration rules, systems of equations and post-processing. *Credit units: 3 ECTS Credit Units: 6.*

ME 363 Computer-Aided Design
Fundamentals of computer graphics, solid modeling, representation of curves and surfaces. Structural solid geometry and applications of computer aided design. *Credit units: 3 ECTS Credit Units: 6.*

ME 371 Measurement and Instrumentation
Principles of experiment design, measurement, recording and analysis of force, strain, temperature, flow, and acceleration. Principles of impedance match, measurement circuits, MEMS sensors, Fourier transfer, and applications of probability and statistics. Use of typical laboratory equipment such as oscilloscopes, frequency analyzers, operational amplifiers, and thermo couples. *Credit units: 3 ECTS Credit Units: 6.*

ME 381 Design and Manufacturing
First steps in design, detailed design, analysis, and manufacturing concepts are covered. CAD and CAE are used to turn ideas into engineering drawings. Applications to machine elements and material selection. Effects of materials and uncertainties on manufacturing quality, manufacturing speed, cost and production flexibility. *Credit units: 3 ECTS Credit Units: 6.*

ME 384 Mechatronic Systems
Control of mechanical systems with microcomputers. Emphasis on embedded sensors and actuators. Design under uncertainty. Includes a student project. *Credit units: 3 ECTS Credit Units: 6.*

ME 399 Summer Practice II
This training can be held either in a manufacturing or service organization for a minimum of four weeks (20 consecutive working days). It is required to formulate an ME problem and offer a solution. The details of the requirements and further information can be found at: http://www.me.bilkent.edu.tr/∼me399 *Credit units: None ECTS Credit Units: None.*

ME 401 Acoustics and Noise Control
Fundamentals of generation and radiation of sounds. Sources of noise and control methods. Sound and vibration measurement and analysis. *Credit units: 3 ECTS Credit Units: 6.*

ME 402 Waves and Oscillations
Principles of waves and oscillations in solids and fluids and their applications to mechanical systems. *Credit units: 3 ECTS Credit Units: 6.*

ME 432 Applied Thermodynamics
Design and analysis of devices and thermal processes using principles of thermodynamics. Examples include nuclear power stations, jet engines, energy conversion, internal combustion engines, desaliniation and others. *Credit units: 3 ECTS Credit Units: 6.*

ME 433 Gas Dynamics
Development of compressible gas equations, properties of stagnation and sonic gas flow; shock waves; numerical methods for expansion waves and supersonic flows. *Credit units: 3 ECTS Credit Units: 6.*

ME 435 Environmental Thermal Engineering
Credit units: 3 ECTS Credit Units: 6.

ME 436 Energy Conversion Systems
Principles of energy conversion among different states of energy including heat, electricity and optical energy. Direct energy conversion devices for thermic, thermo-ionic, magnetohydrodynamic, photovoltaic energy. Principles and theories of chemical and mechanical energy storage devices. *Credit units: 3 ECTS Credit Units: 6.*

ME 437 Heat Engines
Principles of internal combustion engines, their performance and properties. Theory and design of flow in steam and gas turbines. Performance and control of turbines *Credit units: 3 ECTS Credit Units: 6.*

ME 440 Automotive Engineering
Automotive components. Modeling of vehicle dynamics. Maximum speed and acceleration calculations. Wheels and tires. Brake systems and performance. Suspension system and geometry. Steering system and geometry. Aerodynamics drag and effects on vehicle performance. *Credit units: 3 ECTS Credit Units: 6.*

ME 442 Machinery Dynamics
Design and analyisis of mechanisms. Gears. gear trains, cams, involute and circular gear properties. Force transmission and analysis and mass balance. *Credit units: 3 ECTS Credit Units: 6.*

ME 446 Application of Solid Mechanics
Introduction to elasticity theory; tension-compression, continuity equations. Advanced strength of materials: torsion of axisymmetric cross sections, curved beams, thick-walled cylinders. Mechancis of composite materials. Introduction to layered materials and applications. *Credit units: 3 ECTS Credit Units: 6.*

ME 451 Applications of Fluid Mechanics
Foundations of turbomachinery; nondimensional parameters and similarity law; turbines, centrifugal pumps, performance parameters. Aerodynmaic principles; blade geometry, fluid flow; rotating flows; lift and drag of blades. *Credit units: 3 ECTS Credit Units: 6.*

ME 481 Engineering Project I
Development of a mechanical engineering project, design procedures, design selection, engineering statement of customer preferences, ethical and professional responsibilities of engineers. Projects lead to products. *Credit units: 3 ECTS Credit Units: 6.*

ME 482 Engineering Project II
The projects that are started in ME 481are realized by teams of students. The final products are presented to a jury. *Credit units: 3 ECTS Credit Units: 6.*

GRADUATE COURSES

ME 500 Integrated Product Development
This course examines the process of new product development from an interdisciplinary standpoint. A one-semester project course, it involves the collaborative team effort from engineering design to business plan. *Credit units: 3 ECTS Credit Units: 6.*

ME 501 Mathematical Techniques in Mechanical Engineering I
This course explores methods of solving ordinary differential equations and introduction to partial differential equations; reviews elementary concepts, series solutions, Fourier, Bessel and Legrendre functions, boundary value problems, and eigenfunction expansions; and addresses calculus of variations. Solutions of classical partial differential equations of mathematical physics, including Laplace transformation and the method of separation of variables, will be covered in this course *Credit units: 4 ECTS Credit Units: 8.*

ME 503 Numerical Methods in Mechanical Engineering
This course emphasizes numerical methods to solve differential equations that are important in Mechanical Engineering. Procedures will be presented for solving systems of ordinary differential equations and boundary value problems in partial differential equations. Students will be required to develop computer algorithms and employ them in a variety of engineering applications. Comparison with analytical results from 24-701 will be made whenever possible. *Credit units: 4 ECTS Credit Units: 8.*

ME 511 Fluid Mechanics
This course focuses on development and application of control volume forms of mass, momentum and energy conservation laws, differential forms of these laws in Eulerian and Lagrangian coordinates, and Navier-Stokes equations. Students also explore applications to problems in incompressible and compressible laminar flows, boundary layers, hydrodynamic lubrication, transient and periodic flows, thermal boundary layers, convective heat transfer, and aerodynamic heating. *Credit units: 4 ECTS Credit Units: 8.*

ME 516 Tribology - Friction, Lubrication and Wear
Covers the science of surfaces interacting via dry, lubricated, and mixed contact. Fundamental aspects include the Reynolds Equation, thermal-tribology, friction, and wear. The course will conclude with a team project which will require computer programming. *Credit units: 3 ECTS Credit Units: 6.*

ME 521 Advanced Thermodynamics
The course covers advanced macroscopic thermodynamics and introduces statistical thermodynamics. Review of first and second laws. Axiomatic formulation of macroscopic equilibrium thermodynamics and property relationships. Criteria for thermodynamic equilibrium with application to multiphase and multi-component systems. Thermodynamic stability of multiphase systems. Elementary kinetic theory of gases and evaluation of transport properties. Statistical-mechanical evaluation of thermodynamic properties of gases, liquids, and solids. Students are expected to have an undergraduate level of understanding of Thermodynamics (comparable to 24-221). *Credit units: 4 ECTS Credit Units: 8.*

ME 523 Molecular Simulation of Materials
The purpose of this course is to expose engineering students to the theory and implementation of numerical techniques for modeling atomic-level behavior. The main focus is on molecular dynamics and Monte Carlo simulations. Students will write their own simulation computer codes, and learn how to perform calculations in different thermodynamic ensembles. Consideration will be given to heat transfer, mass transfer, fluid mechanics, mechanics, and materials science applications. The course assumes some knowledge of thermodynamics and computer programming. *Credit units: 3 ECTS Credit Units: 6.*

ME 551 Intro to Solid Mechanics I
This is the first course in a two-part professionally oriented course sequence covering a variety of important problems in solid mechanics. Topics covered typically include torsion of non-circular cross sections, the field equations of elasticity and boundary conditions, and a number of classical plane stress/plane strain solutions in rectangular and polar coordinates. Emphasis is placed on not only elasticity theory and how classical elasticity solutions are derived, but also on their use in constructing and interpreting the results from finite element simulations of applied engineering problems. Where applicable, comparisons are also made between solutions derived via the full theory of elasticity and simplified solutions developed in strength of materials courses. *Credit units: 4 ECTS Credit Units: 8.*

ME 555 Cellular Biomechanics
This course discusses how mechanical quantities and processes such as force, motion, and deformation influence cell behavior and function, with a focus on the connection between mechanics and biochemistry. Specific topics include: (1) the role of stresses in the cytoskeleton dynamics as related to cell growth, spreading, motility, and adhesion; (2) the generation of force and motion by moot molecules; (3) stretch-activated ion channels; (4) protein and DNA deformation; (5) mechanochemical coupling in signal transduction. If time permits, we will also cover protein trafficking and secretion and the effects of mechanical forces on gene expression. Emphasis is placed on the biomechanics issues at the cellular and molecular levels; their clinical and engineering implications are elucidated. *Credit units: 3 ECTS Credit Units: 6.*

ME 556 Advanced Manufacturing
This course focuses on modeling of material removal processes, including the turning, milling, boring, and drilling processes. The course also includes introduction on economics of material removal, non-traditional material removal processes, stability of machining processes, tool wear and tool life, dimensional and surface metrology, and experimental methods in manufacturing. A term project that may involve experimentations is an integral part of the course. *Credit units: 4 ECTS Credit Units: 8.*

ME 561 Vibration of Linear and Dynamic Systems
The subject area for this course is mechanical vibration, at a level appropriate for first-year graduate students. Classical techniques in mechanical vibration are developed for the modeling and analysis of discrete and continuous linear systems. Continuous systems are described within the broader context of operator theory to emphasize the physical and mathematical analogies with discrete systems. Specific topics include: Discrete systems. Equations of motion for multiple degree of freedom systems through Lagrange's method; linearization about equilibrium; symmetry and definiteness properties; free vibration; matrix eigenvalue problems; orthogonality; Rayleigh quotient; generalized coordinates; transient and forced response through modal analysis. Continuous systems. Classical rod, shaft, string, beam, membrane and plate models; Hamilton's principle; equations of motion and boundary conditions through variational methods; essentials of functional analysis; exact solution of eigenvalue problems; response through modal analysis and Green's function methods; global

discretization; Galerkin's method; essential and suppressible boundary conditions; Kamke quotient; introduction to elastic wave propagation. *Credit units: 4 ECTS Credit Units: 8.*

ME 575 Micro/Nano Robotics
This course focuses on the design, modeling, fabrication, and control of miniature mobile robot and micro/nano-manipulation systems for graduate and upper level undergraduate students. It provides an overview of the state-of-the-art micro- and nanoscale sensors, actuators, manipulators, energy sources, robot design, and control methods. It requires active student participation, interaction, and in-class discussions. In addition to the basic background, it includes many case studies of current miniature robots and micro/nano-systems, challenges and future trends, and potential applications. The course requires a final project involving novel theoretical and/or experimental ideas for micro/nano-robotic systems with a team of students. Depending on the equipment availability, these projects can also involve hands-on experience and experimental demonstrations. *Credit units: 4 ECTS Credit Units: 8.*

ME 581 Computer Aided Design
This course is the first section of the two-semester sequence on computational engineering. Students will learn how computation and information technologies are rapidly changing the way engineering design is practiced in industry. The course covers the theories and applications of the measurement, representation, modeling, and simulation of three-dimensional geometric data used in the engineering designed process. Students taking this course are assumed to have knowledge of the first course in computer programming. *Credit units: 4 ECTS Credit Units: 8.*

ME 612 Turbulent Flow
Course content emphasizes basic equations of turbulent flow, Reynolds stresses, semi-empirical and phenomenological theories of turbulence, similarity theory, and eddy viscosity as well as turbulence production, dissipation, and scaling laws. In addition, applications to confined flows, boundary layers, convective heat transfer and jet mixing, and introduction to more complex closure schemes and statistical methods in turbulence are explored. *Credit units: 4 ECTS Credit Units: 8.*

ME 615 Microfluidics
This course offers an introduction to the emerging field of microfluidics with an emphasis on chemical and life sciences applications. During this course students will examine the fluid dynamical phenomena underlying key components of "lab on a chip" devices. Students will have the opportunity to learn practical aspects of microfluidic device operation through hands-on laboratory experience, computer simulations of microscale flows, and reviews of recent literature in the field. Throughout the course, students will consider ways of optimizing device performance based on knowledge of the fundamental fluid mechanics. Students will explore selected topics in more detail through a semester project. Major course topics include pressure-driven and electrokinetically-driven flows in microchannels, surface effects, micro-fabrication methods, micro/nanoparticles for biotechnology, biochemical reactions and assays, mixing and separation, two-phase flows, and integration and design of microfluidic chips. Students are assumed to have an undergraduate level of knowledge in fluid mechanics (comparable to 24-231). Compared to the undergraduate course, graduate students will conduct an additional project, more extensive homework and attend an extra hour of recitation. *Credit units: 4 ECTS Credit Units: 8.*

ME 630 Advanced Heat Transfer
This course is open to students from all areas of engineering, although an undergraduate background in heat transfer is assumed. This class is an appropriate preparation for the doctoral qualifying exam. Topics to be covered include: mathematical formulation of heat transfer problems, heat conduction, thermal radiation, hydraulic boundary layers, and laminar and turbulent convection. Problems and examples will include theory and applications drawn from a spectrum of engineering design problems. *Credit units: 4 ECTS Credit Units: 8.*

ME 631 Conductive Heat Transfer
This course is open to students from all areas of engineering, although a graduate background in heat transfer is assumed, such as the material covered in Advanced Heat Transfer. This course focuses on application of exact and approximate analytical methods to problems of conduction heat transfer. This course also covers numerical techniques in heat conduction. Covered topics include steady periodic problems, melting and solidification, enthalpy formulation, parametric estimation, and the Boltzmann Transport Equation. Examples will be drawn from a spectrum of engineering application. *Credit units: 2 ECTS Credit Units: 4.*

ME 632 Convective Heat Transfer
This course is open to students from all areas of engineering, although a graduate background in heat transfer is assumed, such as the material covered in Advanced Heat Transfer (24-730). This course focuses on the fundamentals of convective heat transfer. Topics covered in this course are: laminar and turbulent heat transfer, high speed flow, natural convection, and experimental techniques. Examples will be drawn from a spectrum of engineering application. *Credit units: 2 ECTS Credit Units: 4.*

ME 634 Small Scale Heat Transfer
This course is open to students from all areas of engineering, although a graduate level background in heat transfer is assumed, such as the material covered in Advanced Heat Transfer (24-730). This course focuses on the unique heat transfer effects in micro and nano scales. This course includes mathematical modeling of

small scale heat transfer, review of microfabrication techniques, thermometry, electrical and optical techniques for thermal conductivity measurements, and thermophysical properties of gasses and solids. Examples will be drawn from a spectrum of thermal engineering applications in microelectronics and instrumentation. *Credit units: 2 ECTS Credit Units: 4.*

ME 635 Heat Transfer in Biology and Medicine

Course objectives include: studying applications of heat transfer to biological systems, reviewing biomedical instrumentation related to thermal therapy, and developing mathematical techniques for bioheat transfer analyses. Syllabus includes: introduction to heat transfer in biological systems, mathematical modeling of bioheat transfer, cryopreservation, cryosurgery, hyperthermia and thermal ablation, thermal regulation in the human body, and measurements of thermophysical properties of biomaterials. *Credit units: 2 ECTS Credit Units: 4.*

ME 652 Intro to Solid Mechanics II

This is the second course in a two-part professionally oriented course sequence covering a variety of important problems in solid mechanics. Topics covered typically include anisotropy, energy methods and finite elements, contact problems, fracture mechanics and plasticity. As in the first course in the sequence, emphasis is placed on not only mechanics theory and classical solutions, but also on their application in finite element modeling of applied engineering problems. This course builds on concepts from the first course, so that it or a similar course on elasticity theory is a prerequisite. *Credit units: 4 ECTS Credit Units: 8.*

ME 657 Nano/Micro Manufacturing

This is a survey-type course in different techniques of nano/micro-scale manufacturing. A wide range of topics from lithography, laser processes, mechanical micro-manufacturing, measurement techniques, ultrasonic micromachining, micro-electrodischarge machining, micro-electrochemical machining, e-beam and ion-beam machining, and micro-stereolithography techniques are surveyed. For each technique, the physical principles of the technique, material capability, geometric capability, and other advantages/disadvantages are discussed. Students are required to complete a final project. *Credit units: 4 ECTS Credit Units: 8.*

ME 660 Acoustics

This course covers physics and theory of sound generation, radiation and transmission in mechanical systems. The theoretical developments begin with one-dimensional wave theory and its applications to propagation of sound in different media and to interaction of sound with structures. Solutions of wave equations in 3-D are developed for the classical radiation and scattering problems as well as transmission in wave guides. Students are exposed to criteria concerning noise effects on people. Laboratory exercises will cover measurement and analysis of sounds waves. *Credit units: 4 ECTS Credit Units: 8.*

ME 665 Dynamics

Topics include kinematics of particles and rigid bodies; dynamics of a particle, systems of particles and rigid bodies; central force fields, orbits and trajectories variable mass systems; Lagrange's equations of motion; Hamilton's Principle; variational methods; and applications to vibration problems and the gyroscope. *Credit units: 3 ECTS Credit Units: 6.*

ME 671 Linear Systems

Topics include review of classical feedback control; solution of differential and difference equations; Laplace and Z-transforms, matrix algebra, and convolution; state variable modeling of dynamic continuous and discrete processes; linearization of nonlinear processes; state variable differential and difference equations; computer-aided analysis techniques for control system design; state variable control principles of controllability, observability, stability, and performance specifications; trade-offs between state variable and transfer function control engineering design techniques; and design problems chosen from chemical, electrical, and mechanical processes. *Credit units: 4 ECTS Credit Units: 8.*

FACULTY OF HUMANITIES AND LETTERS

Talat S. Halman, M.A., Dean

The Faculty of Humanities and Letters comprises five departments:

- American Culture and Literature
- Archaeology
- English Language and Literature
- Philosophy
- Turkish Literature

The departments of American Culture and Literature, Archaeology, English Language and Literature, and Philosophy all have Bachelor of Arts (B.A.) programs. In addition, the Department of Turkish Literature offers graduate programs leading to Master of Arts (M.A.) and Doctor of Philosophy (Ph.D.) degrees, while the Department of Archaeology and History of Art has an M.A. program.

The Faculty also houses a number of non-degree-granting units which offer university-wide service courses in First Year English and Composition, Foreign Languages (French, German, Italian, Japanese, Russian and Spanish), History of the Turkish Republic and Turkish Language and Literature. The Cultures, Civilizations and Ideas program offers a year-long intensive course to sophomore students.

ACADEMIC STAFF

İlknur Aka, Instructor
B.A., German Language and Literature, Hacettepe University, 1982.

Varol Akman, Professor
Ph.D., Electrical, Computer, and Systems Engineering, Rensselaer Polytechnic Institute, 1985. Artificial intelligence, logic, philosophy of language, philosophy of mind, pragmatics, the Internet and society.

Istvan Aranyosi, Assistant Professor
Ph.D., Philosophy, Central European University, 2005. Metaphysics, philosophy of mind.

David De Kanter Arndt, Visiting Assistant Professor
Ph.D., Comparative Literature, U.C. Irvine, 1998. Modern Fiction and Poetry (French, German, English); History of Literary Theory and Criticism, Classical Literature and Philosophy, Contemporary Continental Philosophy.

İsmail Aşıkoğlu, Instructor
B.A., Education, Ankara University, 1964.

Sema Aydın, Instructor
M.A., German Language and Literature, Hacettepe University, 1989.

Louise Barry, Instructor
Ph.D., French Literature, Emory University, 2002. Aesthetics, cultural history and literature.

Julian Bennett, Assistant Professor
Ph.D., Archaeology, University of Newcastle upon Tyne, 1991. Roman provinces and frontier studies, cultural heritage, archaeological drafting and surveying.

Sandrine Berges, Assistant Professor
Ph.D., Philosophy, University of Leeds, 2000. Moral and political philosophy, ancient philosophy, Nietzsche.

Yehezkel S. Berkovski, Visiting Assistant Professor
Ph.D., Philosophy, Oxford University, 2005. Logical positivism, philosophy of logic, Kant, possible worlds, philosophy of science.

Ahmet Beyatlı, Instructor
Ph.D., Management, University of Baghdad, 1994. Arabic.
Arzu Bezgin, Instructor
B.A., Italian Language and Literature, Ankara University 1991.
Dennis Bryson, Assistant Professor
Ph.D., History, University of California, Irvine, 1993. 20th century US cultural, intellectual, and social history. Critical theory, history of the foundations and social sciences in the US, family and gender history.
Ayşe Candoğan, Instructor
B.A., Italian Language and Literature, Ankara University, 1992.
William Coker, Instructor
M.Phil., Comperative Literature, Yale University, 2008. German Literature and Intellectual history.
Benni Claasz Coockson, Instructor
Teacher College, Delft, NL, 1985. Archaeological photography, recording, mapping, and illustration.
Berna Cordan, Instructor
B.A., Journalism and Public Relations, Ankara University, 1975.
Costantino Costantini, Instructor
Ph.D., Comparative Literature, Emory University, 2001. Classics, French and Italian Literature, theory.
Nur Bilge Criss, Assistant Professor
Ph.D., History, George Washington University, 1990. Modern history, Ottoman history, Turkish Foreign Policy, Contemporary History, Cold War History.
Gülay Çayan, Instructor
B.A., German Language Teaching, Hacettepe University, 1992.
Ayşe Çelikkol, Assistant Professor
Ph.D., Rice University, 2006. 19th Century British Literature and Culture, Cosmopolatinism and globalization studies.
Hilmi Demir, Assistant Professor
Ph.D., Philosophy and Cognitive Science, Indiana University, 2006. Philosophy of mind, philosophy of cognitive science, logic and philosophy of information.
E. Lale Demirtürk, Associate Professor
Ph.D., American Studies, University of Iowa, 1986. Modern African-American novel, American novel, 1865-1945.
Elizabeth Sarah Disley, Instructor
Ph.D., German Idealism, self-consciousness, ethics, political theory, Magdalene College, University of Cambridge, 2009.
Marianella Gutierrez Erdem, Instructor
B.A., Spanish Language Teaching, Corazon de Maria University, 1970.
Charles Gates, Senior Lecturer
Ph.D., Classical Archaeology, University of Pennsylvania, 1979. Aegean Bronze Age, Greek art and archaeology, Byzantine art and archaeology.
Marie-Henriette Gates, Associate Professor
Ph.D., Ancient Near Eastern Languages and Literatures, Yale University, 1976. Archaeology of Mesopotamia, archaeology of Egypt, archaeology of Syria and Palestine, archaeological method and theory.
Ali Turan Görgü, Instructor
M.A., Teaching of Turkish, Gazi University, 1997.
David Grambling, Visiting Assistant Professor
Ph.D., German Literature, University of California Berkeley, 2008. Modern German Literature.

Sevil Güner, Instructor
B.A., French Language Teaching, Gazi University, 1988.
Talat S. Halman, Professor
M.A., Political Science, Columbia University, 1954. Hon. Ph.D., Boğaziçi University , 1988. Turkish language, Near Eastern languages, literature and culture, Middle Eastern studies, Islam and its culture.
Daren I. Hodson, Instructor
Ph.D., Comparative Literature, University of Utah, 1995. Composition and Rhetoric, Eighteenth Century Literature, Philosophy and Culture, Contemporary Culture.
Craig Ireland, Assistant Professor
Ph.D., Theory and Epistemology of Literature, Université de Montréal, 2000. Social and literary theory, public sphere theory, Western Marxism, Cultural Studies, 18th to 20th-century Western intellectual and cultural history.
Mehmet Kalpaklı, Assistant Professor
Ph.D., Turkish Literature, University of Washington/İstanbul University, 1992. Ottoman literature and cultural history, Near Eastern languages and literature, modern Turkish literature, theory of literature, use of computers for humanities.
Engin Karacaören, Instructor
Ph.D., Spanish Language and Literature, Ankara University, 2002.
N. Megan Kelley, Instructor
Ph.D., American History, York University, 2006. 20th century American History, film studies, Gender studies, cultural studies.
Valerie Kennedy, Assistant Professor
Ph.D., English Literature, University of East Anglia, 1979. Modern drama, Victorian fiction, 20th century fiction.
Paul Elliot Kimball, Instructor
Ph.D., Classic (concentration in ancient history) State University of New York at Buffalo, 2004. Hellenistic and Late Antique History, Byzantine Social and Cultural History, Greek Religion, Myth and Ritual.
Edward Kohn, Assistant Professor
Ph.D., History, McGill University, 2000. US History, 20th century US foreign relations.
Ezel Kural-Shaw, Visiting Professor
Ph.D., History, Harvard University, 1975. Ottoman, European, Byzantine, and Near Eastern History. Comparative institutional, social and intellectual history.
Gül Kurtuluş, Instructor
Ph.D., English Literature, Bilkent University, 1997. Modern drama, 16th and 17th century English Literature, literary theory and criticism.
Torey Liepa, Instructor
Ph.D., Cinema Studies, New York University, 2008. Film history, American cultural and media studies.
Laurent Mignon, Assistant Professor
Ph.D., Modern Turkish Literature, London University, 2002. 19th and 20th century's Turkish literature, literary translations, travel literature.
Jacques Morin, Instructor
Ph.D., Classics, McGill University, 1991. Greek and Roman art and archaeology, Aegean prehistory.
Nurdane Mumcu-Öz, Instructor
M.A., Turkish Language and Literature, Ankara University, 2002.
Mukaddes Mutluer, Instructor
B.A., German Language and Literature, Hacettepe University, 1976.

Mustafa Nakeeb, Visiting Assistant Professor
Ph.D., Philosophy, State University of New York at Buffalo, 1999. History of Philosophy, Ancient Philosophy (Plato), Ancient Historiography, Philosophy of History.
Saeko Ohashi, Instructor
B.A., Japanese Language and Education, Gifu University, 1979.
Kurt Ozment, Visiting Assistant Professor
Ph.D., Comperative Literature, University of California, 2007. Aesthetics, literary theory, poetry.
Sare Öz, Instructor
B.A., Turkish Literature, Gazi University, 1960.
Özlem Özduran, Instructor
B.A., Italian Language and Literature, Ankara University, 1990.
Ahmet Özer, Instructor
B.A., Turkish Language and Literature, Anadolu University, 1992.
İlknur Özgen, Associate Professor
Ph.D., Classical and Near Eastern Archaeology, Bryn Mawr College, 1982. Anatolian art and archaeology, Greek art and archaeology, Near Eastern archaeology, Aegean archaeology.
Gürcan Özköklü, Instructor
M.A., German Language Education, Hacettepe University, 1990.
Rasim Özyürek, Instructor
Ph.D., Turkish Language Teaching, Baku State University, 1998.
Julie Park, Visiting Assistant Professor
Ph.D., Comparative Literature, U.C. Irvine, 1999. Modern Fiction, Psychoanalytic Approaches to Literature, Literary Theory, Women's Studies, Film Studies.
Donald Bruce Randall, Associate Professor
Ph.D., English Literature, University of Alberta, 1995. Post-colonical literature, Victorian literature.
Özlem Saçak, Instructor
M.A., Italian Language and Literature, Ankara University, 1993.
Seçil Saraçoğlu, Instructor
B.A., French Language and Literature, Ankara University, 1971.
Kory Spencer Sorrell, Assistant Professor
Ph.D., Pennsylvania State University, 2000. American pragmatism, ethics, international human rights, and feminist episitemology and moral theory.
Şengül Soytetir Şentürk, Instructor
Ph.D., German Language and Literature, Hacettepe University, 1999.
Engin Soyupak, Instructor
B.A., French Language Teaching, Gazi University, 1976.
Ulrich Steinvorth, Visiting Professor
Ph.D., Philosophy, Universitaet Göttingen, 1968. Political philosophy, ethics, metaphysics.
Muammer Şanlı, Instructor
Ph.D., American Culture and Literature, Hacettepe University, 1999. American poetry, Vietnam War literature, Native American literature.
Gülnara Tanrıkulu, Instructor
B.A., Russian Language and Literature, Şevçenko Russian University , 1988.
Sema Taşkın, Instructor
Ph.D., English Literature, Hacettepe University, 1999. 20th century poetry, romantic poetry, victorian literature.
Burcu Taşkıran, Instructor
M.A., Graduate School of Education, Bilkent University, 2002.

Nuran Tezcan, Assistant Professor
Ph.D., Ottoman Literature, Otto-Friedrich University-Bamberg, 1996. Ottoman literature, poetry of the Republican era, Turkish lexicon, Turkish as a native and foreign language.
Semih Tezcan, Visiting Professor
Ph.D.,Turcology, University of Göttingen-Germany, 1970. Pre-Islamic and Early-Islamic Turkish Languages and Literature, Turkish Languages of Persia, Old Anatolian Turkic, Turkish Lexicology.
İbrahim Turan, Instructor
Ph.D., Education, Hacettepe University, 1998.
Zelda Turan, Instructor
B.A., French Language and Literature, Hacettepe University, 1982.
Nurhan Turgut, Instructor
M.A., German Language and Literature, Hacettepe University, 1996.
Lars Vinx, Assistant Professor
Ph.D., Philosophy, University of Toronto, 2006. Political philosophy and history of political thought, philosophy of law, medieval and early modern philosophy.
Simon Wigley, Assistant Professor
Ph.D., Political Philosphy, London School of Economics and Political Science, 1998. Political Philosophy, Ethics, distributive justice, responsibility, desert, well-being.
William Wringe, Assistant Professor
Ph.D., Logic and Metaphysics, University of Leeds, 2000. Philosophical logic, epistemology.
Hilmi Yavuz, Adjunct Senior Lecturer
B.A., Philosophy, University of London, 1969.
Vedat Yazıcı, Instructor
B.A., Education, Gazi University, 1988.
Thomas Zimmermann, Assistant Professor
Ph.D., Regensburg University, 2006. European and Anatolian prehistory and protohistory, Archaeometallurgy

PART-TIME ACADEMIC STAFF

Asuman C. Abuagla, M.A., Classical Greek Language and Literature, Ankara University, 2003.
Seray Altıkulaç, B.A., Spanish Language and Literature, Ankara University, 2007.
Nurgüzel Cumalıoğlu, B.A., Turkish Language and Literature, İstanbul University, 1963.
Neşe Çetiner, B.A., Turkish Language and Literature, İstanbul University, 1974.
Özlem Doğan, B.A., Ankara University, Spanish Language and Literature, 2000.
Kudret Emiroğlu, B.A., International Relations, Ankara University, 1979.
Müfit Erdoğan, B.A., French Language and Literature, Ankara University, 1967.
Hilal Erkuş, B.A., Radio and T.V., Pekin University, 1992.
Sevim Gözcü Ezen, B.A., Turkish Language and Literature, Ankara University, 1998.
Eser Güler, B.A., Turkish Language and Literature, Ankara University, 1970.
Pınar Güven, B.A., German Language Teaching, Hacettepe University, 2004.
Nadir Hüseyin, B.A., Russian Language, Azerbaijan State University, 1970.
Gönenç Tuzcu, B.A., Turkish Language and Literature, Gazi University, 2005.
Oktay İkinci, B.A., Turkish Language and Literature, Gazi University, 1988.
Ahmet Kaya, B.A., Turkish Language and Literature, Ankara University, 1985.
Leman Müftüoğlu, B.A., Turkish Language and Literature, İstanbul University, 1977.
Öcal Oğuz, Ph.D., Gazi University, 1991. Turkish folk literature.
Ayhan Şendöl, B.A., Turkish Language and Literature, Ankara University, 1966.
Ümit Tarı, B.A., Samsun Education Institute, 1976.
Burcu Tekin, B.A., Spanish Language and Literature, Ankara University, 2005.
Mahmut Temizyürek, B.A., Psychological Services in Education, Ankara University, 1992.

Tansal Tokat, B.A., Turkish Language and Literature, Ankara University, 1970.
Simay Erdem Tuğlu, M.A., Chinise Langage and Literature, Ankara University, 2006.

GENERAL COURSES

HUMANITIES COURSES

HUM 121 The Mediterranean World to 1600
The course examines the dynamics of humans, time, and space in the shaping of cultures and civilizations in the three continents bordering the Mediterranean Sea. Topics include interdisciplinary themes that connect with one another through the medium of history. Fields such as archaeology, art architecture, drama, geography, and religion become integrated to develop student skills in analysis, critical thinking, and self-expression. *Credit units: 3 ECTS Credit Units: 6.*

HUM 122 The Mediterranean World and Beyond, 1600 to the Present
The aim of this course is to make students aware of issues and questions, encourage them to seek answers, and follow ramifications by focusing on the scientific revolution, French Revolutionary era and nationalism, industrialization, imperialism, colonialism, Darwin-Marx-Freud, "modernization" models and variations, globalization of concerns (such as ecology, communication and implications) and the issue of post-modern. *Credit units: 3 ECTS Credit Units: 6.*

HUM 321 The Enlightenment and the French Revolution
The Enlightenment also known as the Age of Reason, represents the spreading of trust in science and scientific methodology and the intent to apply that knowledge towards the improvement of humankind. The writings of the period manifest a critical spirit aimed at reforming society and its institutions. From encouragement of technology to emphasis on human rights, this period shapes our views of modernity. Writings of the period focus on issues that are still significant today: nature of the representative government, tolerant secularism, reform of the penal system, free trade, ethics, and theory of knowledge. *Credit units: 3 ECTS Credit Units: None.*

PROGRAM IN CULTURES, CIVILIZATION AND IDEAS

M. Nakeeb (Acting Coordinator), D. D. K. Arndt, L. Barry, W. Coker, C. Costantini, E. S. Disley, D. Grambling, D. I. Hodson, P. E. Kimball, K. Ozment, J. Park, K. S. Sorrell.

COURSE DESCRIPTIONS

HUM 111 Cultures Civilizations and Ideas I
This half of the year-long course "Cultures, Civilizations, and Ideas" introduces students to the study of culture and civilization through close reading of primary texts in the ancient traditions of the Near East and the Mediterranean. It also introduces students to more modern critical readings and discussion of the value and weight of this tradition. The course aims to provide students with an understanding of the ancient roots of literary craft and philosophical thought, and to enhance the student's ability in interpretative and critical reasoning. Successful completion of the course requires careful and timely reading of assigned texts, essay writing, and active participation in class discussion. Grading is based on a course project, a mid-term examination or term-paper, comprehensive final examination, and class participation. Required texts include: *Epic of Gilgamesh*; Freud: *Civilization and its Discontents* ; Homer: *Iliad*; Sophocles: *Theban Plays*; Plato: *Republic*; and a course reader of other shorter works and critical essays. *Credit units: 3 ECTS Credit Units: 4, Prerequisite: ENG 102. Aut (Staff)*

HUM 112 Cultures Civilizations and Ideas II
The second half of the year-long course "Cultures, Civilizations and Ideas", continues the study of culture through examination of texts through the periods of the Late Middle Ages, the Renaissance, Enlightenment, and up to modern times. The course focuses on several themes, most importantly, the concepts of Modernity and Knowledge, Individualism, Cross-Cultural Contact, Social Order and Disorder. As in HUM 111, close reading and discussion of primary texts is the vehicle for the course. Grading is based on a course project, a mid-term examination or term-paper, comprehensive final examination, and class participation. Required authors include, among others: Machiavelli, Shakespeare, Descartes, Rousseau, Hegel, Marx, Kafka. *Credit units: 3 ECTS Credit Units: 4, Prerequisite: HUM 111. Aut (Staff)*

HUM 291 Selected Topics in the Humanities
These courses are designed to allow students to explore and focus on various topics in the Humanities and Social Sciences in depth and detail, and from an interdisciplinary perspective. Such courses have the objective of furthering the critical reading, writing, and analytic skills fostered in other CCI courses. These courses will engage in study of themes, issues, or concepts from fields such as Comparative Literature, Philosophy, History, Art History, Film Studies, Political Thought, and many other disciplines. Two separate sections of CCI Selected Topics courses will be offered every Spring Semester. Courses will be taught in seminar format, and are open to all Bilkent students as a general elective. *Credit units: 3 ECTS Credit Units: 6.*

HUM 331 Humanities and Social Science Honors Seminar
This seminar is restricted to students who have a cumulative grade point average of 3.30 or higher. The seminar is designed to provide students with a sense of basic concepts and theoretical approaches which are common to advanced research in the humanities and social sciences. Though the specific content of the seminar will change from one year to the next, each seminar will present important readings and texts from several disciplines (philosophy, psychology, sociology, literary theory, etc.). Students will discuss their work with one another in seminar meetings, and also in one-on-one meetings with the seminar leader throughout the semester. Each student will complete a term paper on a topic of his or her choice related to the issues covered in the seminar, and will leave the course with a polished piece of academic writing which they can use in applications to graduate school, as well as a detailed letter of recommendation from the seminar instructor. *Credit units: 3 ECTS Credit Units: 4. Aut (E. S. Disley)*

HUM 435 Dual Revolution and Democracy
The course examines the period of the French Revolution and the Industrial Revolution as one of intellectual and economic upheavals that stem from preceding scientific and technological changes which inform the concept of modernity as well the process by which the masses gain recognition as voices-voters who expect to share in political decision-making. Key topics are the Enlightenment, institutional changes during the French Revolution, and progress of industrialization and franchise in Great Britain. Students are expected to carry out directed research in which they compare findings related primarily to France and England to what the experience was in another country at that time or later. Many of the topics to be analyzed in the course (such as secularization, industrialization, demographic change, urbanization, education, reform movements, free trade ...) have relevance to current issues in Turkey. *Credit units: 3 ECTS Credit Units: None.*

TURKISH UNIT

S. Öz (Coordinator), İ. Aşıkoğlu, B. Cordan, A. T. Görgü, N. Mumcu-Öz, A. Özer, R. Özyürek, B. Taşkıran, V. Yazıcı.

Part-time: N. Cumalıoğlu, N. Çetiner, S. Gözcü Ezen, E. Güler, G. Tuzcu, O. İkinci, A. Kaya, L. Müftüoğlu, A. Şendöl, Ü. Tarı, M. Temizyürek, T. Tokat.

COURSE DESCRIPTIONS

TURK 101 Turkish I
The meaning and nature of language; importance of language in society; language-culture relationship; world languages and Turkish; history and the present state of Turkish; Turkish languages; phonetic features of Turkish; structure of Turkish; punctuation and style; introduction to speech and composition. *Credit units: 2 ECTS Credit Units: 1. Aut (İ. Aşıkoğlu, B. Cordan, N. Cumalıoğlu, N. Çetiner, A. T. Görgü, S. Gözcü Ezen, E. Güler, G. Tuzcu, O. İkinci, A. Kaya, L. Müftüoğlu, S. Öz, A. Özer, A. Şendöl, Ü. Tarı, B. Taşkıran, M. Temizyürek, T. Tokat, V. Yazıcı)*

TURK 102 Turkish II
Basic principles of speech and composition; rules and forms of oral expression: addresses, lectures, panels, etc.; introduction to Turkish literature; analysis of selected texts from contemporary Turkish literature; introduction to “Divan” literature; language of the Ottoman period, selected poems and prose texts; reading and oral interpretation of selections from Turkish and world literature; exercises in composition and report writing. *Credit units: 2 ECTS Credit Units: 1. Aut (N. Çetiner, A. T. Görgü, S. Gözcü Ezen, E. Güler, G. Tuzcu, A. Kaya, L. Müftüoğlu, Ü. Tarı, B. Taşkıran, M. Temizyürek, T. Tokat)*

TURK 103 Turkish Usage and Style
Aims to show the students the structure of the Turkish language and to develop their skills in using the language effectively. In addition to the subjects covered in TURK 101 and 102, by focusing upon basic grammar and doing textual analysis the students are expected to appreciate the richness of the Turkish language. *Credit units: 3 ECTS Credit Units: 1. Aut (V. Yazıcı)*

TURK 104 Oral and Written Practice of Turkish
The outline of the course is designed to emphasize the basic concepts of the Turkish language by presenting selected texts from Turkish and world literature. Main goal of the course is to improve the creative and critical thinking skills of the students, as well as use of the Turkish language correctly and effectively in written and oral expression. *Credit units: 3 ECTS Credit Units: 2.*

TURK 111 Turkish as a Second Language I
The aim is to help the students comprehend spoken and written Turkish, express their ideas in written and oral form, and to acquaint them with an understanding of Turkish life and culture. *Credit units: 3 ECTS Credit Units: 6. Aut (N. Mumcu-Öz)*

TURK 112 Turkish as a Second Language II
Sequel to TURK 111. Basic principles of speech and composition. Exercises in oral and written expression. Analysis of selected texts from Turkish literature and media. *Credit units: 3 ECTS Credit Units: 6. Aut (N. Mumcu-Öz)*

TURK 113 Turkish as a Second Language III
The objective of the course is to provide the students with further skills and confidence in oral and written expression and to make them familiar with more complicated texts from different areas of Turkish intellectual life. *Credit units: 3 ECTS Credit Units: 6.*

TURK 114 Basic Turkish IV
The objective of the course is to provide the students with further skills and confidence in oral and written expression and to make them familiar with more complicated texts from different areas of Turkish intellectual and cultural life. *Credit units: 3 ECTS Credit Units: 6.*

TURK 125 Rhetoric
Students are expected to choose two of the works listed below and make a comparative analysis. The works are; *Körleşme* (Alias Canetti), *SevgiliArsız Ölüm* (Latife Tekin), *Cevdet Bey veOğulları* (Orhan Pamuk), *Venedikte Ölüm* (Thomas Mann), and *Gece* (Bilge Karasu). *Credit units: 3 ECTS Credit Units: None.*

TURK 201 Ottoman Turkish I
This course gives an introduction to the reading and writing systems and grammar of Ottoman Turkish through close reading of graded selections from poems, essays, short stories and archival materials printed in the late Ottoman and early Republican periods. *Credit units: 3 ECTS Credit Units: None.*

TURK 202 Ottoman Turkish II
This course gives an introduction to the reading and writing systems and grammar of Ottoman Turkish through close reading of graded selections from poems, essays, short stories and archival materials printed in the late Ottoman and early Republican periods. *Credit units: 3 ECTS Credit Units: None.*

TURK 203 Ottoman Turkish III
This course is devoted to the reading and understanding of texts focusing on key issues in late Ottoman and early Republican Turkish history. The course aims to develop reading skills in Ottoman Turkish and to examine important texts written between 1700 and 1928. *Credit units: 3 ECTS Credit Units: None.*

TURK 204 Ottoman Turkish IV
This course emphasizes the different types of Ottoman writing in the elaborate high style of classical Ottoman (15th-20th centuries). Selections from manuscript are used to enable students to read texts they are likely to encounter in their historical research. Some documents will be selected from Ottoman archives in Nasih, Rik'a, Divâni scripts. *Credit units: 3 ECTS Credit Units: None.*

TURK 211 Intermediate Turkish I
This intermediate course builds on students' knowledge and usage of grammar previously acquired by improving especially their reading, writing and speaking skills. *Credit units: 3 ECTS Credit Units: 6.*

TURK 381 Advanced Turkish I
This course emphasizes on advanced use of the four basic language skills (reading, writing, speaking and listening). Students will be expected to comment on various articles, books (novels, stories, poetry) they read and multimedia materials they listen to or watch; both verbally and in writing. *Credit units: 3 ECTS Credit Units: 6.*

TURK 382 Advanced Turkish II
In this course, the students will participate in activities designed to improve all of the basic language skills. Development of verbal expression skills will be particularly emphasized and in this respect, students shall design a play to be staged at the end of the semester. *Credit units: 3 ECTS Credit Units: 6. Aut (N. Mumcu-Öz)*

TURK 401 Turkish Grammar
The aim of this course is to make an introduction to Turkish grammar; to discuss the importance of language in reading and writing; to make a revision of the principles of spelling and analyze word groups and different kinds of sentences. *Credit units: 4 ECTS Credit Units: None.*

TURK 403 Turkish Grammar I
Definition of language and views about its origins. Phonetics of Turkish language. Types of suffixes. Intonation of speech patterns. *Credit units: 4 ECTS Credit Units: None.*

TURK 404 Turkish Grammar II
Parts of speech (noun, verb, adjective, pronoun, adverb, article, conjunctions). Syntax and, sentence structure of Turkish language with discussion different views. *Credit units: 4 ECTS Credit Units: None.*

HISTORY OF TURKISH REPUBLIC UNIT

N. B. Criss (Coordinator).

COURSE DESCRIPTIONS

HISTR 201 History of Turkish Republic I
This course covers the nature and identity of the Ottoman Empire and its many legacies to the Republic such as modernization and intellectual movements. The focus is on the place of the Empire in international politics and its efforts to integrate with the European state system and public law from the early 19th century to World War I; why the Ottomans chose to join WWI; Turkey's War of Independence and formation of the Republic. *Credit units: 2 ECTS Credit Units: 1. Aut (Staff)*

HISTR 202 History of Turkish Republic II
The second part of this course focuses on the political/diplomatic history of the early Republic, Atatürk's reforms and principles of statecraft; Turkey between two world wars; World War II and Ankara's active neutrality; transition to multi-party democracy; the Korean War and membership in NATO; domestic and foreign policies from 1946 to 1980. *Credit units: 2 ECTS Credit Units: 1. Aut (Staff)*

FOREIGN LANGUAGES UNIT

E. Soyupak (Coordinator)

Chinise: H. Erkuş, S. E. Tuğlu.

French: M. Erdoğan, S. Güner, E. Soyupak, Z. Turan.

German: İ. Aka, S. Aydın, G. Çayan, P. Güven, M. Mutluer, G. Özköklü, Ş. Soytetir Şentürk, İ. Turan, N. Turgut.

Italian: A. Bezgin, A. Candoğan, Ö. Özduran, Ö. Saçak.

Japanese: S. Ohashi.

Spanish: S. Altıkulaç, Ö. Doğan, M. G. Erdem, E. Karacaören, B. Tekin.

Russian: N. Hüseyin, G. Tanrıkulu.

Other Foreign Languages: A. Beyatlı.

FOREIGN LANGUAGE COURSES

The Foreign Languages Unit offers basic- and intermediate-level courses in German, French, Italian, Japanese, Russian, Spanish, Chinise, Arabic and Persian. Advanced level courses as well as special-purpose courses emphasizing language skills in various professions are also offered.

BASIC LEVEL COURSES

GER 111/112/113/114	**Basic German I / II / III / IV**
FRE 111/112/113/114	**Basic French I / II / III / IV**
ITA 111/112/113/114	**Basic Italian I / II / III / IV**
SPA 111/112/113/114	**Basic Spanish I / II / III / IV**
RUS 111/112/113/114	**Basic Russian I / II / III / IV**
FRL 131/132/133/134	**Basic Arabic I / II / III / IV**
FRL 141/142/143/144	**Basic Persian I / II / III**
JAP 111/112/113/114	**Basic Japanese I / II / III / IV**
FRL 155/156/157/158	**Basic Chinese I / II / III / IV**

INTERMEDIATE LEVEL COURSES

GER 211/212/213/214	**Intermediate German I / II / III / IV**
FRE 211/212/213/214	**Intermediate French I / II / III / IV**
ITA 211/212/213/214	**Intermediate Italian I / II / III / IV**
SPA 211/212/213/214	**Intermediate Spanish I / II / III / IV**
RUS 211/212/213/214	**Intermediate Russian I / II / III / IV**
JAP 211/212	**Intermediate Japanese I / II**
FRL 255	**Intermediate Chinese I**

ADVANCED LEVEL COURSES

FRE 381/382	**Communication Skills in French I / II**
GER 381/382	**Communication Skills in German I / II**

LANGUAGE COURSES FOR SPECIFIC PROGRAMS

The following courses are designed for the students of the School of Tourism and Hotel Management and the Vocational School of Hotel and Travel Services only. The main focus is on tourism related matters.

GER 161/162/163/164	**Basic German I / II / III / IV**
SPA 161/162/163/164	**Basic Spanish I / II / III / IV**
FRL 131/132/133/134	**Basic Arabic I / II / III / IV**
FRL 141/142/143/144	**Basic Persion I / II / III / IV**
FRL 165/166/167/168	**Basic Chinese I / II / III / IV**
JAP 161/162/163	**Basic Japanese I / II / III**
RUS 161/162/163/164	**Basic Russian I / II / III / IV**

The following courses are designed for the students of the Graduate Program in Turkish Literature and Archaeology and History of Art. Particular emphasis is given to text comprehension, and translation into Turkish.

FRE 401/402	**Readings in French I / II**
GER 421/422	**Readings in German I / II**

The following intensive language courses are offered in the summer semester to all students. These courses are designed to equip students with the knowledge and usage of grammar and with special emphasis on reading, writing and speaking skills.

GER 400/410	**Intensive German I / II**
FRE 400/410	**Intensive French I / II**
RUS 400/410	**Intensive Russian I / II**
FRL 400/410	**Intensive Arabic I / II**
ITA 400/410	**Intensive Italian I / II**
SPA 400/410	**Intensive Spanish I / II**

DEPARTMENT OF AMERICAN CULTURE AND LITERATURE

E. Kohn (Acting Chair), D. Bryson, E. L. Demirtürk, C. Ireland, N. M. Kelley, T. Liepa, M. Şanlı.

The Department of American Culture and Literature offers a program leading to the Bachelor of Arts degree. The department offers a course selection that examines the United States in all its complexity, integrating literature, culture, and history. This interdisciplinary program will not only introduce students to the study of the United States but will also develop critical and creative thinking skills that will enable students to reflect upon their own culture and its history and literature. The newly revised curriculum seeks to ground students in the skills of close reading and textual analysis. Further, it asks students to consider works in their historical and cultural contexts, illustrating the complicated social relations that exist between writer, text, history, and reader. In recognition of the demands of contemporary professional and academic life, the program now requires courses in the natural and social sciences. The program, as is true of most other programs in the humanities, does not offer vocational training per se but rather develops fluency in English, analytical skills, and ability in written expression that will prepare students for success in their professional lives and in further academic study.

UNDERGRADUATE PROGRAM

CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
AMER 115	Methods and Texts I	3 / 7
AMER 195	Introduction to American Studies I	3 / 7
CTE 191	Information and Communication Technology	3 / 6
ENG 101	English and Composition I	3 / 6
ENG 117	Advanced English Grammar I	3 / 4
GE 100	Orientation	1 / 1
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
AMER 116	Methods and Texts II	3 / 7
AMER 196	Introduction to American Studies II	3 / 7
ENG 102	English and Composition II	3 / 6
ENG 118	Advanced English Grammar II	3 / 4
TURK 102	Turkish II	2 / 1

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
AMER 207	American Texts and Contexts I	4 / 6
AMER 293	American History I	3 / 6
HISTR 201	History of Turkish Republic I	2 / 1
HUM 111	Cultures Civilizations and Ideas I	3 / 4
MATH 103	Introductory Mathematics	3 / 6
SOC 101	Introduction to Sociology	3 / 5

Spring Semester		Credits / ECTS Credits
AMER 208	American Texts and Contexts II	4 / 6
AMER 294	American History II	3 / 6
HISTR 202	History of Turkish Republic II	2 / 1
HUM 112	Cultures Civilizations and Ideas II	3 / 4
PHYS 200	Physics for Poets	3 / 5
POLS 104	Introduction to Political Science II	3 / 6

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
AMER 301	American Social Texts to 1900	4 / 6
AMER 343	American Theater	3 / 6

AMER 357	American Intellectual History I	3 / 6
AMER 383	American Novel to 1900	3 / 6
	Elective	3 / 6

Spring Semester Credits / ECTS Credits

AMER 302	American Social Texts From 1900	4 / 6
AMER 358	American Intellectual History II	3 / 6
AMER 374	American Poetry	3 / 6
AMER 384	American Novel From 1900	3 / 6
	Elective	3 / 6

FOURTH YEAR

Autumn Semester Credits / ECTS Credits

AMER 427	Topics in Theory for American Culture	3 / 6
AMER 459	Race and Ethnicity in American Culture	3 / 6
	Restricted Electives	6 / 12
	Elective	3 / 6

Spring Semester Credits / ECTS Credits

AMER 426	American Studies in a Global Context	3 / 6
AMER 492	Gender Studies in American Culture	3 / 6
	Restricted Electives	6 / 12
	Elective	3 / 6

RESTRICTED ELECTIVES

AMER 404	The 1950s	3 / 6
AMER 409	The Great Migration Novel	3 / 6
AMER 418	Contemporary American Short Story	3 / 6
AMER 419	Modern Latino Short Fiction	3 / 6
AMER 420	Readings in Southern Literature	3 / 6
AMER 428	Novels of Toni Morrison	3 / 6
AMER 429	Orientalism and American Culture 1860-1925	3 / 6
AMER 430	The Thirties: the Great Depression and the New Deal	3 / 6
AMER 434	Cold War Culture and Modernization	3 / 6
AMER 436	Media Communications Culture	3 / 6
AMER 437	American Film in Context	3 / 6
AMER 438	The Self in American Culture and History	3 / 6
AMER 439	The Art and Business of the Short Story	3 / 6
AMER 440	American Society and Globalization	3 / 6
AMER 441	Culture in its Historical Contexts	3 / 6
AMER 447	Topics in Cultural Studies	3 / 6
AMER 448	American Pragmatism	3 / 6
AMER 449	Modernity and Visuality	3 / 6
AMER 450	Representations of the City	3 / 6
AMER 451	Ethnic Literature	3 / 6
AMER 456	Race and Media in the U.S.	3 / 6
AMER 458	History of American Presidential Campaigns	3 / 6
AMER 460	Contemporary Native American Writers	3 / 6
AMER 461	The History of the Book in America	3 / 6
AMER 462	Transatlantic Currents in American Women's Fiction and Poetry	3 / -
AMER 466	Contemporary African-American Women Writers	3 / 6
AMER 467	The Early American Metropolis	3 / 6
AMER 469	American Law Culture and Society	3 / 6
AMER 470	Introduction to Advanced Academic Writing	3 / 6
AMER 471	Reading De Tocqueville	3 / 6

COURSE DESCRIPTIONS

UNDERGRADUATE COURSES

AMER 115 Methods and Texts I
This course gives students the critical methods necessary to interpret a variety of social texts. The primary mode of organization is around genre. A unit on poetry will teach students to identify poetic forms and to scan lines; a unit on fiction will address such issues as narrative voice, characterization, and symbolism; a unit on drama will examine the dimensions of staging and performance; a unit on film will teach students to approach texts in two and three dimensions; a unit on music will examine harmony, musical form, and performance; and a unit on nonfiction prose will examine the status of objectivity in source materials. Other major issues concern the distinction between literal and figurative language, terms for literary studies, and the linguistic diversity of the United States. Students will also learn how to develop a bibliography and how to cite sources using established styles. *Credit units: 3 ECTS Credit Units: 7. Aut (M. Şanlı)*

AMER 116 Methods and Texts II
This course continues the work of AMER 115. The primary mode of organization is around genre. A unit on drama will examine the dimensions of staging and performance. A unit on film will teach students how to analyze the formal development of a shot sequence. A unit on the novel will continue the study of the formal components of fiction. *Credit units: 3 ECTS Credit Units: 7, Prerequisite: AMER 115 or AMER 117.*

AMER 195 Introduction to American Studies I
This course provides an introduction to the interdisciplinary study of American culture and literature. Through consideration of exemplary moments and problems in the history of the United States, students will consider how different disciplines (history, cultural studies, textual criticism, political science, or sociology) provide interpretive strategies for American studies. In addition, students will be asked to consider how these disciplinary approaches might be combined or integrated into an interdisciplinary method. Throughout the course, a foundation of knowledge in American geography, political systems, demography, institutions, economics, and social structure will be established so as to create the possibility of further study. Tutorial support will be provided. *Credit units: 3 ECTS Credit Units: 7. Aut (T. Liepa)*

AMER 196 Introduction to American Studies II
This course continues the work of AMER 195 in building a foundation for the interdisciplinary study of the United States. In this semester, students will study such as education, political systems, gender, race, and class in greater depth. Specifically, students will examine primary documents to develop their understanding of these topics. Tutorial support will be provided. *Credit units: 3 ECTS Credit Units: 7, Prerequisite: AMER 195.*

AMER 207 American Texts and Contexts I
This course provides an interdisciplinary node of connection between the survey in history and the survey in literature. Drawing from exemplary moments and problems in American culture from the beginnings to the Civil War, the course asks students to relate a variety of primary sources to broader contextual issues. This course will be writing intensive, with tutorial support provided. *Credit units: 4 ECTS Credit Units: 6, Prerequisite: AMER 118 and AMER 196. Aut (E. L. Demirtürk, T. Liepa)*

AMER 208 American Texts and Contexts II
This course provides an interdisciplinary node of connection between the survey in history and the survey in literature. Drawing from exemplary moments and problems in American culture from the Civil War to the present, the course asks students to relate a variety of primary sources to broader contextual issues. This course requires writing intensively, with tutorial support provided. *Credit units: 4 ECTS Credit Units: 6, Prerequisite: AMER 207.*

AMER 293 American History I
A study of the history of the United States, with particular attention to the colonial era, the American Revolution, the early national period, and the Civil War. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: AMER 118 and AMER 196. Aut (Staff)*

AMER 294 American History II
A study of the history of the United States, beginning with the Reconstruction era and devoting particular attention to the Gilded Age, the Great Depression, the two World Wars, and the Cold War. *Credit units: 3 ECTS Credit Units: 6.*

AMER 301 American Social Texts to 1900
The course provides an in-depth analysis of a particular issue, genre, or constellation of voices in the period. The approach will be interdisciplinary, with a particular emphasis on the social situation of textual productions. *Credit units: 4 ECTS Credit Units: 6. Aut (C. Ireland, N. M. Kelley)*

AMER 302 American Social Texts From 1900
The course provides an in-depth analysis of a particular issue, genre, or constellation of voices in the period. The approach will be interdisciplinary, with a particular emphasis on the social situation of textual productions. *Credit units: 4 ECTS Credit Units: 6.*

AMER 343 American Theater
A study of selected 20th century plays, movements, and issues raised by the study of theater, including its relationship to mass cultural forms, state support, and documentary truth. Writers will include Lorraine Hansberry, Arthur Miller, Eugene O'Neill, Marc Blitzstein, Arthur Arent, Luis Valdez, and Anna Deavere Smith. *Credit units: 3 ECTS Credit Units: 6. Aut (M. Şanlı)*

AMER 357 American Intellectual History I
This course will ideal with the intellectual history of the United States from the colonial era to the Civil War. It will explore such topics as the Puritan tradition, republican ideology in America, Tocqueville and democracy, the Transcendentalists, the debate over slavery, views on the role of women in the new republic, and antebellum social science. Primary texts by John Winthrop, Benjamin Franklin, Thomas Paine, Thomas Jefferson, James Madison, Alexis de Tocqueville, Ralph Waldo Emerson, Henry David Thoreau, William Lloyd Garrison, David Walker, Frederick Douglass, Sarah Grimke, Catharine Beecher, Margaret Fuller, Horace Bushnell, Henry C. Carey, and George Fitzhugh will be read and discussed in the course. *Credit units: 3 ECTS Credit Units: 6. Aut (D. Bryson)*

AMER 358 American Intellectual History II
This course will deal with the intellectual history of the United States from 1865 to the present. It will explore such topics as the pragmetist tradition, the plight of African Americans and their struggle for civil rights and economic betterment, the American social sciences, intellectuals and the public sphere, feminist thought, trends in American literary studies and cultural studies, debates over multiculturalism, the controversy over the "clash of civilizations", and recent American thought on the philosophy and history of science. Writers to be considered include: Lester Frank Ward, William Graham Summer, Charlotte Perkins Gilman, W.E.B. Du Bois, William James, John Dewey, Margaret Meadi Gunnar Myrdal, Henry R. Luce, Henry Wallace, J.K. Galbraith, Milton Friedman, Martin Luther King Jr., Malcom X, Lionel Trilling, Susan Sontag, Betty Friedan, Gloria Anzaldua, Hannah Arendt, Herbert Marcuse, Edward Said, Samuel Hutington, Russell Jacoby, T.S. Kuhn, and Walter Benn Michaels. *Credit units: 3 ECTS Credit Units: 6.*

AMER 374 American Poetry
This course studies the social and formal development of poetic expression in the United States, with particular attention given to Bradstreet, Wheatley, Whitman, Dickinson, Longfellow, Crane, Pound, Eliot, Hughes, Brooks, Lowell, Frost, and Rich. *Credit units: 3 ECTS Credit Units: 6.*

AMER 383 American Novel to 1900
Introducing the novel as a literary form, the course offers a history of the development of the novel in America. Students are expected to apply various approaches to the reading of any selected novel or novels. Authors may include Hawthorne, Melville, Twain, S. Crane, H. James, R. Hall, K. Chopin, R.H. Davis, E. Wharton, C. Perkins Gilman, K.A. Porter, A. Smedley. *Credit units: 3 ECTS Credit Units: 6. Aut (E. L. Demirtürk)*

AMER 384 American Novel From 1900
A study of novels covering the period from 1900 to the present. Selections can include works by E. Hemingway, F.S. Fitzgerald, W. Faulkner, J. Steinbeck, W. Cather, T. Dreiser, J. Smiley, and "popular" novels, novels by women, African-American, Native American, and ethnic writers. *Credit units: 3 ECTS Credit Units: 6.*

AMER 404 The 1950s
Both in terms of actual events and in terms of US self-perception, the era known as "the 1950s" marks several important watersheds in US social, cultural and economic history. The course examines a range of topics, including US foreign policy, the suburban boom, the domestic retreat of women, the emergence of youth culture and rock'n roll, Disneyland, the rise of television, McCarthyism, and responses to the era: civil rights, the Beat poets, and intellectual debates around social conformity and "the end of ideology." *Credit units: 3 ECTS Credit Units: 6.*

AMER 409 The Great Migration Novel
The course gives background readings from Internet sources and from critical books (copies of chapters), and from journals (copies of articles), including the introduction to *Black Metropolis* by R. Wright. Books covered are: Paul LaurenceDunbar, *The Sport of the Gods*, Richard Wright, *Black Boy (American Hunger)*, Ann Petry, *The Street*, Paule Marshall, *Brown Girl*, *Brownstones*. *Credit units: 3 ECTS Credit Units: 6.*

AMER 418 Contemporary American Short Story
This course aims to introduce students to contemporary American short stories. While requiring students to analyze the elements of short story, the course will also strive to explore contemporary American short stories by focusing on their diverse styles, themes and their regional and national heritages. *Credit units: 3 ECTS Credit Units: 6. Aut (G. Kurtuluş)*

AMER 419 Modern Latino Short Fiction
Many storytellers from Mexico, Central America and Latin America tell a rich diversity of stories as they encounter the North American environment. We will read a selection of stories to better understand how love, marriage, upward mobility, longings for home, growing up, and other human events are experienced by this special group of Americans with their own rich traditions. *Credit units: 3 ECTS Credit Units: 6.*

AMER 420 Readings in Southern Literature
Major critical approaches from Aristotle's it Poetics to recent theories; attempts to analyze and define the functions of literature; social, ethical, historical, and aesthetic issues; classical heritage, romantic theory, modernism; post-structuralism, including deconstruction and cultural critiques. *Credit units: 3 ECTS Credit Units: 6.*

AMER 428 Novels of Toni Morrison
Nobel-winning African-American woman novelist Toni Morrison's work deserves closer attention with the increasing popularity she has enjoyed. The course will explore how history and memory play a pivotal role in the survival of her black womens characters, whose lives are determined by racist, classist, and sexist boundaries. The course will further explore the role of community and cultural heritage for women characters, especially, to cross "places" and to define new meanings of home in transgressing boundaries. Excerpts from Morrison's essay and interviews will be given as handouts in association with the discussions of novels. *Credit units: 3 ECTS Credit Units: 6.*

AMER 429 Orientalism and American Culture 1860-1925
The geographic focus will be on American perceptions of the "the Near East." The course examines a wide range of genres and artifacts from high culture to popular and material culture, placing them in their dual historical context (American and Near Eastern). Genres and artifacts include gothic literature, travel narratives, war novels, correspondence and missionary narratives, museum and world fair representations of the Near East, Orientalism in Victorian architecture, performances, and movies, advertisements, and magazine articles. In addition, students will read theoretical texts to frame their approach to the material. *Credit units: 3 ECTS Credit Units: 6.*

AMER 430 The Thirties: the Great Depression and the New Deal
This course will examine the nineteen-thirties, a crucial decade in twentieth-century United States history. We will examine the causes and consequences of the Great Depression, the New Deal of President Franklin D. Roosevelt, and the political, cultural, and intellectual developments of this era. The course will emphasize a historical approach to the thirties, but will also examine the literature, film, art, and music of this decade. *Credit units: 3 ECTS Credit Units: 6. Aut (D. Bryson)*

AMER 434 Cold War Culture and Modernization
This course will explore the culture of the early Cold War (1950-60) in an international context of modernization narratives. The Cold War invented many cosmopolitan cultural forms, subjects, and narratives, with the express aim of the local/ global circulation of American ideas of modernity. The global modernity of the 50s is a product of American social sciences, area studies, development theories, public relations and advertisement/ propaganda campaigns. In this course we will explore the ways in which this project was appropriates and subverted in various local practices and discourses. Reading include official documents from US National Archives and various Turkish archives, modernization theories, and other background material on the cultural Cold War. *Credit units: 3 ECTS Credit Units: 6.*

AMER 436 Media Communications Culture
This interdisciplinary course examines the history, sociology, and theory of media and communications in the American context. Our focus will be on the ways that diverse media and technologies-orality, literacy, print, radio, television, film, digital media- shape and transform human communication. Topics to be covered may include: the role of media and technology in the development of mass culture; the corporatization of media and culture; forms of media critique; digital media and the laws of cyberspace; media, ideology, and the public sphere; the poetics of online communication; multimedia communication; media, nationalism and minority cultures; media, gender and sexuality; media globalization, and the future of democracy; news media, advertising; and computer-mediated communications; communication networks; and the internet. *Credit units: 3 ECTS Credit Units: 6.*

AMER 437 American Film in Context
This course examines a wide variety of Hollywood and independent American films in their artistic, technical, social, and economic context. The focus will be on the vast range of filmmaking styles that have emerged in the United States over the past century. Films by D.W. Griffith, Charlie Chaplin, Orsan Wells, Alfred Hitchcock, Billy Wilden, John Ford, Martin Scorcese, Francis Ford Coppolla, Woody Allen, Robert Altman, Stan Brakhage, John Waters, Jim Jarmusch, David Lynch, John Samples, Spike Lee, the Coen Coen Brothers, Quentin Tarantino, Hal Hantley, Steven Soderberg, Spike Jonze, and Todd Solondz will be studied. *Credit units: 3 ECTS Credit Units: 6.*

AMER 438 The Self in American Culture and History
This course will examine the manner in which the "self" has been constructed in American (and more generally Western) culture from a historical perspective. We will examine how various American (as well as non-U.S.) writers, social scientists, and philosophers have dealt with the self –as well as how the self has been experienced and perceived by Americans in general– during the nineteenth and twentieth centuries. The following will be issues of special concern: the transition from "character" to "personality" in the early twentieth century; the cultural history of emotional expression and management; social scientific knowledge and the construction of the self; gender and self; the emergence of the modern emphasis on self-realization; the phenomena of "multiple personality"; and the significance of "memoro-politics" in the contemporary world. The most important goal of

the course will be foster a critical sense of the way in which the self is not a naturally given entity, but is produced within specific cultural and historical contexts. *Credit units: 3 ECTS Credit Units: 6.*

AMER 439 The Art and Business of the Short Story

What, if anything, makes a short story and not a sketch, an unfinished novel, or a prose poem? Must short stories achieve unity of effect, consciousness of their own artistry, reveal character rather than build it, or capture a slice of life? Is there any truth in the cliche that the short story is the only original American art form, and if not, what symbolic work is performed by that cliche? Why have publishers and creative writing workshops extolled the genre's virtues for 100 years? We will read short stories and short story criticism by Edgar Allan Poe, Mary Wilkins Freeman, Anton Chechov, Edith Wharton, O. Henry, Saul Bellow, Philip Roth, Raymond Carver, Louise Erdrich, Bobbie Ann Mason, and recent unknown authors. Although we will study the stories' themes, we will focus on formal and institutional analyses – that is, on the technical and business aspects of the genre's unfolding. *Credit units: 3 ECTS Credit Units: 6.*

AMER 440 American Society and Globalization

This course will examine the content and context of such global concepts as global economy, global village, INGOs, communications society, technology revolution and multiculturalism with American and global perspectives. Specific references will be made to contemporary global events including the social changes that took place in the 20th century and issues with the role the U.S. plays in a global society. Particular attention will be paid to the elements of perspective consciousness, global interconnectedness, cross-cultural understanding, and global history. Students are expected to apply and evaluate global issues with cross-cultural inquiry in individual and group projects. *Credit units: 3 ECTS Credit Units: 6.*

AMER 441 Culture in its Historical Contexts

To discuss culture is itself a cultural practice. This course, then, will consider recent cultural concerns about self-identity and social memory while at the same re-situating such concerns in their social and economic context. This is an interdisciplinary course that involves the reading of literary and philosophical texts. Although no prior background in philosophy or history is required, it is expected that students be familiar with writing documented research papers at the 4th year level. *Credit units: 3 ECTS Credit Units: 6.*

AMER 447 Topics in Cultural Studies

This course introduces students to comparative analytical tools and diverse archival material for reading contemporary culture and institutions. Readings will be framed by theories of transnationalism and cosmopolitanism and will offer new paradigms for thinking about multi-sited cultural production and the global circulation of textual and visual forms. The course will enable a rethinking of modernity, postmodernity, mobility, borders and boundaries. *Credit units: 3 ECTS Credit Units: 6.*

AMER 448 American Pragmatism

The purpose of this course is to examine the contribution of American Pragmatism to intellectual thought and contemporary criticism. We will read during the first two-thirds of the semester the writing of two "classical" American Philosophers, William James and John Dewey, as well as selected texts from the intellectual forefather of American Pragmatism, Ralph Waldo Emerson. Pragmatism offers, among other things, distinctive accounts of knowledge, ethics, social progress, democracy, the individual, social conflict, self-expression, the scientific method, culture, and education. We will examine many of these in detail and then in the last portion of the semester turn to contemporary advocates of Pragmatism (such as Richard Rotry, Cornel West, and Richard Posner) in order not only to identify lines of continuity and break between classical and contemporary pragmatism, but also to critically assess the contributions of each to ongoing social inquiry and criticism. *Credit units: 3 ECTS Credit Units: 6.*

AMER 449 Modernity and Visuality

Different understandings of "the modern" emerged across national cultures in the early decades of the 20th century. Modernazition meant constant innovations, industrializition of production, consumerism, urbanization in social life everywhere. Modernism implied a certain form of global artistic production that questioned representation. However, across national cultures the processes and concepts embedded in modernity had different specular languages. That is to say, "the modern" was expressed with different symbols, images, and social spectacles in the US, Germany, France and Turkey. The purpose of the course is to compare the visual regimes of modernity so as to understand how "the modern" is experienced in different geographies. *Credit units: 3 ECTS Credit Units: 6.*

AMER 450 Representations of the City

This course considers the experience of living in the modern and postmodern city in selected texts by Puerto Rican, African-American, and Turkish writers. Our emphasis will be on the ways in which these writers have portrayed the disadvantages and promises of urban life. In view of these texts we will be looking at the different ways the urban experience is represented in different cultures. The film screenings, written essay assignments and presentations will provide us with the vital historical, social and political backdrop upon which we will build our understanding of each text. *Credit units: 3 ECTS Credit Units: 6.*

AMER 451 Ethnic Literature
The literature produced by the ethnic subculture in America will be examined with special emphasis on its characteristics. Major writers' works from various groups (Jewish, Native-American, Chicano, Asian American) will be discussed. *Credit units: 3 ECTS Credit Units: 6.*

AMER 456 Race and Media in the U.S.
This course will critically examine the role of the media in enabling or challenging the social constructions of race in American society. It will take an interdisciplinary approach to analyzing the issue of race mainly focusing on its media representations. In covering race, readings in the course will primarily address the experiences of African Americans under the light of the White Studies. However, this course will center on experiences of African Americans, who lived on both sides of the racial divide both as black and white people at different stages of their lives as well as those who 'pass for white.' We will be watching a variety of films all through the semester: TV series such as the Jeffersons, Shirley Temple movies with Bill 'Bojangles' Robinson, S. Poitier's *Guess Who is Coming to Dinner* , and more contemporary movies will be discussed. Since race and gender in this course will be viewed as interlocking social systems, we will discuss gender and class, when the need arises for it in our discussions. The reading materials include a a textbook: We will read Robert M. Entman & Andrew Rojecki, The Black Image in the White Mind: Media and Race in America (Chicago: The University of Chicago P, 2000), while the course package will include articles on critical work, based on a cultural studies approach to race, gender, and class in the media. *Credit units: 3 ECTS Credit Units: 6.*

AMER 458 History of American Presidential Campaigns
Every four years the United States picks its president. Campaigns for the presidency have ranged from a few drunken, raucous, and even violent weeks in the nineteenth century, to the very sophisticated and year-long "packaging" of the presidency today. This course will look at the evolution of American presidential campaigns, with an emphasis on the changing "political culture" in the United States. As well as looking at key texts, the class will explore the media of American politics, from newspapers and political cartoons, to radio, television, and the dawn of internet campaigning. In particular we will focus on the current presidential campaign in the United States, as the Democrats and Republicans pick their candidates for 2008. *Credit units: 3 ECTS Credit Units: 6.*

AMER 459 Race and Ethnicity in American Culture
This course presents a comparative study of the culture and writings of major ethnic groups in the US. Students will be exposed to the cultural expression and the processes of identity formation for various groups, including Latino/as, Native Americans, African Americans and Italian-, Irish-, and Asian Americans. Students will study key texts in the field. Topics may include theories of assimilation, integration, and colonization, conceptual models such as "whiteness," and the "melting pot," and historical responses to immigration, such as ethnocide, eugenics, and repatriation, as backdrop to the complex roles played by race and ethnicity in the US. *Credit units: 3 ECTS Credit Units: 6. Aut (N. M. Kelley)*

AMER 460 Contemporary Native American Writers
A study of the fiction and poetry of Native American writers covering the period from 1945 to the present. Selections may include works by Sherman Alexie, Joseph Bruchac, Louise Erdrich, Joy Harjo, N. Scott Momaday, and Leslie Marmon Silko, as well as other contemporary Native American writers. *Credit units: 3 ECTS Credit Units: 6.*

AMER 461 The History of the Book in America
This course examines the history of the book in America as both a subject of scholarly inquiry, and as a distinctive academic discipline. For well over fifty years now, Book History has occupied an interdisciplinary place in the academy on either side of the Atlantic, and we will spend the semester considering the various subjects of study pursued by practitioners, together with the scholarly methodologies they employ to that end. Accordingly, we begin with an in-depth look at the book in early America, paying special attention to its role in the religious and popular cultural life of the colonies. Democratization will be our theme as we move to the nineteenth century of a new United States: the proliferation of print, and rise of authorship as a profession, highlight this section of the course. From there, we press forward into the twentieth century and beyond. What the modern, postmodern, and media revolutions have meant for books will occupy our thoughts as we bring the course to a close. Along the way, we will examine books not only as literary texts to be read, and material objects to be handled, but as cultural sites that reveal much about the social, economic, and ideological contexts that produced them. *Credit units: 3 ECTS Credit Units: 6.*

AMER 466 Contemporary African-American Women Writers
Contemporary African American women writers may include major works by N. Larsen, Z.N. Hurston, T. Morrison, T. McMillan, A. Walker and G. Naylor. *Credit units: 3 ECTS Credit Units: 6.*

AMER 467 The Early American Metropolis
This course examines the urban United States during the "long" nineteenth century. Although we will focus on contemporary literary depictions of the city, students can also expect to supplement their studies of the urban written word with a critical consideration of a variety of alternate "texts," including the built environment, painting, engraving, and photography. A close attention to historical context will inform all readings and discussions. Our aim is to reconstruct the full diversity of American metropolitan life - including the multiple perspectives of race,

class, region, gender, and ethnicity - both as it was experienced and interpreted at a defining moment in the modern U.S. *Credit units: 3 ECTS Credit Units: 6.*

AMER 469 American Law Culture and Society

Landmark cases in American law not only reflect the cultural values and social institutions of their time, they often dramatically transform them. In this course we will examine famous cases involving such important social issues as slavery, segregation, personal privacy, freedom of speech, capital punishment, torture, prostitution, medical experiments, and education. We will try to understand the conflicts that provoked these confrontations and bring our own judgement to bear on the results. We will also discuss distinctive theories of law that both emerged from and governed the career of these cases. *Credit units: 3 ECTS Credit Units: 6. Aut (K. S. Sorrell)*

AMER 470 Introduction to Advanced Academic Writing

This course provides students with an intensive overview of the academic research and writing process and is particularly recommended as preparation for students who anticipate applying to graduate school in the future. Students will write one major research paper over the course of the semester with classroom units dedicated to each step of the writing process: brainstorming, formulation of a thesis, research and selection of appropriate academic sources, organization and outlining, full citation of sources in both MLA and Chicago style, through proofreading, and so on. Outside samples of ‘good” and “bad” academic writing will be analyzed in course discussions and peer editing will be heavily utilizied throughout the semester. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

AMER 471 Reading De Tocqueville

This course will be devoted to reading *Democracy in Amerika* Alexis de Tocqueville. This is the classic study of American culture and society, based on the travels and observations of de Tocqueville in the United States during the 1830s. We will focus on volume 2 of de Tocqueville’s book -which deals with cultural issues such as the role of indivividualism in America life- but will also examine selected passages and topics from volume 1. Commentaries on and other writings pertinent to the Tocqueville will also be read, including writings by Robert Bellah, Sheldon Wolin, Richard Handler, Abraham Eisenstadt, Winfried Fluck, and others. *Credit units: 3 ECTS Credit Units: 6.*

AMER 492 Gender Studies in American Culture

This course offers an introduction to the critical role that gender has played in the structure of American society. It examines theories of gender and society as they have evolved in recent years. Students consider how feminism and other gender-sensitive critical practices help us to understand problems in U.S. society. *Credit units: 3 ECTS Credit Units: 6.*

DEPARTMENT OF ARCHAEOLOGY

T. Zimmermann (Acting Chair), J. Bennett, B. C. Coockson, C. Gates, M. Gates, J. Morin, İ. Özgen.

Part-time: A. C. Abuagla.

Teaching and research activities of the department concentrate on the archaeology, history and art of Anatolia, the Mediterranean, and the ancient Near East. Students will have opportunities to take part in excavations and surveys conducted by department members at the multi-period sites of Hacımusalar-Elmalı (Antalya) and Kinet Höyük-Dörtyol (Hatay).

UNDERGRADUATE PROGRAM

The aim of the undergraduate program in the Department of Archaeology is to provide a thorough and comprehensive understanding of archaeology, ancient history and art. The curriculum includes practical as well as academic work. There will be field trips to museums and sites in Turkey, and students will have the opportunity to participate in departmental survey/excavation projects; arrangements might also be made for students to take part in excavations and expeditions sponsored by other institutions.

The first two years of the program embrace a wide range of essential introductory subjects designed to familiarize the student with the background material required for the more specialized subjects offered over the following two years. In the third and fourth years, besides the compulsory courses, the student has the opportunity to choose elective topics in his or her field of particular interest. One of the options in the fourth year is supervised study on a topic of the student's own choice, at the end of which the student will produce a short dissertation. This particular elective will be offered to students who would like to continue with graduate studies in the field of archaeology or related subjects. Every student is required to take at least one ancient language (Greek and Latin are offered). A basic knowledge of ancient Greek or Latin is invaluable for those students who decide to specialize in Greek or Roman art and archaeology, or ancient history.

At the end of the program the student will emerge with a good knowledge and comprehension of most aspects of Near Eastern, Mediterranean, and European art and archaeology from the Prehistoric period onwards. Emphasis will of course be placed on Anatolian civilizations since the environment at Bilkent provides an ideal opportunity for first-hand familiarity with the ancient sites and monuments of this country.

UNDERGRADUATE CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
CS 121	Introduction to Computing for Social Sciences	3 / 6
ENG 101	English and Composition I	3 / 6
GE 100	Orientation	1 / 1
HART 111	Introduction to Archaeology	3 / 4
HART 117	Ways of Seeing: Approaches to Art and Architectural History	3 / 4
MATH 103	Introductory Mathematics	3 / 6
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
CS 123	Introduction to Computing and Programming for Social Sciences	3 / -
ENG 102	English and Composition II	3 / 6
HART 102	History of Art II	2 / -
HART 120	Human Evolution and World Prehistory	3 / 6
PHYS 200	Physics for Poets	3 / 5
TURK 102	Turkish II	2 / 1

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
HART 219	Anatolian Archaeology, Neolithic to the Iron Age	3 / 5
HCIV 101	History of Civilization I	3 / 6
HISTR 201	History of Turkish Republic I	2 / 1
PHIL 102	Ancient Philosophy	3 / 6
PSYC 102	Introduction to Social Psychology	3 / 5
	Ancient Language Requirement I	3 / 6

Spring Semester		Credits / ECTS Credits
ECON 103	Principles of Economics	3 / 6
HART 210	Egyptian Art and Archaeology	3 / -
HART 212	Special Topics in Art Architecture and Archaeology	3 / -
HCIV 102	History of Civilization II	3 / 6
HISTR 202	History of Turkish Republic II	2 / 1
	Ancient Language Requirement II	3 / 6

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
HART 305	The Roman City	3 / -
HART 311	20th Century American Painting	3 / -
	Department Electives (2)	6 / 12
	Ancient Language Requirement III	3 / 6

Spring Semester		Credits / ECTS Credits
HART 310	Archaeological Surveying and Planning	3 / 6
	Department Electives (3)	9 / 18
	Ancient Language Requirement IV	3 / 6

FOURTH YEAR

Autumn Semester		Credits / ECTS Credits
HART 409	Museum Practices and the Preservation of Cultural Heritage	3 / 6
HART 423	Cities, Monuments and Landscapes of Classical Anatolia	3 / 6
	Department Electives (2)	6 / 12
	Non-Department elective (1)	3 / 6

Spring Semester		Credits / ECTS Credits
HART 426	Contemporary Turkish Art	3 / -
HART 436	Archaeological Method and Theory	3 / 6
	Department Electives (2)	6 / 12
	Non-Department elective (1)	3 / 6

DEPARTMENT ELECTIVES

HART 231	Ancient Greek I	3 / 6
HART 232	Ancient Greek II	3 / 6
HART 239	Latin I	3 / 6
HART 240	Latin II	3 / 6
HART 300	The Roman Empire Under Trajan	4 / 6
HART 303	Greek Sculpture	3 / 6
HART 306	Hellenistic and Roman Sculpture	3 / 6
HART 307	Monumental Painting	3 / 6
HART 308	Greek Vase Painting	3 / 6
HART 310	Archaeological Surveying and Planning	3 / 6
HART 313	European Prehistory	3 / 6
HART 314	Archaeology of Iran	3 / 6
HART 315	Greek Architecture	3 / 6
HART 316	Roman Architecture	3 / 6
HART 317	Archaeology of Troy	3 / 6
HART 319	Bronze Age in Iran	3 / 6

HART 322	Orientalizing Period	3 / 6
HART 326	Near Eastern and Anatolian Glyptic	3 / 6
HART 328	The Aegean Bronze Age	3 / 6
HART 333	Ancient Greek III	3 / 6
HART 334	Ancient Greek IV	3 / 6
HART 340	Archaeology of Ionia	3 / 6
HART 343	Latin III	3 / 6
HART 344	Latin IV	3 / 6
HART 351	Monuments of Athens	3 / 6
HART 352	Monuments of Rome	3 / 6
HART 365	Ancient Cities	3 / 6
HART 370	Iron Age Sculpture of the Near East	3 / 6
HART 371	Achaemenian Art and Archaeology	3 / 6
HART 403	Greek Sanctuaries	3 / 6
HART 406	Science in Archaeology	3 / 6
HART 408	Late Roman and Byzantine Periods in Anatolia	3 / 6
HART 411	Greek and Roman Portraiture	3 / 6
HART 412	Museum Education	1 / 2
HART 413	Archaeological Photography	3 / 6
HART 420	Readings in Prehistory	3 / 6
HART 421	Archaeological Conservation	3 / 6
HART 430	Readings in Near Eastern Art and Archaeology	3 / 6
HART 434	Landscape Archaeology	3 / 6
HART 435	Selected Topics in Anatolian Art and Archaeology	3 / 6
HART 439	Neolithic and Chalcolithic Periods in Anatolia	3 / 6
HART 440	Readings in Anatolian Art and Archaeology	3 / 6
HART 474	Neo-Assyrian Art and Archaeology	3 / 6
HART 490	Supervised Study	3 / 6
HART 491	Readings From Near Eastern Texts	3 / 6
HART 492	Readings From Greek/Latin Texts	3 / 6
HART 515	Readings in Near Eastern Archaeology	3 / 6
HART 516	Supervised Research in Near Eastern Archaeology	3 / 6
HART 517	Readings in Anatolian Archaeology	3 / 6
HART 518	Supervised Research in Anatolian Archaeology	3 / 6
HART 519	Research Directions for Anatolian Archaeology and Art	3 / 6

GRADUATE PROGRAMS

Master of Arts in Archaeology

The Department of Archaeology offers a graduate program leading to the M.A. degree. The program focuses on the archaeology and art of Anatolia from the Prehistoric to the Medieval period, within its Mediterranean and Near Eastern context. Instruction is primarily through courses that encourage independent research, and emphasis is placed on individuality of thought as well as a thorough knowledge of the field and the application of critical methods to archaeological problems.

Admission: Applicants are normally expected to have an undergraduate major in archaeology, history of art, anthropology, or a related subject, and must demonstrate a proficiency in English. Students from other disciplines are also eligible for the program, providing they remedy deficiencies in their academic background by completing a year of preparatory courses prior to beginning the Master's program. (Also refer to the "Graduate Admissions" section in the introduction of this catalog for the general graduate admission requirements.)

Degree Requirements: The M.A. offered by the department focuses on the archaeology and art of Anatolia. The program requires students to complete (generally over three semesters) a minimum of 27 units of course work (a total of at least 9 courses), comprising core courses in Archaeological Method and Theory, The Interpretation of Art Historical Materials, Research Directives in Anatolian Art and Archeaology and/or Ethnoarchaeology, and a minimum of three seminars in at least two of the following subjects: Pre-Classical, Classical and Medieval Art and Archaeology. A range of seminar

topics is offered within each specified period, and these are varied each semester according to the needs of the students and the specialties of the instructors. Students who wish to concentrate on Classical Archaeology are required to take Ancient Greek or Latin, or both. Medieval specialists have the opportunity to study Ottoman Turkish and Paleography (offered through the History Department). Students who wish to supplement their academic background are permitted to attend undergraduate lecture courses and seminars either as auditors or for extra credit.

By the end of the second year the student will complete a Master's thesis in a specialized field of study. Participation in an approved field project is also an integral part of the program, and by the second year at the latest a reading knowledge of French or German must be demonstrated through examination.

GRADUATE CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
HART 501	Issues in Archaeological Theory	3 / 6
HART 505	Cultural Ecology	3 / 6
HART 507	Pre-Classical Art and Archaeology	3 / 6
HART 509	Classical Art and Archaeology	3 / 6
HART 519	Research Directions for Anatolian Archaeology and Art	3 / 6
HART 523	Medieval Art and Archaeology	3 / 6
HART 551	Ancient Greek I	3 / 6
HART 553	Ancient Greek III	3 / 6
HART 563	Latin I	3 / 6
HART 583	Latin III	3 / 6

Spring Semester		Credits / ECTS Credits
HART 504	Interpretation of Art Historical Materials	3 / 6
HART 508	Issues in Pre-Classical Art and Archaeology	3 / 6
HART 510	Issues in Classical Art and Archaeology	3 / 6
HART 524	Issues in Medieval Art and Archaeology	3 / 6
HART 552	Ancient Greek II	3 / 6
HART 554	Ancient Greek IV	3 / 6
HART 564	Latin II	3 / 6
HART 584	Latin IV	3 / 6

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
HART 599	Master's Thesis	- / 24

Spring Semester		Credits / ECTS Credits
HART 599	Master's Thesis	- / 24

RESTRICTED ELECTIVES

HART 507	Pre-Classical Art and Archaeology	3 / 6
HART 508	Issues in Pre-Classical Art and Archaeology	3 / 6
HART 509	Classical Art and Archaeology	3 / 6
HART 510	Issues in Classical Art and Archaeology	3 / 6
HART 523	Medieval Art and Archaeology	3 / 6
HART 524	Issues in Medieval Art and Archaeology	3 / 6

ELECTIVES

HART 551	Ancient Greek I	3 / 6
HART 552	Ancient Greek II	3 / 6
HART 553	Ancient Greek III	3 / 6
HART 554	Ancient Greek IV	3 / 6
HART 563	Latin I	3 / 6
HART 564	Latin II	3 / 6

HART 583 Latin III . . . . . 3 / 6
HART 584 Latin IV . . . . . 3 / 6

COURSE DESCRIPTIONS

UNDERGRADUATE COURSES

HART 111 Introduction to Archaeology
This course provides background material essential for any student of archaeology, covering such topics as the history of archaeological research and excavation, major archaeological discoveries of past centuries, modern excavating, surveying and recording techniques, dating methods, identification of sites and the topographical factors involved in locating ancient settlements. *Credit units: 3 ECTS Credit Units: 4. Aut (J. Bennett)*

HART 117 Ways of Seeing: Approaches to Art and Architectural History
A thematic introduction to great works of art and architecture, techniques of analysis, and methods of interpretation. Examples studied will be taken from cultures around the world, ancient, medieval, and modern, with the majority coming from the western tradition. Themes explored will include: form; style; iconography (the subject matter of art); images of the sacred; architecture and ritual; politics and art; landscapes and natural settings; private architecture: the house; and perspectives from sociology, Marxism, feminism, and semiotics. *Credit units: 3 ECTS Credit Units: 4. Aut (C. Gates)*

HART 118 Survey of European Art and Architecture
An introduction to the art and architecture of Western Europe and America from the Middle Ages through the 20th century. *Credit units: 3 ECTS Credit Units: 6.*

HART 120 Human Evolution and World Prehistory
This course is a survey of the human prehistory of Africa, Europe and Asia from the first hominids to the Mesolithic period, with particular emphasis on morphological evolution, environment and cultural developments. *Credit units: 3 ECTS Credit Units: 6.*

HART 125 Archaeological Illustration
This course offers the first principles and basic skills required for archaeological illustration: drawing artifacts, buildings and reconstructions, producing artwork for publication, and drawing in the field during survey work and excavation. *Credit units: 3 ECTS Credit Units: 4. Aut (B. C. Coockson)*

HART 126 Archaeological Planning or Planning and Drawing in the Field
Further development and practice of the skills introduced in HART 217. *Credit units: 3 ECTS Credit Units: 5.*

HART 208 Roman Art and Archaeology
A historical survey of the visual arts and architecture of Rome and Italy studied in cultural and political context, from the Etruscans to the fall of Rome. *Credit units: 3 ECTS Credit Units: 6.*

HART 219 Anatolian Archaeology, Neolithic to the Iron Age
An introduction to the ancient sites and monuments of Anatolia and its relations with the surrounding cultures from the beginning of urban civilization (ca. 7th millennium BC) to the Early Iron Age. *Credit units: 3 ECTS Credit Units: 5. Aut (İ. Özgen)*

HART 220 Anatolian Archaeology, Classical and Byzantine
An introduction to the ancient sites and monuments of Anatolia and its relations with the surrounding cultures from the Archaic to the Byzantine period. *Credit units: 3 ECTS Credit Units: 6.*

HART 221 Great Discoveries from the Ancient World
Archaeologists find and study a wide range of things - from preserved footprints to frozen bodies, from fossilised skulls to battlefield relics, from cities lost in the jungle to those buried by falling ash. Specifically designed for the non-archaeologist, this course demonstrates how discoveries like these as well as the study of the many monuments left to us by ancient societies have revolutionised our knowledge of man's past. Specifically designed for non-archaeologists, the course examines and assesses some of the more important archaeological discoveries and monuments that have helped change our view of the past, including some of the more famous and well-known 'finds', such as Tutankamun's Tomb and Troy, as well as several of the less-well known 'discoveries and monuments', as with the site of Custer's Last Stand and the Easter Island statues. *Credit units: 3 ECTS Credit Units: 6. Aut (J. Bennett)*

HART 222 Mesopotamian Archaeology
The history, archaeology and art of the Ancient Near East from the Akkadian period (late 3rd millennium BC) through the Persian conquest (539 BC). *Credit units: 3 ECTS Credit Units: 6.*

HART 225 Cultural Anthropology
Survey of the basic data and methods of research in the material culture of ancient societies in historical context, illustrating the principles of cultural behavior. Exploration of selected basic concepts and theories of contemporary anthropology. Current problems in relation to materials from the Old World. *Credit units: 3 ECTS Credit Units: 6.*

HART 227 Greek Archaeology
An introduction to the archeology and cultures of ancient Greece, From the Neolithic to Hellenistic periods. *Credit units: 3 ECTS Credit Units: None.*

HART 231 Ancient Greek I
Introduction to ancient Greek for beginning students. The course will emphasize both grammar and reading. *Credit units: 3 ECTS Credit Units: 6. Aut (J. Morin)*

HART 232 Ancient Greek II
Completion of the grammar and vocabulary acquisition started in Ancient Greek I. *Credit units: 3 ECTS Credit Units: 6.*

HART 239 Latin I
Introduction to Latin for beginning students. The course will emphasize both grammar and reading. *Credit units: 3 ECTS Credit Units: 6. Aut (A. C. Abuagla)*

HART 240 Latin II
Completion of the grammar and vocabulary acquisition begun in Latin I. *Credit units: 3 ECTS Credit Units: 6.*

HART 241 Great Discoveries from the Ancient World
Archaeologists find and study a wide range of things - from preserved footprints to frozen bodies, from fossilised skulls to battlefield relics, from cities lost in the jungle to those buried by falling ash. Specifically designed for the non-archaeologist, this course demonstrates how discoveries like these as well as the study of the many monuments left to us by ancient societies have revolutionised our knowledge of man's past. Specifically designed for non-archaeologists, the course examines and assesses some of the more important archaeological discoveries and monuments that have helped change our view of the past, including some of the more famous and well-known 'finds', such as Tutankamun's Tomb and Troy, as well as several of the less-well known 'discoveries and monuments', as with the site of Custer's Last Stand and the Easter Island statues. *Credit units: 3 ECTS Credit Units: 6.*

HART 300 The Roman Empire Under Trajan
This course is specifically designed to provide students with little or no previous knowledge of Roman history or archaeology with and understanding of how the Roman Empire appeared and functioned at its apogee. It will begin with an overview of political events and developments from 31 BC, when Octavian became undisputed ruler of Rome, to AD 97, the year that Nerva adopted Trajan as his heir and successor. Then follows a more detailed review of the historical and archaeological evidence for cultural and social aspects of the Roman Empire during Trajan's reign, with a particular emphasis on the evidence available from the eastern Roman provinces, and especially from modern Turkey. From this, students will learn how a reliable account of the period can only be established by combining the limited historical record with the evidence of archaeology, epigraphy and numismatics. On successful completion of the course, therefore, the student will not only have a detailed knowledge of the cultural achievements of the period, but will have also developed an awareness of historiographical methods and issues, and how archaeology substantially improves on the available documentary record. *Credit units: 4 ECTS Credit Units: 6.*

HART 303 Greek Sculpture
The course will concentrate on the development of Greek sculpture with special emphasis on the state of research, on new interpretations of images and on the methodology of interpretation. *Credit units: 3 ECTS Credit Units: 6.*

HART 305 The Roman City
A survey of art, architecture, and archaeology of the Mediterranean and Near East in the medieval and early modern periods, from Constantine the Great to the 18th century. Focus will be on the art and architecture of the Late Roman and Byzantine empires in Italy and the eastern Mediterranean basin and of Islamic states from the Umayyad and Abbasid caliphates to the Ottoman, Safavid, and Mughal empires. *Credit units: 3 ECTS Credit Units: None. Aut (C. Gates)*

HART 306 Hellenistic and Roman Sculpture
A survey of Hellenistic and Roman sculpture from 300 BC to the Constantinian period (ca. 300 AD). The major artistic achievements of the Romans - portraiture, historical narratives and the stylistic changes from the idealized to the realistic. *Credit units: 3 ECTS Credit Units: 6.*

HART 307 Monumental Painting
The arts of wall painting and mosaics in the Greek world and Italy from the Archaic period to the third century AD. *Credit units: 3 ECTS Credit Units: 6.*

HART 308 Greek Vase Painting
A survey of Greek vase painting from the Geometric period (ca. 9th century BC) to the 4th century BC with special attention to Attic vase painting of the Archaic and Classical periods. *Credit units: 3 ECTS Credit Units: 6.*

HART 310 Archaeological Surveying and Planning
A practical course offering an introduction to surveying procedures in the recording of sites and field surveys. Chain surveying, gridding, contouring and leveling are all covered by this course as they are basic to the accurate recording of all kinds of archaeological evidence. *Credit units: 3 ECTS Credit Units: 6.*

HART 313 European Prehistory
Survey of human prehistory in Europe from the earliest humanoid cultures to the beginnings of advanced civilizations. Paleolithic and Mesolithic cultures; Neolithic and Bronze Age cultures. *Credit units: 3 ECTS Credit Units: 6.*

HART 314 Archaeology of Iran
A detailed examination of the archaeology of Iran from the time of the earliest civilizations to the Achaemenian period. *Credit units: 3 ECTS Credit Units: 6.*

HART 315 Greek Architecture
A survey of Greek building from ca. 700 BC to the 1st century BC. The Greek architectural tradition and its historical development will be emphasized (the history and nature of Doric and Ionic orders and of “Aeolic” and Corinthian styles). Materials, techniques and procedures of construction will also be covered. Sanctuary architecture provides the core material of the course but military, funerary, and ceremonial monuments will also be considered. *Credit units: 3 ECTS Credit Units: 6. Aut (J. Morin)*

HART 316 Roman Architecture
A survey of Roman architecture, from the Etruscans to the Constantinian period (ca. 300 AD) throughout the Roman world, with an emphasis on the architecture of the Republic and the early Roman Empire. *Credit units: 3 ECTS Credit Units: 6.*

HART 317 Archaeology of Troy
A broad-based investigation into the problem of the origin and development of the Homeric city of Troy. The written and archaeological sources and the extent and the limitations of the data will be emphasized. The class will discuss the relationships between epic, history and archaeological evidence. *Credit units: 3 ECTS Credit Units: 6.*

HART 318 Archaeology of Syria and Palestine
The archaeology of the Levant and its relationship with surrounding cultures from the beginning of urban civilization to ca. 1200 BC. *Credit units: 3 ECTS Credit Units: 6.*

HART 319 Bronze Age in Iran
A detailed examination of the archaeology of Iran during the Bronze Age. *Credit units: 3 ECTS Credit Units: 6.*

HART 322 Orientalizing Period
A survey of the trends in Greek arts, crafts and techniques between the early 8th and 6th centuries BC, emphasizing their connection with the artistic traditions of the Near East (Anatolia, the Levant, Egypt) and the Near Eastern contribution to the development of Greek culture, both material and intellectual. *Credit units: 3 ECTS Credit Units: 6.*

HART 323 Islamic Art and Architecture I
Islamic Art and Architecture of the Middle East and North Africa from the 8th through the 13th centuries. *Credit units: 3 ECTS Credit Units: 6.*

HART 325 Hittite Archaeology
Topics include the origin, the rise and the development of the Hittite state and civilization. Topography, settlement, history, urban growth, organization and civic administration, public religion, commercial and political activities and art will be considered. *Credit units: 3 ECTS Credit Units: 6. Aut (İ. Özgen)*

HART 326 Near Eastern and Anatolian Glyptic
This course will survey the glyptic arts (seal carvings) of the Near East and Anatolia from their beginning in the Uruk period (late 4th millennium BC) down to the Iron Age in Anatolia and Mesopotamia (1st millennium BC). The seals, their representations and associated texts will be examined to highlight our understanding of the administration and social structure they reflect. *Credit units: 3 ECTS Credit Units: 6.*

HART 327 Bronze Age in Anatolia
The archaeology of Anatolia between 3000 and 1200 BC and its relationship with surrounding cultures - the Aegean, the Levant and the Near East, and Egypt. The data examined are primarily archaeological, but textual evidence will also be considered. Emphasis on questions of “style” and “regionality” in the analysis of art works serving as evidence for interaction in the late Bronze Age in the eastern Mediterranean. *Credit units: 3 ECTS Credit Units: 6.*

HART 328 The Aegean Bronze Age
The prehistoric cultures of the Aegean area, concentrating on Minoan Crete, Troy, the Aegean Islands, and Mycenaean Greece. *Credit units: 3 ECTS Credit Units: 6.*

HART 330 Egyptian Art and Archaeology
A survey of the art and archaeology of ancient Egypt, from the Predynastic Period to the end of the New Kingdom (4000-1100 BC). The course will emphasize major monuments of architecture, sculpture, relief and painting. Questions of stylistic change and historical context will be considered, as well as cultural relations with neighboring civilizations. *Credit units: 3 ECTS Credit Units: 6. Aut (M. Gates)*

HART 333 Ancient Greek III
Selections from Greek literature (such as Homer, Hesiod, Xenophon Aeschylus, Sophocles, Euripides, Plato, Herodotus and Thucydides). *Credit units: 3 ECTS Credit Units: 6, Prerequisite: HART 231 and HART 232.*

HART 334 Ancient Greek IV
Selections from Greek literature (such as Homer, Hesiod, Xenophon Aeschylus, Sophocles, Euripides, Plato, Herodotus and Thucydides). Also, an introduction to Epigraphy. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: HART 333.*

HART 338 Hittite Texts I
The course teaches students how to read the Hittite cuneiform script. Some elementary historical texts will be read to introduce students to this genre of cuneiform literature. *Credit units: 3 ECTS Credit Units: 6.*

HART 340 Archaeology of Ionia
A detailed survey of the archaeology and history of Ionia from the Bronze Age through the Classical period. Special emphasis will be placed on urban development of the major Ionian centers, political and religious institutions, and cultural and artistic productions, as well as their exchanges with the wider Mediterranean and Anatolian world. *Credit units: 3 ECTS Credit Units: 6.*

HART 343 Latin III
Completion of the grammar points of the Latin language and an introduction to original texts. Also, an introduction to Epigraphy. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: HART 239 and HART 240. Aut (A. C. Abuagla)*

HART 344 Latin IV
Readings and discussions of many of the works of Roman literature. Emphasis will be on correct translation of the Latin, with attention to genre and narrative technique, and to building facility in reading Latin. Selections from writers such as Plautus, Vergil, Cicero, Caesar, Lucretius, Petronius and Ovid will be read in the original. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: HART 343.*

HART 345 Preclassical Anatolian Archaeology Study Tour
A one month course surveying the archaeology of Turkey (ancient Anatolia) in the classroom and on site. A week of introductory lectures at the Bilkent campus will prepare for 3 weeks visiting sites and museums. This course will cover the evolution of Anatolian cultures from the first farming communities in the Neolithic period (10th millennium BC) through the Bronze and Iron Age Kingdoms of the Hittites (2nd millennium BC) and Phrygians (1st millennium BC). Major archaeological sites like Neolithic Çatalhöyük, Hittite Hattushe and Phrygian Gordion will be among the many places included in the study trip itinerary. *Credit units: 3 ECTS Credit Units: None.*

HART 350 Classical Byzantine-Selcuk Anatolian Archaeology Study Tour
A one month course surveying the art and archaeology of Turkey (ancient Anatolia) in the classroom and on site. A week of introductory lectures at the Bilkent will prepare for 3 weeks visiting sites and museums. This course will focus on Anatolia's architectural and urban brilliance as part of the classical, Greco-Roman world (500 BC to 400 AD); and examine how the Byzantine and Seljuk states adapted and transformed these patterns in the centuries that followed. Sites include great cities of antiquity such as Pergamon and Ephesus; Byzantine monastic communities at Alahan and in Cappadocia; and Konya, the Seljuk capital. *Credit units: 3 ECTS Credit Units: None.*

HART 351 Monuments of Athens
The monuments of Athens from the Archaic period through the Hellenistic and Roman periods, considering stylistic developments and historical and cultural context. *Credit units: 3 ECTS Credit Units: 6.*

HART 352 Monuments of Rome
A detailed study of the monuments of Rome in relation to its topography and urban development. Stylistic characteristics and innovations in architecture and arts. *Credit units: 3 ECTS Credit Units: 6.*

HART 360 Ancient Mesoamerican Civilizations
A survey of the civilizations of Mesoamerica from earliest human settlement to the Spanish conquest, with emphasis on the art and archaeology of the great states: Olmec, teotihuacan, Maya, Toltec, and Aztec. *Credit units: 3 ECTS Credit Units: 6.*

HART 365 Ancient Cities
A study of urban developments from the Neolithic period onwards, covering in particular cities of the Near East, Egypt, the Aegean, Greece and the Roman world. *Credit units: 3 ECTS Credit Units: 6. Aut (C. Gates)*

HART 370 Iron Age Sculpture of the Near East
Attention is focused on the major sculptural groups of the Anatolians, Assyrians, Neo-Babylonians and Persians. *Credit units: 3 ECTS Credit Units: 6. Aut (İ. Özgen)*

HART 371 Achaemenian Art and Archaeology
A discussion of the arts and archaeology of the Achaemenian period. The particular focus will be on the sites of Iran and Anatolia. *Credit units: 3 ECTS Credit Units: 6.*

HART 380 Archaeology of Phoenicia
Detailed survey of Phoenician art and archaeology in its historical and economic context. There will be particular emphasis on the influences and relationships, especially in the fields of trade and art, between the Phoenicians and the rest of the Mediterranean and Near Eastern World. *Credit units: 3 ECTS Credit Units: 4.*

HART 403 Greek Sanctuaries
This course examines the religious, political and social uses of one of the most important institutions of the Greek world, together with the architecture, sculpture, pottery and offerings found in sanctuaries. *Credit units: 3 ECTS Credit Units: 6.*

HART 409 Museum Practices and the Preservation of Cultural Heritage
Study of various aspects of museum work. Management principles, cataloging and care of art objects, exhibitions and acquisitions, administrative procedures, and museum architecture will be emphasized. Specialist lecturers and visits to museums and their facilities. *Credit units: 3 ECTS Credit Units: 6. Aut (B. C. Coockson)*

HART 411 Greek and Roman Portraiture
From the origins of classical sculpture in the Archaic Period, sculptors continued to improve and refine their methods and approaches to produce portraiture which represented real people of their time, and which reflected the sprits of their age. This course follows the development of classical partraiture from its beginnings to the late Roman period, with an emphasis on Roman portraiture, to establish its origins and originality, and to examine its role in contemporary society. *Credit units: 3 ECTS Credit Units: 6.*

HART 412 Museum Education
This course will investigate the role of museums as institutions with a pedagogical mission. The focus is on the relation between the visitor and the collection on display. By means of mediation, a visit to a museum can be a learning experience in many dimensions (knowledge, self-understanding, taste, cultural competence). The theoretical aspects, history, recent publications and practical possibilities of museum education are discussed. The Museum of Anatolian Civilizations will serve as the field of educational research and experimentation. *Credit units: 1 ECTS Credit Units: 2.*

HART 414 The Archaeology of Vernacular Architecture
This course surveys the ancient and contemporary construction of traditional buildings like farm complexes and village houses in Anatolia and the Middle East. The application of different building materials and techniques is discussed in context with modern archaeological fieldwork, in terms of what archaeologists might find or trace of such constructions after their deterioration. *Credit units: 3 ECTS Credit Units: 6. Aut (B. C. Coockson)*

HART 421 Archaeological Conservation
Archaeological conservation provides a framework of ethical and practical knowledge for the conservation and preservation of archaeological materials and sites. Theoretical and laboratory topics will also be discussed. *Credit units: 3 ECTS Credit Units: 6.*

HART 422 Conservation for Field Archaeologists
This course will give hands-on training for basic finds' conservation in the field. It will take place over a 3-week period, with 14 hours of class and laboratory training. *Credit units: 1 ECTS Credit Units: 2.*

HART 423 Cities, Monuments and Landscapes of Classical Anatolia
Scattered throughout the modern Republic of Turkey, ancient Anatolia, are the very visible remains of some 100 and more sites and monuments that help illuminate the history and in particular the architectural developments of the Classical period in this region. This course will examine several of these sites and their hinterlands to explain what we can learn from the archaeological remains about changing social and economic systems in the Classical period, roughly 600 BC - AD 300. The course takes a chronological approach to the subject, so that developments in contemporary social and economic systems can be explored and explained at the individual sites. As such, a particular emphasis is placed on how the architectural remains at such sites help us understand their varying degrees of prosperity in the Classical period. However, although the course will naturally focus mainly on such well-known places as Priene, Pergamum and Ephesus, it will also examine what can be learnt from the remains at several less-well known sites, like Patara, Oinoanda, and Ankara. *Credit units: 3 ECTS Credit Units: 6. Aut (J. Bennett)*

HART 424 Religion and Society in the Ancient Near East
This course will examine formal and private religion practiced by the ancient civilizations of Mesopotamia, the eastern Mediterranean, Anatolia and Egypt. Topics to be covered include religious settings (temples, shrines

and outdoor cult places), iconography referring to deities and cults, and ancient texts that explain cult practices and religious beliefs. Lectures, class discussions and student presentations. *Credit units: 3 ECTS Credit Units: 6. Aut (M. Gates)*

HART 430 Readings in Near Eastern Art and Archaeology
This course will investigate the most recent issues and scholarship on a topic in the field of Near Eastern art and archaeology. Subject to be announced in the schedule of classes. *Credit units: 3 ECTS Credit Units: 6.*

HART 434 Landscape Archaeology
This course examines the relationship between geomorphology and ancient settlement, with emphasis on the development of coastal landforms, changes in sea levels, the evolution of carstic landforms and fluvial geomorphology. *Credit units: 3 ECTS Credit Units: 6.*

HART 435 Selected Topics in Anatolian Art and Archaeology
Weekly 3-hour seminar with assigned readings, reports and a research paper on a specialized topic to be selected by the instructor. It will cover specific cultural periods, regions or issues in Anatolian Art and Archaeology. *Credit units: 3 ECTS Credit Units: 6.*

HART 436 Archaeological Method and Theory
Readings and a series of discussions focusing on research problems designed to give the student an understanding of the different approaches to the historical study of works of art and archaeology. *Credit units: 3 ECTS Credit Units: 6.*

HART 439 Neolithic and Chalcolithic Periods in Anatolia
An examination of the aceramic Neolithic cultures of Southeast Anatolia and the ceramic Neolithic cultures of the South and Southwest Anatolian plateau and their Chalcolithic successors. *Credit units: 3 ECTS Credit Units: 6. Aut (T. Zimmermann)*

HART 440 Readings in Anatolian Art and Archaeology
This course will investigate the most recent issues and scholarship on a topic in the field of Anatolian art and archaeology. Subject to be announced in the schedule of classes. *Credit units: 3 ECTS Credit Units: 6.*

HART 454 Introduction to Sumerology
The course is an introduction to the study of Sumerian language, documents, history and culture. A history of the discovery of the Sumerian civilization is followed by an overview of Sumerian history and the main features of Sumerian society. The course familiarizes students with the corpus of Sumerian texts in the fields of literature, mythology, religion, economy and political history. The significance of Sumerology for other fields of study, especially Assyriology and Hititology, is explained. The question of Sumerian origins is explored alongside an assessment of the role of the Sumerians in the history of civilizations. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

HART 474 Neo-Assyrian Art and Archaeology
The Neo-Assyrian Empire (10th-7th century BC) represents a high moment in the long history of Ancient Near Eastern civilizations. This course covers notable aspects of its architecture, arts and settlement systems as preserved in the archaeological record. *Credit units: 3 ECTS Credit Units: 6.*

HART 489 Senior Conference
A project emphasizing archaeological research on a specific topic in any field of art and archaeology supplemented with oral presentations. *Credit units: 3 ECTS Credit Units: 6.*

HART 490 Supervised Study
Independent research under the supervision of a faculty member whose special competence coincides with the area of a student's interest. Consent of the supervising faculty member and of the major advisor is required. *Credit units: 3 ECTS Credit Units: 6.*

HART 491 Readings From Near Eastern Texts
This course will focus on the translation of Near Eastern texts. Knowledge of Akkadian will be a prerequisite. *Credit units: 3 ECTS Credit Units: 6.*

HART 492 Readings From Greek/Latin Texts
This course will focus on selected readings from original sources. *Credit units: 3 ECTS Credit Units: 6.*

HART 494 Readings From Greek/Latin Texts II
Reading ancient Greek or Latin authors in their original language. This course requires familiarity with the ancient language beyond the department's 2-year ancient language curriculum. *Credit units: 3 ECTS Credit Units: 6.*

GRADUATE COURSES

HART 501 Issues in Archaeological Theory
This course will examine contemporary debates in archaeological methodology, analysis and interpretation. Emphasis will be placed on the techniques for applying theoretical models to fieldwork and analytical research. *Credit units: 3 ECTS Credit Units: 6. Aut (J. Morin)*

HART 503 Issues in Conservation and Preservation
Introduction to the basic methods of conservation of objects, architecture, and historical and archaeological sites; conservation and cultural preservation in their socio-economic contexts; laws and ethics of cultural preservation; and international perspectives on conservation and cultural preservation. *Credit units: 3 ECTS Credit Units: 6.*

HART 504 Interpretation of Art Historical Materials
A historical survey of different approaches to the analysis of art and architecture. *Credit units: 3 ECTS Credit Units: 6.*

HART 505 Cultural Ecology
Cultural adaptation, with emphasis on the systematic interaction of environment, technology and social organization among hunter-gatherers, nomadic herders and peasant farmers. *Credit units: 3 ECTS Credit Units: 6.*

HART 506 Ethnoarchaeology
The history, method and theory of ethnoarchaeology, with case studies of the use of ethnography in archaeological interpretation and theory-building. *Credit units: 3 ECTS Credit Units: 6.*

HART 507 Pre-Classical Art and Archaeology
These classes will be conducted with readings and discussion on key issues of Anatolian art and archaeology from the Prehistoric period to the Iron Age. *Credit units: 3 ECTS Credit Units: 6. Aut (T. Zimmermann)*

HART 508 Issues in Pre-Classical Art and Archaeology
These classes will be conducted with readings and discussion on key issues of Anatolian art and archaeology from the Prehistoric period to the Iron Age. *Credit units: 3 ECTS Credit Units: 6.*

HART 509 Classical Art and Archaeology
Classes conducted with readings and discussion on key issues of Anatolian art and archaeology from the Greek, Hellenistic and Roman periods. *Credit units: 3 ECTS Credit Units: 6.*

HART 510 Issues in Classical Art and Archaeology
Classes conducted with readings and discussion on key issues of Anatolian art and archaeology from the Greek, Hellenistic and Roman periods. *Credit units: 3 ECTS Credit Units: 6.*

HART 515 Readings in Near Eastern Archaeology
Graduate tutorial in Near Eastern Archaeology, on a topic to be chosen by the instructor. *Credit units: 3 ECTS Credit Units: 6. Aut (İ. Özgen)*

HART 516 Supervised Research in Near Eastern Archaeology
Independent study, on a topic relevant to the student's specialized research field in Near Eastern archaeology. *Credit units: 3 ECTS Credit Units: 6.*

HART 517 Readings in Anatolian Archaeology
Graduate tutorial in Anatolian Archaeology, on a topic to be chosen by the instructor. *Credit units: 3 ECTS Credit Units: 6.*

HART 518 Supervised Research in Anatolian Archaeology
Independent study, on a topic relevant to the student's specialized research field in Anatolian archaeology. *Credit units: 3 ECTS Credit Units: 6.*

HART 519 Research Directions for Anatolian Archaeology and Art
A team-taught proseminar to introduce research perspectives and sources, with one topic per week, on periods (Neolithic, Ancient Near East and Egypt, Iron Age Near East, Bronze Age Aurope/Mediterranean, Greece, Rome, Byzantium, Islamic world) and themes (Science in Archeology, Ancient Languages and Epigraphy, Ethnoarcheology, Ceramics and Artifactural Analyses). *Credit units: 3 ECTS Credit Units: 6. Aut (M. Gates)*

HART 521 Problems in Medieval Art and Archaeology
Classes conducted with readings and discussion on key issues of Anatolian art and archaeology of the Byzantine, Islamic, Seljuk and Ottoman periods. *Credit units: 3 ECTS Credit Units: 6.*

HART 523 Medieval Art and Archaeology
Classes conducted with readings and discussion on key issues of Anatolian art and archaeology of the Byzantine, Islamic, Seljuk and Ottoman periods. *Credit units: 3 ECTS Credit Units: 6.*

HART 524 Issues in Medieval Art and Archaeology
Classes conducted with readings and discussion on key issues of Anatolian art and archaeology of the Byzantine, Islamic, Seljuk and Ottoman periods. *Credit units: 3 ECTS Credit Units: 6.*

HART 530 Conservation for Field Archaeologists
This course will give hands-on training for basic finds' conservation in the field. It will take place over a 3-week period, with 14 hours of class and lab. training. *Credit units: 1 ECTS Credit Units: 2.*

HART 532 Introduction to Hittitology
The course covers Hittite history, religion and literature; it also discusses the history of Hittitology (Hittite studies). *Credit units: 3 ECTS Credit Units: 6.*

HART 536 Hittite Grammar 1
The course is an introduction to the Hittite language spoken in Anatolia in the 2nd mill. BC, and one of the oldest among the Indo-European languages. The students will be introduced to basic grammar and syntax, in order to understand the language. *Credit units: 3 ECTS Credit Units: 6.*

HART 538 Hittite Texts I
The course teaches students how to read the Hittite cuneiform script. Some elementary historical texts will be read to introduce students to this genre of cuneiform literature. *Credit units: 3 ECTS Credit Units: 6.*

HART 551 Ancient Greek I
Introduction to ancient Greek for graduate students. The course will emphasize both grammar and reading. *Credit units: 3 ECTS Credit Units: 6. Aut (J. Morin)*

HART 552 Ancient Greek II
Completion of the grammar and vocabulary acquisition started in Ancient Greek I. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: HART 551.*

HART 553 Ancient Greek III
Selections from Greek literature, and an introduction to epigraphy. *Credit units: 3 ECTS Credit Units: 6.*

HART 554 Ancient Greek IV
Selections from Greek literature, and an introduction to epigraphy. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: HART 553.*

HART 563 Latin I
Introduction to Latin for graduate students. Basic points of grammar will be covered and reading skills developed. *Credit units: 3 ECTS Credit Units: 6. Aut (A. C. Abuagla)*

HART 564 Latin II
Continuation of the grammar and development of reading skills introduced in Latin I. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: HART 563.*

HART 583 Latin III
Selections from Latin literature and an introduction to epigraphy. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: HART 564. Aut (A. C. Abuagla)*

HART 584 Latin IV
Selections from Latin literature, prose composition, and an introduction to numismatics. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: HART 583.*

HART 588 Readings From Greek/Latin Texts II
Reading ancient Greek or Latin authors in their original language. This course requires familiarity with the ancient language beyond the department's 2-year ancient language curriculum. *Credit units: 3 ECTS Credit Units: 6.*

HART 599 Master's Thesis
Credit units: None ECTS Credit Units: 24.

DEPARTMENT OF ENGLISH LANGUAGE AND LITERATURE

T. S. Halman (Acting Chair), A. Çelikkol, V. Kennedy, E. Kural-Shaw, G. Kurtuluş, D. B. Randall, S. Taşkın.

UNDERGRADUATE PROGRAM

Through a study of major authors, literary works and movements, the undergraduate program in English Literature and Language helps students to achieve a mature understanding of themselves and the world, and to learn to read critically and analytically, write clearly and persuasively, reason soundly and express themselves intelligently in English. In addition to giving a solid foundation in English Literature and Culture, the curriculum emphasizes critical thinking, communication skills and intellectual growth.

The department curriculum comprises the analysis, study, and discussion of: various types of literature, origins and characteristics of myth; classical, biblical, Norse and Celtic mythology; literary terms and movements; periods of English literature from Old and Middle English literature through Renaissance, 17th C., 18th C., the Romantic Period, the Victorian age, to the present; English history; British society and culture; American literature; world literature, and theory and practice of criticism. The courses which emphasize class practice, exercise and drills are: composition, translation, reading and oral interpretation, and research techniques.

Apart from department courses, students will be able to take elective courses from a wide variety of subjects offered by the other departments of the University, notably in foreign languages, social sciences, computer programming, and fine arts. This wider distribution of courses will provide the students with opportunities to broaden their culture, contribute to a desirable balance of intellectual interests, and prepare them for more specialized studies in the future.

UNDERGRADUATE CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
ELIT 109	Translation I (English-Turkish)	3 / 4
ELIT 115	Oral Expression Discussion and Presentation I	3 / 4
ELIT 137	English History I (to the Restoration)	3 / 5
ELIT 139	Appreciation of Literature	3 / 5
ENG 101	English and Composition I	3 / 6
ENG 117	Advanced English Grammar I	3 / 4
GE 100	Orientation	1 / 1
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
CTE 191	Information and Communication Technology	3 / 6
ELIT 112	Translation II (Turkish-English)	3 / 4
ELIT 130	Selections from English Literature (to the Restoration)	3 / 5
ELIT 138	English History II (to Present)	3 / 5
ENG 102	English and Composition II	3 / 6
ENG 118	Advanced English Grammar II	3 / 4
TURK 102	Turkish II	2 / 1

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
ELIT 205	Oral Expression Discussion and Presentation II	3 / 6
ELIT 223	World Mythology	3 / 6
ELIT 265	Introduction to the Novel	3 / 6
ELIT 281	The Short Story	3 / 6
ENG 201	Essay Writing	3 / 5
HISTR 201	History of Turkish Republic I	2 / 1

Spring Semester		Credits / ECTS Credits
ELIT 208	Critical Reading	3 / 6
ELIT 242	Introduction to Drama	3 / 6
ELIT 262	The English Novel (19th Century)	3 / 6
ELIT 270	Poetry	3 / 6
ENG 214	Research Techniques for Humanities	3 / 5
HISTR 202	History of Turkish Republic II	2 / 1

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
ELIT 351	Shakespeare I (Comedies, Romances, Problem Plays)	3 / 7
ELIT 355	Major Writers of the Renaissance	3 / 6
ELIT 361	Modern British Fiction I (to the 1950s)	3 / 7
HUM 111	Cultures Civilizations and Ideas I	3 / 4
	Elective	3 / 6

Spring Semester		Credits / ECTS Credits
ELIT 352	Shakespeare II (Tragedies, Roman Plays, Histories)	3 / 7
ELIT 356	Major Writers of the Neoclassical Period	3 / 6
ELIT 362	Modern British Fiction II (1950s to present)	3 / 7
HUM 112	Cultures Civilizations and Ideas II	3 / 4
	Elective	3 / 6

FOURTH YEAR

Autumn Semester		Credits / ECTS Credits
ELIT 423	Theory and Practice of Criticism	3 / 6
ELIT 441	British Drama I (from the Restoration to the 1950s)	3 / 6
ELIT 463	Post-Colonial Fiction	3 / 6
ELIT 471	Romantic Poetry	3 / 6
	Elective	3 / 6

Spring Semester		Credits / ECTS Credits
ELIT 438	Selected Topics	3 / 6
ELIT 442	British Drama II (from the 1950s to present)	3 / 6
ELIT 456	Major Writers of the Victorian Period	3 / 6
ELIT 474	20th Century Poetry	3 / 6
	Elective	3 / 6

COURSE DESCRIPTIONS

UNDERGRADUATE COURSES

ELIT 109 Translation I (English-Turkish)

Aims to use English passages for translation to help students improve their reading comprehension, enlarge their vocabulary, and deepen their awareness and understanding of different usage and structures. *Credit units: 3 ECTS Credit Units: 4.*

ELIT 112 Translation II (Turkish-English)

Sequel to ELIT 109. Designed to help students practice their written English through translation of various texts in Turkish allowing them to use different grammatical structures. *Credit units: 3 ECTS Credit Units: 4.*

ELIT 115 Oral Expression Discussion and Presentation I

This course aims to help students improve their speaking skills in an intellectual context. Through extensive drills and practice, students will be familiarized with ways and methods of oral expression, meaningful, persuasive and coherent speech, and discussion and presentation. Course material will include topics and relatively short or excerpted texts in a wide spectrum of areas such as humanities, social sciences, history, philosophy, psychology, science and technology, the arts, music, and media. *Credit units: 3 ECTS Credit Units: 4. Aut (V. Kennedy)*

ELIT 130 Selections from English Literature (to the Restoration)

Designed to familiarize students with the major works and authors of English literature from its beginnings to the Restoration. The works to be introduced may include *Beowulf; Canterbury Tales; Sir Gawain and the Green Knight*; *Piers Plowman*; Medieval lyrics, ballads, and plays; *Morte Darthur; Utopia*; 16th century sonnets, and

lyrics; *The Faerie Queene; Dr. Faustus*; Metaphysical and Cavalier Poetry; *Paradise Lost* essays by Bacon; *Leviathan*. *Credit units: 3 ECTS Credit Units: 5.*

ELIT 137 English History I (to the Restoration)
A survey of English history from Roman Britain to the Restoration. *Credit units: 3 ECTS Credit Units: 5. Aut (S. Taşkın)*

ELIT 138 English History II (to Present)
Sequel to ELIT 137. Surveys English history from the Restoration to the present. *Credit units: 3 ECTS Credit Units: 5.*

ELIT 139 Appreciation of Literature
An introduction to the study and appreciation of three major literary genres: drama, fiction and poetry. *Credit units: 3 ECTS Credit Units: 5. Aut (G. Kurtuluş)*

ELIT 205 Oral Expression Discussion and Presentation II
This course aims to enhance students' interest in using different methods of oral expression in order to improve their speaking skills through extensive drills and practice as well as using topics related to humanities, philosophy, the arts, music and media. *Credit units: 3 ECTS Credit Units: 6. Aut (S. Taşkın)*

ELIT 208 Critical Reading
This course aims to help students develop their critical, interpretative and reading skills by the study and analysis of selected non-literary texts. *Credit units: 3 ECTS Credit Units: 6.*

ELIT 223 World Mythology
An introduction to the origins and characteristics of myth and the study of mythic motives and themes found in world mythology with emphasis on classical myths. *Credit units: 3 ECTS Credit Units: 6. Aut (S. Taşkın)*

ELIT 242 Introduction to Drama
An introduction to the study of drama based on a selection of works including Greek tragedy and modern classics. *Credit units: 3 ECTS Credit Units: 6.*

ELIT 262 The English Novel (19th Century)
A study of the major English novelists of the 19th century. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ELIT 139.*

ELIT 265 Introduction to the Novel
This course introduces students to the study of the novel in English, placing emphasis on formal qualities such as language, structure, plot, character, theme, and setting. The course offers a bridge between earlier courses introducing students to literary study more broadly, and later courses, in which the novel is studied in period and thematic more broadly, and later courses, in which the novel is studied in period and thematic contexts. Texts for study may be taken from any period or sub-genre of the novel. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ELIT 139. Aut (V. Kennedy)*

ELIT 270 Poetry
An introduction to poetry through selected examples written in English. *Credit units: 3 ECTS Credit Units: 6.*

ELIT 281 The Short Story
An introduction to the short story through selected examples from British, American, and world writing. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ELIT 139. Aut (Staff)*

ELIT 351 Shakespeare I (Comedies, Romances, Problem Plays)
This course aims to develop students' skills in textual analysis and criticism of Shakespeare's romantic comedies, romances, and problem plays. *Credit units: 3 ECTS Credit Units: 7, Prerequisite: ELIT 109 and ELIT 137 and ELIT 139. Aut (D. B. Randall)*

ELIT 352 Shakespeare II (Tragedies, Roman Plays, Histories)
A study of Shakespeare's tragedies, Roman plays, and histories. *Credit units: 3 ECTS Credit Units: 7, Prerequisite: ELIT 112 and ELIT 130 and ELIT 138.*

ELIT 355 Major Writers of the Renaissance
A study of major works by principal dramatists other than Shakespeare; 16th century lyrics and sonnets; Metaphysical and Cavalier poetry, and Milton. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ELIT 109 and ELIT 137 and ELIT 139. Aut (D. B. Randall)*

ELIT 356 Major Writers of the Neoclassical Period
A study of selections from the major works of such writers as Dryden, Addison, Steele, Swift, Pope, Dr. Johnson, and Boswell. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ELIT 112 and ELIT 130 and ELIT 138.*

ELIT 361 Modern British Fiction I (to the 1950s)
A survey of developments in British fiction from the beginning of the 20th century to the 1950s. Major authors might include Conrad, Woolf, Joyce, D.H. Lawrence, E.M. Forster, Waugh and Orwell. *Credit units: 3 ECTS Credit Units: 7, Prerequisite: ELIT 109 and ELIT 137 and ELIT 139. Aut (Staff)*

ELIT 362 Modern British Fiction II (1950s to present)
A study of developments in British fiction in the second half of the 20th century, such as post-modernism, feminist issues, and the campus novel. Authors may include Golding, Fowles, Beckett, Durrell, Lessing, Murdoch, Drabble, Weldon, Roberts, K. Amis, Lodge, Bradbury, Barker, Winterson, etc. *Credit units: 3 ECTS Credit Units: 7, Prerequisite: ELIT 112 and ELIT 130 and ELIT 138.*

ELIT 411 History of English Language
This course is designed to develop students' critical awareness of English Language by studying the original texts starting from the Old English period till present. The physical changes in the language's systems within the rich framework of social, political, and cultural history will be explored. The course will not only concentrate on the particular history of English, but also on the linguistic and social consequences which resulted from the collision and intermingling of cultures due to conquest, trade, and migration. *Credit units: 3 ECTS Credit Units: 5. Aut (R. Wiggin)*

ELIT 413 Writing and Autobiography
The course will explore autobiographical writing through the study of autobiographies, confessions and diaries. Alongside these, autobiographical elements in literary writings such as lyric and narrative poetry and the novel will be considered. We will explore such questions as the relationship between autobiography and fiction, the importance of memory in the creation of autobiographical texts and how identities and the self are represented in autobiographical writings. *Credit units: 3 ECTS Credit Units: 6.*

ELIT 423 Theory and Practice of Criticism
A historical survey of literary criticism with emphasis on the 20th century. Methods of critical analysis will be illustrated in the light of selected texts. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ELIT 223 and ELIT 261 and ENG 201. Aut (Staff)*

ELIT 438 Selected Topics
The course will cover any genre, movement, writer or topic not included in the curriculum. The coverage of the course will be determined according to the needs of the students and to the recent developments in literary studies. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ELIT 242 and ELIT 262 and ENG 214.*

ELIT 441 British Drama I (from the Restoration to the 1950s)
A study of British Drama from the Restoration to the 1950s including works by such writers as Dryden, Congreve, Gay, Behn, Pinero, Sheridan, Goldsmith, Wilde, Priestley, Shaw, Eliot, Synge and O'Casey. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ELIT 223 and ELIT 261 and ENG 201. Aut (G. Kurtuluş)*

ELIT 442 British Drama II (from the 1950s to present)
Sequel to ELIT 441. Dramatists to be studied may include Beckett, Bolt, Osborne, Wesker, Pinter, Shaffer, Arden, Stoppard, Churchill, Bond, Wertenbaker and Daniels.. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ELIT 242 and ELIT 262 and ENG 214.*

ELIT 450 Introduction to Popular Culture
The aim of the course is to study basic theories, approaches and topics within popular culture. The course will examine different methods of popular culture, research and theories on which they are based. There will be in-depth study of international and global aspects of everyday life and popular culture such as consumer culture, mass media, entertainment, migration, technology. *Credit units: 3 ECTS Credit Units: 6.*

ELIT 456 Major Writers of the Victorian Period
Selections from the principal works of such writers as Tennyson, Browning, Carlyle, Ruskin and Arnold. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ELIT 242 and ELIT 262 and ENG 214.*

ELIT 462 Single Author Study
The course will be concerned to consider the writer's writings in relation to themes including his/her concern with personal relationships and his/her representation of them in his/her novels. With its detailed focus on one author, the course will enable students to study the ways in which themes and concerns appear and reappear through the body of a writer's work, within and across different genres. *Credit units: 3 ECTS Credit Units: 6.*

ELIT 463 Post-Colonial Fiction
A study of recent fiction written in English by authors coming from former colonies of the British Empire. Works by such authors as Chinua Achebe, Buchi Emecheta, V.S. Naipaul, Salman Rushdie, Hanif Kureishi, Kamala Markandaya, R.K. Narayan and Anita Desai may be discussed. Post-colonial theory will also be studied through the texts of Edward Said, Frantz Fanon, Homi Bhabha, Gayatri Spivak and Ngugi wa Thiong'o. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ELIT 223 and ELIT 261 and ENG 201. Aut (V. Kennedy)*

ELIT 471 Romantic Poetry
A study of selections from the major works of such poets as Wordsworth, Coleridge, Byron, Shelley and Keats. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ELIT 223 and ELIT 261 and ENG 201. Aut (D. B. Randall)*

ELIT 473 Modern Poetry
A study of the dominant trends and major poets in Britain, the U.S.A., and Europe. *Credit units: 3 ECTS Credit Units: 5. Aut (S. Taşkın)*

ELIT 474 20th Century Poetry
A study of the dominant trends and major poets of the 20th century. Poets to be studied may include Hardy, Owen, Sassoon, Yeats, T.S. Eliot, MacDiarmid, Graves, Auden, Thomas, MacNeice, Larkin, Gunn, Hughes, Harrison and Heaney. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ELIT 242 and ELIT 262 and ENG 214.*

DEPARTMENT OF PHILOSOPHY

V. Akman (Chair), I. Aranyosi, S. Berges, Y. S. Berkovski, H. Demir, M. Nakeeb, U. Steinvorth, L. Vinx, S. Wigley, W. Wringe.

The Department of Philosophy is one of the youngest departments at Bilkent. Established in late 2002, it offers a B.A. degree in philosophy. Plans for the M.A. and the Ph.D. degree programs are in progress.

The aim of the department is threefold: (i) by exploring influential philosophical arguments and ways of arguing, the department intends to impart upon the students the intellectual resources to discern lines of thought and courses of action that are defensible as opposed to ill-considered; (ii) the department aims to foster background capabilities—self-reliance, judging well when decision-making, creativity in problem-solving, adaptability, argumentative acumen and so forth—that complement and are essential to the good use of vocational skills; (iii) by investigating abstract problems and arguments in depth and by adopting an analytic stance the department aims to provide students with a solid platform from which to pursue graduate studies in philosophy.

The curriculum is broad based in that the students are required to complete courses in a number of academic fields other than philosophy, i.e., physics, biology, computers, mathematics, statistics, economics, languages, literature, and history. Because the curriculum provides each student with a substantive grounding in these fields, the student is able to constructively challenge the way they are practiced from a position of authority rather than from a position of hearsay. Besides, several of the courses (e.g. languages, statistics, computer programming, etc.) aim to develop specific skills that are essential to the workplace. In the meantime, the philosophy courses on their own provide a more than sufficient basis from which to pursue graduate work in philosophy. As a result, the critical mass of philosophical understanding is established whilst at the same time each student's future career options are not foreclosed due to unnecessary over-specialization at an early stage.

The department places a premium upon: (i) discussion-based class work, encouraging the students to be actively part of the learning experience; (ii) essay-based assessment (complemented by a drafting process and a series of essay tutorials); (iii) tutorials and ongoing feedback; (iv) trusting the students to come to terms with the original texts, rather than asking them to work from watered-down commentaries on those texts; (v) the development of each student's ability to pursue independent research (culminating in the fourth year where a thesis is completed on a chosen topic under the supervision of a faculty member).

The Philosophy Undergraduate Program and Course Descriptions can be found at the following address: http://www.phil.bilkent.edu.tr

UNDERGRADUATE PROGRAM

CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
CS 121	Introduction to Computing for Social Sciences	3 / 6
ENG 101	English and Composition I	3 / 6
GE 100	Orientation	1 / 1
MATH 105	Introduction to Calculus I	4 / 7
PHIL 101	Introduction to Logic	3 / 6
PHIL 103	Introduction to Philosophy I	3 / 6
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
ECON 103	Principles of Economics	3 / 6
ENG 102	English and Composition II	3 / 6
MATH 106	Introduction to Calculus II	4 / 7

PHIL 102	Ancient Philosophy	3 / 6
PHIL 104	Introduction to Philosophy II	3 / 6
TURK 102	Turkish II	2 / 1

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
ECON 221	Introduction to Probability and Statistics I	3 / 6
HISTR 201	History of Turkish Republic I	2 / 1
PHIL 201	Epistemology	3 / 6
PHIL 203	Rationalists	3 / 6
PHYS 107	Basic Physics I	4 / 6
	Second Foreign Language	3 / 6

Spring Semester*		Credits / ECTS Credits
HISTR 202	History of Turkish Republic II	2 / 1
PHIL 202	Ethics	3 / 6
PHIL 204	Empiricists	3 / 6
PSYC 100	Introduction to Psychology	3 / 6
	Second Foreign Language	3 / 6

* Students should take either PHYS 108 or MBG 110 in this semester in addition to the preceding courses (see ELECTIVES)

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
PHIL 303	Kant	3 / 6
PHIL 305	Intermediate Logic	3 / 6
PHIL 401	Metaphysics	3 / 6
	Literature Restricted Elective	3 / 6
	Second Foreign Language	3 / 6

Spring Semester		Credits / ECTS Credits
FA 262	Fine Arts Seminar	3 / 4
PHIL 301	Political Philosophy	3 / 6
PHIL 306	Philosophy of Language	3 / 6
PHIL 308	Philosophy of Mind	3 / 6
	Second Foreign Language	3 / 6

FOURTH YEAR

Autumn Semester		Credits / ECTS Credits
PHIL 304	Philosophy of Science	3 / 6
PHIL 403	Senior Thesis I	3 / 6
	History Restricted Elective	3 / 6
	Elective (2)	6 / 12

Spring Semester		Credits / ECTS Credits
PHIL 302	Social and Legal Philosophy	3 / 6
PHIL 402	Aesthetics	3 / 6
PHIL 404	Senior Thesis II	3 / 6
	History Restricted Elective	3 / 6
	Elective	3 / 6

SECOND FOREIGN LANGUAGE ELECTIVES

FRE 111	Basic French I	3 / 6
FRE 112	Basic French II	3 / 6
FRE 113	Basic French III	3 / 6
FRE 114	Basic French IV	3 / 6
GER 111	Basic German I	3 / 6
GER 112	Basic German II	3 / 6
GER 113	Basic German III	3 / 6
GER 114	Basic German IV	3 / 6

HART 231	Ancient Greek I	3 / 6
HART 232	Ancient Greek II	3 / 6
HART 239	Latin I	3 / 6
HART 240	Latin II	3 / 6
HART 333	Ancient Greek III	3 / 6
HART 334	Ancient Greek IV	3 / 6
HART 343	Latin III	3 / 6
HART 344	Latin IV	3 / 6

HISTORY ELECTIVES

HIST 347	Ottoman Reform Movements I: Political and Social (1550-1839)	3 / 6
HIST 348	Ottoman Reform Movements II: Political and Social (1839-1914)	3 / 6
HIST 411	Ottoman History: 1300-1600	3 / 6
HIST 412	Ottoman History: 1600-1914	3 / 6
HIST 415	British History: 1485-1914	3 / 6
HIST 416	Medieval British History	3 / 6
HIST 417	Medieval Europe (500-1500)	3 / 6
HIST 418	Modern Europe (1453-1914)	3 / 6
HIST 431	History of the United States until the Reconstruction	3 / 6
HIST 432	History of the United States from the Reconstruction	3 / 6

LITERATURE ELECTIVES

AMER 343	American Theater	3 / 6
AMER 383	American Novel to 1900	3 / 6
ELIT 223	World Mythology	3 / 6
ELIT 261	The English Novel I (18th Century)	3 / 6

ELECTIVES

AMER 374	American Poetry	3 / 6
AMER 384	American Novel From 1900	3 / 6
ECON 501	Economics I	3 / 6
ECON 502	Economics II	3 / 6
ELIT 242	Introduction to Drama	3 / 6
ELIT 262	The English Novel (19th Century)	3 / 6
ELIT 270	Poetry	3 / 6
FA 461	Philosophy of Art	3 / 4
MBG 110	Introduction to Modern Biology	3 / 6
MBG 451	Concepts in Biology I	3 / 6
PHIL 405	Advanced Philosophy of Language	3 / 6
PHIL 406	Advanced Philosophy of Mind	3 / 6
PHIL 407	Medieval Philosophy	3 / 6
PHIL 408	Nineteenth Century Philosophy	3 / 6
PHIL 409	Introduction to Phenomenology	3 / 6
PHIL 410	History of Analytic Philosophy	3 / 6
PHIL 411	What is a Mind?	3 / 6
PHIL 412	Philosophy of Mathematics	3 / 6
PHIL 413	Foundations of Cognitive Science	3 / 6
PHIL 414	Consciousness	3 / 6
PHYS 108	Basic Physics II	4 / 6
PHYS 226	Quantum Physics	3 / 6

MBG 110 or PHYS 108 may be taken as elective, if not taken the second year.

COURSE DESCRIPTIONS

UNDERGRADUATE COURSES

PHIL 101 Introduction to Logic

A self-contained introduction to the basic notions of logic, including language, truth, argument, consequence, proof, and counter example. Both propositional logic and predicate logic are studied (their syntax plus semantics),

with an emphasis on translating English sentences into logical symbols. A contemporary software package such as *Tarski's World* may be used to construct derivations of valid arguments. *Credit units: 3 ECTS Credit Units: 6. Aut (V. Akman)*

PHIL 102 Ancient Philosophy
This course introduces the thought of ancient philosophers focusing on questions about the purpose of philosophy, the nature of knowledge, virtue and the good life. *Credit units: 3 ECTS Credit Units: 6.*

PHIL 103 Introduction to Philosophy I
The course raises and examines central problems in theoretical philosophy such as: Is there a world of things that exists independently of human thought and sensation? How can we know the difference between appearance and reality? How does our mind and the physical world relate? How can we know whether there are other minds? Do we freely choose our actions or are they pre-determined? Those problems are investigated through a close reading of influential texts in the history of philosophy. *Credit units: 3 ECTS Credit Units: 6. Aut (S. Berges)*

PHIL 104 Introduction to Philosophy II
The course raises and examines central problems in practical philosophy such as: Is there a single true morality? To what extent is morality conventional? How can we know what is the right and wrong thing to do? Why should I do the right thing? What is it to live one's life well? Those problems are investigated through a close reading of influential texts in the history of philosophy. *Credit units: 3 ECTS Credit Units: 6.*

PHIL 201 Epistemology
This course addresses several of the central problems of contemporary epistemology, such as: conceptions of epistemic justification; skeptical arguments and responses to them; foundationalism and coherentism; externalism and internalism; causal theories of knowledge; rationality and cognitive relativism; naturalised epistemology. *Credit units: 3 ECTS Credit Units: 6. Aut (S. Wigley)*

PHIL 202 Ethics
This course endeavors to appraise critically the moral sense, deontological, utilitarian and intuitionist accounts of morality. In so doing it asks: Do our value judgments merely reflect our subjective preferences or are they based on an objective reality? Is there a single ultimate value? Should we be guided by reason or passion, altruism or egoism? Should we determine a person's worth based on the consequences of their actions or the motives for their actions? Does maximizing overall happiness respect the individual? *Credit units: 3 ECTS Credit Units: 6.*

PHIL 203 Rationalists
This course introduces the rationalist tradition in philosophy through the works of Descartes, Leibniz, and Spinoza. We will look at these philosophers' responses to questions about substance, perception, thought, identity and causality. *Credit units: 3 ECTS Credit Units: 6. Aut (L. Vinx)*

PHIL 204 Empiricists
This course introduces the works of empiricist philosophers Locke, Berkeley, and Hume focusing on the nature of substance, perception, and thought, and philosophical problems about identity and causality. *Credit units: 3 ECTS Credit Units: 6.*

PHIL 241 Social and Political Philosophy I
What is to live one's life well? Is there a single true morality? How can we know what is the right and wrong thing to do? Why should I do the right thing? These problems and more are examined through a close reading of influential texts in the history of philosophy. The course is mutually supported by the co-requisite course ENG 241 Sophomore Academic English I. *Credit units: 3 ECTS Credit Units: 6. Aut (I. Aranyosi, S. Berges, Y. S. Berkovski, H. Demir, U. Steinvorth, L. Vinx, W. Wringe)*

PHIL 242 Social and Political Philosophy II
Should we be guided by reason or passion, altruism or egoism? Is the idea of forcing someone to be free a contradiction? Should there be limits on what justice can demand in order to bring about the best consequences? These problems and more are examined through a close reading of influential texts in the history of philosophy. The course is mutually supported by the co-requisite course ENG 242 Sophomore Academic English II. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: PHIL 241. Aut (S. Wigley)*

PHIL 301 Political Philosophy
When, if at all, is coercion justified? When is it justified to disobey? In what sense should I be free in a political community? Is the idea of forcing someone to be free a contradiction? Those questions and more are examined through a close reading of influential philosophical texts. *Credit units: 3 ECTS Credit Units: 6.*

PHIL 302 Social and Legal Philosophy
What should be the relationship between the individual and the state? Must we be embedded in the social world in order to be free? How can we justify rules of justice? Should there be limits on what justice can demand in order to bring about the best consequences? Those questions and more are examined through a close reading of influential philosophical texts. *Credit units: 3 ECTS Credit Units: 6.*

PHIL 303 Kant
This course is based around a close and critical reading of Kant's *Critique of Pure Reason*. We concentrate on assessing Kant's response to the possibility that the world studied by science is in some sense mind-dependent and/or mind-constructed. More specifically, we consider his distinction between *a priori and a posteriori* knowledge and analytic and synthetic judgments, his argument for synthetic *a priori* truths, his transcendental deduction of the categories and his transcendental idealism. *Credit units: 3 ECTS Credit Units: 6. Aut (Y. S. Berkovski)*

PHIL 304 Philosophy of Science
It is often assumed that science is a paradigm of rational inquiry. In this course we look at a number of recent accounts of scientific rationality which try to give good grounds for this assumption. We also consider the closely related question of scientific realism: when do we have good grounds for thinking that the objects described in scientific theories really exist? *Credit units: 3 ECTS Credit Units: 6. Aut (W. Wringe)*

PHIL 305 Intermediate Logic
This course builds on PHIL 101 - Introduction to Logic, and focuses on the uses and limitations of formal techniques in the study of language and argument. Topics to be covered will include: Further study of propositional and predicate calculus, including discussion of completeness, soundness and decidability results; set-theoretic and semantic paradoxes; Introduction to modal and intuitionistic logic; logic and computability. *Credit units: 3 ECTS Credit Units: 6. Aut (H. Demir)*

PHIL 306 Philosophy of Language
We discuss key concepts such as: truth, meaning, reference, logical form, speech act and metaphor. In addition we critically assess various theories that aim to show what it is for a statement to be true. As preparation, the course commences with a brief recap of key aspects of logic. *Credit units: 3 ECTS Credit Units: 6.*

PHIL 308 Philosophy of Mind
This course introduces students to key issues in contemporary philosophy of mind. We start by looking at dualist, materialist and functionalist responses to the mind/body problem, and consider a range of further issues about personal identity, consciousness and intentionality. A key guiding issue is, 'To what extent, and in what ways can the human mind be compared to a computer?' *Credit units: 3 ECTS Credit Units: 6.*

PHIL 401 Metaphysics
Focusing on a selection of key texts, this course examines core topics in contemporary metaphysics, such as: truth, existence, universals and particulars, causality, modality, perception, knowledge, the *a priori*, identity, anomalous monism, supervenience, vagueness, and time. *Credit units: 3 ECTS Credit Units: 6. Aut (I. Aranyosi)*

PHIL 402 Aesthetics
This course examines key debates in the Philosophy of Art, such as the definition of art, the ontology of artworks, the nature and scope of the aesthetic, expression, representation, interpretation, appreciation, aesthetic value and the value of art, creativity, art and ethics. *Credit units: 3 ECTS Credit Units: 6.*

PHIL 403 Senior Thesis I
The aim of PHIL 403 and PHIL 404 is the gradual development of each student's ability to carry out independent research. In PHIL 403, the student starts to work on a thesis addressing a chosen philosophical topic under the supervision of a faculty member. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

PHIL 404 Senior Thesis II
The aim of PHIL 403 and PHIL 404 is the gradual development of each student's ability to carry out independent research. In PHIL 404, the student writes and defends in front of a jury a thesis addressing the chosen philosophical topic. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: PHIL 403.*

PHIL 405 Advanced Philosophy of Language
A continuation of PHIL 306 - Philosophy of Language, delving into advanced material. *Credit units: 3 ECTS Credit Units: 6.*

PHIL 406 Advanced Philosophy of Mind
A continuation of PHIL 308 - Philosophy of Mind, delving into advanced material. *Credit units: 3 ECTS Credit Units: 6.*

PHIL 407 Medieval Philosophy
This course gives an overview of philosophy during the middle ages (500-1400) while situating it within a broad social and cultural context. We consider major figures such as St. Augustine, St. Anselm, and St. Thomas, and study some of the main themes of medieval philosophy: the relationship between faith and reason, the existence of God and abstract entities, the nature of human knowledge. *Credit units: 3 ECTS Credit Units: 6.*

PHIL 408 Nineteenth Century Philosophy
This course covers the progress of thought in Europe after Kant. It focuses on the following topics: the study of culture and the human sciences, the rise and fall of idealism, historicism, modernity, critical philosophy after

Kant. Emphasis is placed upon the work of authors like Schopenhauer, Hegel, Dilthey, Feuerbach, Kierkegaard, and Nietzsche. *Credit units: 3 ECTS Credit Units: 6.*

PHIL 409 Introduction to Phenomenology

Phenomenology is frequently regarded as movement of thought with methods contrasting the methods of science and analytic philosophy. It has been an intellectual force in Europe, influencing psychology, sociology, theology, and aesthetics. Its philosophical foundations are primarily due to Husserl. In addition to being an epistemological program, Husserlian phenomenology is also a theory about the nature of human consciousness and experience, focusing on *intentionality* and the role of *meaning*. This course concentrates on Husserl's work and important extensions contributed by his student Heidegger. *Credit units: 3 ECTS Credit Units: 6.*

PHIL 410 History of Analytic Philosophy

In this course we examine the history of analytic philosophy starting with the foundational contributions of Frege and Russell. We discuss logical atomism, logical empiricism, Wittgenstein's earlier and later work, ordinary language philosophy, Quine, and Kripke's theory of reference. *Credit units: 3 ECTS Credit Units: 6.*

PHIL 411 What is a Mind?

A topical introduction to philosophy of mind guided by the following questions: What are the major properties and functions of a mind? And in what terms do we think of minds? The course offers a systematic survey of philosophical theories of mind. We begin with the legacy of earlier centuries – mind/body dualism, consciousness, self, and free will – then turn to the first scientific response to this legacy – behaviorism and the rise of scientific psychology – and examine the major theoretical positions and debates it generated in the 20th century, such as reductive physicalism, functionalism and the computer model of the mind, eliminative materialism, instrumentalism, and commonsense psychology. *Credit units: 3 ECTS Credit Units: 6.*

PHIL 412 Philosophy of Mathematics

This course covers several classical and contemporary problems in the philosophy of mathematics, such as: mathematical truth, the nature of proof, mathematical intuition, the foundations of mathematics, and mathematical knowledge. *Credit units: 3 ECTS Credit Units: 6.*

PHIL 413 Foundations of Cognitive Science

We start from two major paradigms in contemporary cognitive science – the wide and the narrow paradigms. The narrow paradigm, which has been the more popular, is concerned with how information is encoded and computed, particularly in human minds. The main rival theories within the narrow paradigm are the symbol-system view and connectionism. The wide paradigm takes minds to be more than information processors, to come in a variety of kinds, and to operate relative to a variety of parameters – teleological, regulatory, environmental, and social. According to the wide paradigm even information processing has to be reexamined in the light of such parameters. *Credit units: 3 ECTS Credit Units: 6.*

PHIL 414 Consciousness

The main questions of this class are the following: What is consciousness and why it matters? Why is consciousness puzzling if not mysterious? Is consciousness one phenomenon or many? The grand divide: the relatively easy problem (how it works) versus the really hard problem (how it feels like) and their derivatives. What mechanisms and competencies underpin consciousness? Where in the brain is consciousness located? Who are the possessors of consciousness, phylogenetically and ontogenetically? Does it come in degrees or is it an all-or-nothing property? Are there different forms of consciousness? Why has consciousness evolved? How does it develop in ontogeny? The class is interdisciplinary and will therefore examine both philosophical positions and arguments as well as the latest scientific theories and data about consciousness. *Credit units: 3 ECTS Credit Units: 6.*

DEPARTMENT OF TURKISH LITERATURE

T. S. Halman (Chair), M. Kalpaklı, L. Mignon, N. Tezcan, S. Tezcan, H. Yavuz.

Part-time: K. Emiroğlu, Ö. Oğuz.

The Department of Turkish Literature, which offers graduate degrees, has admitted its first students to the M.A. program in the 1998-1999 academic year. The Ph.D. program for the graduates of the M.A. program and other qualified candidates started in 2001.

The graduate programs are designed to encompass all periods and genres of oral and written Turkish literature from its beginnings until the present day. Present fields of concentration are: Ottoman Literature, 19th Century Literature and 20th Century Literature.

Unlike many of the traditional departments in this field, the Department of Turkish Literature encourages free and creative thinking, emphasizing research, analysis, interpretation, and criticism. Aiming at enhancing the standards of Turkish literary studies and universalizing the field, the Department underscores proficiency in several languages and encourages theoretical, interdisciplinary, and comparative approaches.

The language of instruction for courses in the Department is Turkish, except in instances where a non-Turkish visiting professor might prefer to teach in English.

Master of Arts in Turkish Literature

The duration of the M.A. program is three years, including a prep year, during which students take courses designed to introduce them to various aspects of literature and to strengthen their proficiency in Ottoman Turkish and foreign languages.

Admission

For entering the M.A. program applicants must be graduates of four-year undergraduate programs, preferably in literature. Applications will be evaluated on the basis of the applicant's scholastic record, ALES results, level of proficiency in Turkish and English, a composition designed to assess his/her ability to critically analyze literary texts, and an interview.

Degree Requirements

Candidates for the M.A. degree are required to complete at least 33 units of credit beyond the preparatory year and to prove their competence in Turkish, Ottoman, and English. Some students may be exempted from English and/or Ottoman depending on their proficiency levels. The candidates may be required to learn additional languages according to their fields of concentration: Persian and/or Arabic for Ottoman Literature; French and/or German for 19th Century Literature and 20th Century Literature. Candidates should prepare and defend a Master's thesis. They should maintain a minimum GPA of 3.00 throughout their studies. Language courses and thesis writing are without credit.

CURRICULUM

PREP YEAR

(All prep year courses are mandatory.)

Autumn Semester		Credits / ECTS Credits
EDEB 401	Introduction to Turkish Literature I	3 / 6
EDEB 403	Theories of Literature	4 / 8
EDEB 405	Written Expression	3 / 6
EDEB 411	Ottoman Turkish I	4 / 8
EDEB 419	The Turkish Short Story	3 / 6

Spring Semester		Credits / ECTS Credits
EDEB 402	Introduction to Turkish Literature II	3 / 6
EDEB 412	Ottoman Turkish II	3 / 6

EDEB 414	Introduction to Folk Literature	3 / 6
EDEB 416	Criticism	4 / 8
EDEB 424	Introduction to Divan Literature	3 / 6

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
EDEB 503	Ottoman Divan Literature	3 / 6
EDEB 504	Turkish Folk Literature	3 / 6
EDEB 505	Turkish Literature 1839-1922 I	3 / 6
EDEB 507	Turkish Poetry	3 / -
EDEB 511	Ottoman Turkish III	3 / 6

Spring Semester		Credits / ECTS Credits
EDEB 510	Turkish Literature 1839-1922 II	3 / 6
EDEB 512	Ottoman Turkish IV	3 / 6
EDEB 524	The Turkish Novel	3 / 6
EDEB 526	Divan Literature Through Texts	3 / 6
EDEB 528	Yunus Emre	3 / -

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
EDEB 591	Thesis Seminar I	2 / 10
EDEB 599	Master's Thesis	- / -

Spring Semester		Credits / ECTS Credits
EDEB 592	Thesis Seminar II	2 / 10
EDEB 599	Master's Thesis	- / -

ELECTIVES

EDEB 513	Sufi Literature	3 / -
EDEB 514	Seminar on Divan Literature	3 / 6
EDEB 522	Readings in Old Anatolian Turkish	3 / -
EDEB 523	13th Century Literature	3 / -
EDEB 530	Literary Translation	3 / 6
EDEB 533	Turkish Immigrant Literature	3 / -

Doctor of Philosophy in Turkish Literature

The doctoral program in Turkish literature is initiated in 2001. Applicants to the program are required to hold an M.A. degree in Turkish Literature or related fields from Bilkent or other universities. To be admitted to the program, applicants from other universities may be required to take written and/or oral exams. The duration of the doctoral program is normally 3.5 years.

Doctoral students must complete course work of at least 24 credit hours with a minimum GPA of 3.00 and fulfill all language requirements before they present their written dissertation proposals and take the comprehensive written and oral exams. The research proposal for the dissertation must be approved by the Department before the candidates may take the comprehensive exams. These exams are designed to evaluate the candidate's expertise in his/her area of concentration and research proposal for the dissertation. The candidate is eligible to take the orals after passing the written exam. Following the successful completion of these requirements, the candidates will conduct research and proceed with the writing of their dissertation, which should embody original research and make a substantial contribution to Turkish literary scholarship. Candidates must successfully defend their dissertation before a committee of the faculty.

Bilkent University will award the successful doctoral candidates the degree of "Doctor of Philosophy in Turkish Literature".

CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
EDEB 603	Seminar on Yunus Emre	3 / -
EDEB 605	East and West in Turkish Literature	3 / -
EDEB 607	Modernism in Turkish Literature	3 / 20
EDEB 615	Love in Turkish Literature	3 / 6
EDEB 619	World Fiction	3 / 6
EDEB 621	Seminar on the Mesnevi in Divan Literature	3 / 6

Spring Semester		Credits / ECTS Credits
EDEB 608	Critical Approaches to Turkish Literature	3 / 20
EDEB 616	Comparative Modern Turkish and Arabic Literature	3 / 6
EDEB 618	Introduction to Semantics	3 / -
EDEB 620	Seminar on Evliya Celebi and the Seyahatname	3 / 6
EDEB 626	The Dede Korkut Oguznames	3 / 6

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
Spring Semester		Credits / ECTS Credits
EDEB 699	Ph.D. Dissertation	- / -

COURSE DESCRIPTIONS

PREP YEAR COURSES

EDEB 401 Introduction to Turkish Literature I
Designed to give the student an overview of Turkish Literature, the course will deal with earliest poems, the Orkhon Inscriptions, major early works (*Divan-i Lugati't-Türk, Kutadgu Bilig, Dede Korkut*, etc.),highlights of Seljuk Literature (especially Yunus Emre), and the most important works of Divan poetry and prose (from the 14th century to the mid-19th century). *Credit units: 3 ECTS Credit Units: 6. Aut (S. Tezcan)*

EDEB 402 Introduction to Turkish Literature II
This course will provide an overview of Turkish literature from the Tanzimat era to the present. Emphasis will be on the development of such literary genres as the novel, short story, drama, poetry, essay, and criticism in the modern era. The ethical and aesthetic arguments of major literary movements, key literary debates, and the social impact of literature will be discussed and evaluated. Readings will include major works in various genres. *Credit units: 3 ECTS Credit Units: 6.*

EDEB 403 Theories of Literature
This course will provide a wide-ranging theoretical background for the practice of literary criticism. A general survey of western literary history, literary movements, genres, and key terms, will be followed by the examination of modern literary/critical theories, including formalist, structuralist, post-structuralist, Marxist, feminist, and psychoanalytical approaches. Readings (in Turkish) will include selections from Aristotle, Barthes, Benjamin, Derrida, Eagleton, Escarpit, Freud, Genette, Jameson, Lukacs, Ong, and Todorov among others. Students will write reading reports, make a presentation, and write a term paper on a selected topic. *Credit units: 4 ECTS Credit Units: 8.*

EDEB 405 Written Expression
This course aims at enhancing the appreciation and control of written Turkish at a high level. It will equip the students with the fundamental skills of writing and editing. After a review of the basic elements of composition (thesis, organization, style, tone), the techniques of narration (summary, paraphrase, quotation), the rules of punctuation, citation, etc. numerous examples of printed works will be discussed in class. Regular writing and rewriting assignments will be given. Emphasis will be on non-fictional prose, including scholarly and critical writing. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

EDEB 411 Ottoman Turkish I
This course will introduce the students to the Ottoman script and teach them the fundamentals of Ottoman-Turkish grammar through readings and writing exercises. *Credit units: 4 ECTS Credit Units: 8. Aut (K. Emiroğlu)*

EDEB 412 Ottoman Turkish II
This course will enhance the students' comprehension of the Ottoman script and the fundamentals of Ottoman-Turkish grammar through readings and writing exercises. *Credit units: 3 ECTS Credit Units: 6.*

EDEB 413 Theoretical History of Western Civilization
In this course, western civilization, from preliterate societies to modern times, will be examined theoretically. Political, economic, religious, technological and artistic transformations on various levels are to be dealt with from different theoretical points of view. Ancient Greek and Roman contributions with respect to philosophy and law are also on the agenda of this course. Historical backgrounds of Humanism, Renaissance, Scientific, Revolution, Reformation, Enlightenment and Romanticism are, inter alia, part of the basic problematic to be discussed. Furthermore, numerous important questions will be raised, among them: 'Are primitive/civilized differences tenable?', 'On what basis can there be periodization of human history?', and 'How the human mind passes from myth to Logos?' *Credit units: 3 ECTS Credit Units: None. Aut (H. Yavuz)*

EDEB 414 Introduction to Folk Literature
This course will offer an historical survey of the major genres of Turkish folk literature including poetry, folktale, the epic, and folk humor. Students will be introduced to significant scholarly works in the field as well. *Credit units: 3 ECTS Credit Units: 6.*

EDEB 416 Criticism
This course aims at furnishing the students with a critical understanding of the development of the theory and practice of literary criticism in Turkey since Ottoman times. Readings will include selections from the works of such writers as Ataç, Cemal Süreya, Fethi Naci, Gürbilek, Moran, Parla,Tanpınar, and Yavuz. Assignments will include regular reading reports, a class presentation, and a term paper. *Credit units: 4 ECTS Credit Units: 8.*

EDEB 419 The Turkish Short Story
The origins of the contemporary short story in Turkish literature may be found in Aziz Efendi's Muhayyelât, a late 18th-century work, which is considered a bridge between the story-telling tradition in the East and the modern short story. In this course, the development of the modern Turkish short story will be examined in historical context, especially with regard to its generic transformation, and in terms of comparisons of style and content among various works by modern authors. *Credit units: 3 ECTS Credit Units: 6. Aut (T. S. Halman)*

EDEB 424 Introduction to Divan Literature
Taking off from the question, "What kind of literature is Divan literature?" this course aims to introduce the aesthetic structure and understanding of divan literature, regarding both form and contents, and to see how they are different from those of today. Our primary topic is poetry: we examine Aruz metrics, the rules of rhyme, and verse forms; we also discuss figures of speech and subtleties of expression. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

EDEB 425 Research and Writing
This course offers an introduction to the methods of academic research. Students will be acquainted with academic resources (research libraries, reference books, catalogs, dictionaries). They will be equipped with the fundamental skills of writing and editing. Techniques of narration and methods of citation will be emphasized. Regular writing assignments will be given. *Credit units: 4 ECTS Credit Units: None.*

EDEB 430 Yunus Emre
Recent research 13th-century Anatolian Turkish literature focuses on two poets: Sultan Veled and Yunus Emre. The latter has reached ud through the centuries with his unique poetic language and sensibility, as well as through his imitators, and overall, as an inexplicable phenomenon. Generations of scholars have sought to reexamine and reinterpret Yunus Emre's poems, which testifies to their intriguing quality. The course aims to deal with several poems by Yunus Emre and their scholarly interpretations. *Credit units: 3 ECTS Credit Units: None.*

EDEB 434 Introduction to Divan Literature II
Ottoman literature endured for 600 years. Its classical epoch ended in the 16th century and its transformation began in the 17th century. This transformation and reorientation period lasted into the 18th century and ended with westernization in the 19th century. In this course we shall examine and discuss the lyric poetry, *mesnevis* and prose works. *Credit units: 3 ECTS Credit Units: 6.*

GRADUATE COURSES

EDEB 503 Ottoman Divan Literature
This course will cover the most important genres of Ottoman Divan literature including poetry (*gazel*, *kaside*, *mesnevi*) and prose (*tezkires*, *chronicles*, *risales*). It will prepare the students for a broader critical understanding of Ottoman literature. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

EDEB 504 Turkish Folk Literature
This course will concentrate on diverse types of Turkish oral literature – folk poems and tales, epics and narratives, anecdotes and satirical pieces, riddles and lyrics from Anatolia. *Credit units: 3 ECTS Credit Units: 6. Aut (Ö. Oğuz)*

EDEB 505 Turkish Literature 1839-1922 I
This course will examine the major developments in Turkish literature from the Tanzimat era to the founding of the Republic. Emphasis will be on the inception and transformation of various literary genres including the novel, the essay, poetry, drama and criticism. The contest between tradition and modernity, debates concerning literariness and the place of literature within society, and the social impact of the literature of the period will be

among the key areas of investigation. Readings will consist of the major works of significant writers and poets, as well as secondary literature, including, A.H. Tanpınar's *XIX. Asır Türk EdebiyatıTarihi*. *Credit units: 3 ECTS Credit Units: 6.*

EDEB 506 Literature of the Republic

This course will offer an overview of the major developments in Turkish literature from the establishment of the Republic to the present. Significant literary movements and important changes in major genres (especially those in poetry, drama, short story, the novel, and criticism) will be examined through texts representing the landmarks of 20th century Turkish literature. Critical appraisal of the historiography of the period is also part of the course. *Credit units: 3 ECTS Credit Units: None.*

EDEB 507 Turkish Poetry

Following a brief overview of the process of change in Turkish poetry from Tazminat (reforms period) until the Republic, this course will survey and discuss movements, changing ideological and aesthetic approaches, the correlation between modern poetry and Republican enlightenment from 1923 until the present day. It will also make a critical analysis of modern poetry in conjunction with literary theories. *Credit units: 3 ECTS Credit Units: None. Aut (H. Yavuz)*

EDEB 510 Turkish Literature 1839-1922 II

This course will examine the major developments in Turkish Literature from the Tanzimat era to the literature from the Tanzimat to the founding of the Republic. Emphasis will be on the inception and transformation of various literary genres including the novel, the essay, poetry, drama and criticism. The contest between tradition and modernity, debates concerning literariness and the place of literature within society, and the social impact of the literature of the period will be among the key areas of investigation. Readings will consist of the major works of significant writers and ports. *Credit units: 3 ECTS Credit Units: 6.*

EDEB 511 Ottoman Turkish III

This course will enhance students' comprehension of Ottoman texts from all periods and genres. *Credit units: 3 ECTS Credit Units: 6. Aut (K. Emiroğlu)*

EDEB 512 Ottoman Turkish IV

This course aims at furnishing students with an understanding of problematic Ottoman texts. *Credit units: 3 ECTS Credit Units: 6.*

EDEB 513 Sufi Literature

The course is designed to study the literary output of Turkish Sufism from Ahmet Yesevi in the 12th century to Şeyh Galip in the 18th century. Following a precis of the mysticalspirit in other religions and Islam (especially in Arab and Persianculture), it concentrates on Mevlâna Celâleddin Rumi and Yunus Emre, on the tekke literature of the sects (which evolved in Anatolia since the 13th century), culminating in the Divan and folk Sufi traditions. Readings are mainly in poetry (including selections from the major mesnevis), but several prose pieces too are on the reading list. The course also deals with Sufi themes in Turkish literature from the Tanzimat until the present. *Credit units: 3 ECTS Credit Units: None.*

EDEB 514 Seminar on Divan Literature

History of Ottoman literature from the 17th to the end of the 19th century. This course will cover the most important genres of Ottoman Divan literature including poetry (*gazel, kaside, mesnevi*) and prose (*tezkires, chronicles,risales*). It will prepare the students for a broader critical understanding of Ottoman Literature. *Credit units: 3 ECTS Credit Units: 6.*

EDEB 518 Poetry and Translation

The aim of this course will be to show how our total understanding of a poem is influenced by the language it is written in and how our perception changes not only as we translate but afterwards when we review the translated text. We will also analyze how imagery can shift with language influence our perception of the poem. We shall also be reviewing translation techniques as well as comparing our translations to existing translations and criticizing these and our own translations in terms of accuracy, imagery and sound and if whether the general mood of the translation reflects the original. It must be remembered that no two impressions of a work of art will be the same. Therefore, every person's translation is bound to be different. After all "interpretation" is a synonym for translation. However, in translating literature, as well as anything else, there are limits to interpretation which are imposed by the original text. We shall endeavor to learn how to keep within these limits. The general focus will be on two writers; Thomas Hardy and T.S. Eliot. The former as both poet and novelist, the latter as poet and essayist. *Credit units: 3 ECTS Credit Units: None.*

EDEB 522 Readings in Old Anatolian Turkish

This course will introduce the students to Old Anatolia Turkish through readings of original texts. It will focus on the unique grammatical aspects of Old Ottoman. *Credit units: 3 ECTS Credit Units: None.*

EDEB 523 13th Century Literature

13th century Anatolia witnessed an efflorescence of Islamic mysticism, sects, humanistic ideals, a new type of Islamic life and architecture, and folk humor and satire. It was an age dominated by such figures as Mevlâna Celâleddin Rumi, Hacı Bektaş Veli, Yunus Emre, Nasreddin Hoca and others. This course will deal with Seljuk

culture and literature. Readings will include selections from Rumi's *Divan*, *Mesnevi*, *Rubaiyat*, Yunus Emre's poetry and Nasreddin Hoca anecdotes, etc. *Credit units: 3 ECTS Credit Units: None.*

EDEB 524 The Turkish Novel
This course will examine the transformation of the social, psychological and aesthetic parameters of the Turkish novel from its inception in the latter part of the 19th century to its most recent examples. Areas of interest will include: the relationship of the early novels with traditional narratives; the questions concerning the social representativeness of novels; the formal changes in the tradition of novel writing, and critical responses to key novels. Readings will include major samples of such subtypes of the Turkish novel as the historical novel, philosophical novel, village novel, nature novel, and modernist novel as well as several critical books and essays. *Credit units: 3 ECTS Credit Units: 6.*

EDEB 526 Divan Literature Through Texts
In this course several sample texts of Ottoman Divan literature, including those in the forms of *münazara, sakiname, şehrengiz, dibace, and tezkire* , will be read and discussed. Emphasis will be on comprehending the special vocabulary of these texts and the unique way of thinking they express. *Credit units: 3 ECTS Credit Units: 6.*

EDEB 530 Literary Translation
Organized essentially as a workshop, this course will familiarize students with techniques of translating Turkish literary texts into English. It is designed for students with proven proficiency in English. Texts will include verse and prose from most periods of Turkish literary history, certainly Divan, folk, Tanzimat and modern literature. Selections may vary depending upon individual needs related to the field of specialization and/or thesis topic. This course will train students in literal translation as well as in doing creative - and hopefully publishable - versions. *Credit units: 3 ECTS Credit Units: 6.*

EDEB 532 The Emergence and the Development of the Short Story in Western Literatures
General characteristics of the short story as literary genre with specific reference to mainly German, American, Russian, and French short stories of the nineteenth century. Identifying and evaluating those aspects of the short story that make it a work of literature. Understanding and appreciating the complex structure formed by the dynamics between the author, narrator, place, time, and the characters. Readings will be in Turkish and English. *Credit units: 3 ECTS Credit Units: None.*

EDEB 533 Turkish Immigrant Literature
This course will discuss the emergence and development of Turkish immigrant literature in Western Europe, mainly in Germany, France, the U.K. and the Netherlands. Emphasis will be on literary genres such as poetry, the novel and the short story written either in Turkish or in the local languages. The influence of Turkish and local literatures on those new texts will be among the key areas of investigation. Readings will consists of the works of significant writers and poets, whenever possible the original Turkish, German, English or French texts or their Turkish translations. *Credit units: 3 ECTS Credit Units: None.*

EDEB 534 Advanced Reading in English
Starting off with a survey of the semantic features of English syntax, this course aims to provide proficiency in advanced readings within a short space of time. Readings in original literary and critical texts. *Credit units: 3 ECTS Credit Units: None.*

EDEB 591 Thesis Seminar I
This course is designed to guide the Master's students in their thesis work. Research methods, literature review, elaboration of topics, and organization of material will be discussed in periodic meetings. Presentation in departmental seminars may be requested. *Credit units: 2 ECTS Credit Units: 10. Aut (T. S. Halman)*

EDEB 592 Thesis Seminar II
This course is designed to guide the Master's students in their thesis work. Research methods, literature review, elaboration of topics, and organization of material will be discussed in periodic meetings. Presentation in departmental seminars may be requested. *Credit units: 2 ECTS Credit Units: 10.*

EDEB 599 Master's Thesis
Credit units: None ECTS Credit Units: None. Aut (Staff)

EDEB 603 Seminar on Yunus Emre
This doctoral seminar will deal with the emergence of Anatolian Sufism and its earliest poetic expression in the work of Yunus Emre. It will be based primarily on close critical readings of Yunus' verses, problems of biography and authenticity, his aesthetics and pantheism, the influence of his ideas and spirituality on later periods. On a comparative basis, the seminar will attempt to shed light on how Yunus Emre resembles or differs from other Sufi poets and European mystics and humanists. *Credit units: 3 ECTS Credit Units: None.*

EDEB 605 East and West in Turkish Literature
From the Orhun Inscriptions to Orhan Pamuk, Turkish Literary history has transpired ever a vast geographic area from Eastern Asia to western Europe. Its hallmarks include orientations and dis-orientations, cultural retentions and intellectual tensions. This seminar will explore and the west. (not to exclude the south) It will deal with all

periods and genres, but will heavily concentrate on fiction, modern poetry, criticism, and dramatic writing. *Credit units: 3 ECTS Credit Units: None.*

EDEB 606 Sufi Seminar
In this seminar Islamic mysticism, orthodox as well as heterodox, will be discussed with special reference to Sufi poetry and its history. Especially the question that, in the absence of systematic philosophical tradition, can mysticism work *in loco parentis* as a systematic world-view will be dealt with. other topics like the theoretical basis of Sufi symbolism will also be on the agenda. *Credit units: 3 ECTS Credit Units: 6.*

EDEB 607 Modernism in Turkish Literature
This course will deal mainly with the repercussions of political and social aspects of Modernism qua Westernization in the Ottoman and Republican Turkish Literature. But, Modernism as a transformation of literature itself, especially in the field of poetry will also be critically investigated. *Credit units: 3 ECTS Credit Units: 20.*

EDEB 608 Critical Approaches to Turkish Literature
This course designed to reevaluate modern Turkish (Republican) literature from a theoretical point of view. Theories such as Marxism and Psychoanalysis (Freudian and Lacanian), and philosophical currents (Phenomenology and Existentialism, among others) will be brought to bear upon related texts to produce new critical understanding. *Credit units: 3 ECTS Credit Units: 20. Aut (H. Yavuz)*

EDEB 615 Love in Turkish Literature
Organized in seminars, this course will examine varying approaches to the theme of love in Turkish literature from the era of the Tanzimat to the present day. Though the focus will be mainly on poetry, other literary genres such as the novel, the short story and drama too will be considered. The impact of social change and ideological conflict on the narration of love and desire will be a key area of investigation. *Credit units: 3 ECTS Credit Units: 6.*

EDEB 616 Comparative Modern Turkish and Arabic Literature
Organized in seminars, this course will explore the varying approaches of modern Turkish and Arab writers to themes and concepts such as love, exile, nationalism, Orientalism, Occidentalism, religion, and realism. Though the focus will be mainly on twentieth century poetry, other literary genres such as the novel, the short story, and drama too will be considered. A cross-disciplinary approach will be encouraged as links between literature and other art-forms will be explored. Readings will consist of the works of significant writers and poets, the original Turkish and whenever possible the Turkish translations of Arabic texts. *Credit units: 3 ECTS Credit Units: 6.*

EDEB 618 Introduction to Semantics
A study of the fundamental principles of semantics with specific reference to semantics of Turkish through concrete, systematic, hands-on, interactive approach. A detailed investigation of different theories of meaning, and topics such as sense and reference, implications and implicatures, definitions, form and meaning in language, and metaphor and other analogical transfers of meaning commonly used in literary styles. *Credit units: 3 ECTS Credit Units: None.*

EDEB 619 World Fiction
This seminar will critically survey and discuss several major 20th century novels and many modern short stories translated into Turkish. It will examine the cultural contexts of the novels and short stories, the way they reflect their times and respective societies, their fictional techniques, aesthetic and ethical concerns, and influences (if any) on Turkish fiction. Relevant theories will also be analyzed. *Credit units: 3 ECTS Credit Units: 6. Aut (T. S. Halman)*

EDEB 620 Seminar on Evliya Celebi and the Seyahatname
The *Seyahatnâme* (“Book of Travels”) the first and finest example of a unique genre of Ottoman literature - is not merely a travel guide but is at the same time a work of literature. It contains rich narrative elements that are included in the conveying of information, the description of observations and experiences, and the reflection of value judgments. This seminar critically examines the ideas that have been proposed concerning when, where and how the *Seyahatnâme* was written; and evaluates the text editions and the important researches that have been made until now. We read selected passages of the work and discuss its contents, structure, scope, and literary features. Using examples of true or false or exaggerated information contained in the *Seyahatnâme* we investigate preconceptions regarding the workand discuss its value today. *Credit units: 3 ECTS Credit Units: 6.*

EDEB 621 Seminar on the Mesnevi in Divan Literature
The seminar provides a historical perspective on the Mesnevi genre from the thirteenth century onward, and examines how it ceded its place to the novel and short story as Turkish literature opened to the West in the nineteenth century. We take a topical approach, and discuss the origin of the Mesnevi genre and the way in which it assumed a Turkish (or Anatolian) dress. We also read selected mesnevis examining such features as structure, plot, authors’ apologies, character, folk tale elements, societal value judgments, and local elements; compare these with the techniques and understanding of the Western novel. *Credit units: 3 ECTS Credit Units: 6.*

EDEB 624 Folk Poetry Seminar
During the Folk Poetry Seminar, Turkish oral poetry beginning with the bard (ozan) tradition and continuing with the “minstrel” (âşık) and “folk poetry” tradition of the Islamic and modern period is critically examined. Differences between the forms of written and oral works, arguments on orality and originality, performance of folk poetry, critical edition methods and folk poetry themes in the cultural heritage or in national literature, including class literature will be analyzed through the works of such major poets as Yunus Emre, Karacaoğlan, Köroğlu, Pir Sultan Abdal, Dadaloğlu, Âşık Veysel. *Credit units: 3 ECTS Credit Units: 6. Aut (Ö. Oğuz)*

EDEB 626 The Dede Korkut Oguznames
How an ancient heroic epic of the Oğuz came to be written down in twelve episodes, with variations, in the Eastern Anatolia - Azerbaijan region, in the fifteenth century. Manuscripts of the work and history of scholarship. Dede Korkut (Korkut Ata) as legendary bard and soothsayet. Lanuage, linguistic and philological problems. Style, subject matter, heroes. The place of the *Book of Dede Korkut* in Turkish literature. Anatolian folk tales that resemble the stories in the *Book of Dede Korkut* Samples of the *Oğuznames* will be studied and analyzed from various perspectives. *Credit units: 3 ECTS Credit Units: 6.*

EDEB 628 Heroic Religious Epics
This is course will basically deal with the topic of heroic Islamic epics, which were composed in Anatolia during XIV. and XV. centuries and later, or translated from Arabic and Persian in the same time period (Danişmendnâme, Saltuknâme, Battalnâme usw.). Works like Vilayetnâmes and Menâkibnâmes will also be studied and samples from various texts elucidated. *Credit units: 3 ECTS Credit Units: 6. Aut (S. Tezcan)*

EDEB 630 Short Story in Western Literature
The rise of the modern short story as a literary genre in Europe and the United States in early nineteenth century and its development in French, Russian and English literatures. Understanding the literary characteristics of the short story through in-depth reading and criticism of the works of major authors of the genre. Readings will be done mainly in Turkish translations. *Credit units: 3 ECTS Credit Units: None.*

EDEB 699 Ph.D. Dissertation
Credit units: None ECTS Credit Units: None. Aut (Staff)

FACULTY OF LAW

Osman B. Gürzumar, Ph.D., Dean
Ece Göztepe Çelebi, Ph.D., Asst. Dean
Tuğrul Katoğlu, Ph.D., Asst. Dean

The Faculty of Law offers a broad set of courses concerning all challenging dimensions of contemporary law. The curriculum is structured to provide the students not only with knowledge in classical and substantial areas like constitutional law, administrative law, civil law, commercial law and criminal law, but also with basic professional information in other fields requiring an international perspective of specialization like competition law, intellectual and industrial property law, international commercial arbitration, European Union Law and international business law. The courses consisting of the Turkish positive law with national character are to be given in Turkish while some others representing an international character and/or which could be learned in a foreign language like philosophy, theory of state and politics, international business law, European Union Law etc. are given in English. The basic philosophy of the Faculty is not to be a "school of a profession" but to have a character of a forum where the students could gain, in addition to basic professional knowledge, a scientific legal approach to follow and participate in the permanent development of the world facing the challenge of globalisation. The Faculty is conscious of the fact and the graduate program is structured in such a way that the students shall have the opportunity to gain and develop the ability of determining, searching for and achieving the appropriate information they need.

ACADEMIC STAFF

Tekin Akıllıoğlu, Adjunct Professor
Ph.D., Administrative law, University of Rennes, 1972. Administrative Law, Human Rights Law.

Murat Atalı, Assistant Professor
Ph.D., Civil Procedure, Regensburg University, 2001.

Zühtü Aytaç, Visiting Professor
Ph.D., Law, Albert Ludwig Freiburg University, 1975. Commercial Law, competition Law and Law of Capital Markets.

Gülüm Bayraktaroğlu Özçelik, Assistant Professor
Ph.D., Private International Law, Ankara University, 2007. European Union Law.

Sahir Çörtoğlu, Adjunct Professor
Ph.D., Private Law, Ankara University, 1980. Property Law, Introduction to Law.

Haluk Emiroğlu, Adjunct Associate Professor
Ph.D., Roman Law, Ankara University, 2000. Introduction to Law, Comparative Private Law, Roman Law.

Ömer Faruk Erdem, Assistant Professor
Ph.D., Political Science, Ankara University, 1971. Commercial law, European Community law.

M. Ali Erten, Adjunct Professor
Ph.D., Law, Ankara University, 1976. Civil law.

Ece Göztepe Çelebi, Assistant Professor
Ph.D., European Public Law, Münster Westfaelische Wilhelms University, 2001. Public Law, Constitutional Law.

Osman B. Gürzumar, Professor
Ph.D., Law, Bern University, 1991. Civil law, competition law.

Ahmet Rüçhan Işık, Visiting Professor
Ph.D., Law, Ankara University, 1962. Labour and Social Security Law.

Tuğrul Katoğlu, Assistant Professor
Ph.D., Public Law, Ankara University, 2001. Criminal law and criminal procedure.

Cengiz Koçhisarlıoğlu, Visiting Professor
Ph.D., Civil Law, Lausanne University, 1982.

Erden Kuntalp, Adjunct Professor
Ph.D., Law, Ankara University, 1964. Civil law, banking law.
Çağlar Manavgat, Assistant Professor
Ph.D., Law of Capital Market, Ankara University, 1996. Law of Capital Markets, Commercial Law.
Kamil Mutluer, Adjunct Professor
Ph.D., Tax Law, Eskişehir Economic and Commercial Sciences Academy, 1971. Tax Law.
Ergun Özbudun, Professor
Ph.D., (LL.D.), Public Law, Ankara University, 1962. Constitutional law, Turkish politics, political parties, electoral studies.
Elvin Evrim Özcan, Instructor
Ph.D., Public Law, Gazi University, 2009.
Hamdi Pınar, Assistant Professor
Ph.D., Commercial Law, Ludwig Maximilian University Munich, 2002.
Sami Selçuk, Adjunct Professor
Ph.D., Law, Ankara University, 1982. Criminal law and criminal procedure.
Lale Sirmen, Adjunct Professor
Ph.D., Civil Law, Ankara University, 1975.
Turgut Tan, Professor
Ph.D., Administrative Sciences, Ankara University, 1970. Administrative law, public economic law.
Bilgin Tiryakioğlu, Adjunct Professor
Ph.D., Private International Law, Ankara University, 1991. (Professor at Ankara University)
Nevzat Toroslu, Visiting Professor
Ph.D., Law, Ankara University,1964. Criminal law and criminal procedure.
Hikmet Sami Türk, Adjunct Professor
Ph.D., Law, Köln University 1964. Commercial law, competition law, maritime law, consitutional law.
Aslı E. Gürbüz Usluel, Assistant Professor
Ph.D., Commercial Law, Ankara University, 2008.
Doruk Utku, Assistant Professor
Ph.D., Civil Law, Marmara University, 2008.

PART-TIME ACADEMIC STAFF

Şebnem Akipek, Ph.D., Civil Law, Ankara University, 1998. (Associate Professor at Ankara University)
Şahin Ardıyok, LL.M., Chicago University, 2004.
Sertaç Hami Başeren, Ph.D., Public Law, Gazi University, 1987.
Kemal Başlar, Ph.D., International Law, Nottingham University, 1995.
F. Aslı Bayata Canyaş, LL.M, International Business and Trade Law, Erasmus University Rotterdam, 2006.
Sanem Baykal, Ph.D., Ankara University, 2001. (Associate Professor at Ankara University)
Vedat Buz, Ph.D., Private Law, Ankara University, 1996. (Professor at Ankara University)
Onat Çopur, LL.M., in Public Law, Ankara University Institute of Social Sciences, 2006.
Shahar Dillbary, J.S.D., University of Chicago, 2006.
Yüksel Ersoy, Ph.D., International Law, Ankara University, 1976. (Professor Emeritus, Ankara University)
Osman R. Günver, Ph.D., Ankara University, 1999.
Gönenç Gürkaynak, LL.M., Harvard Law School, 2001.
Halil Baha Karabudak, Economics, Middle East Technical University, 1985.
Ruşen Keleş, Ph.D., Political Science and Public Administration, Ankara University, 1961. (Professor Emeritus, Ankara University)
İsmail Kırca, Ph.D., Commercial Law. Ankara University, 1995. (Professor at Ankara University)

Johann Kindl, Ph.D., Civil Law, 1992. Universität Augsburg.
Hans-Heiner Kühne, Ph.D., Public Law, Universitaet des Saarlandes, 1969. (Emeritus Professor at Trier University)
Gerald Masch, Ph.D., Civil Law, 1992.
Pınar Altınok Ormancı, LL.M., in Private International Law and International Business Law, Universite Paris 1 Pantheon-Sorbonne, 2005.
Sam Peltzman, Ph.D., Economics, University of Chicago, 1965.
Kerem Cem Sanlı, Ph.D., Law, Marmara University, 2006. (Associate Professor at Bilgi University)
İlmutluhan Selçuk, LL.M., Queen Mary University, 2002.
Mehmet Handan Surlu, LL.B., Ankara University.
Kemal Şenocak, Ph.D., Private Law, Ankara University. (Associate Professor at Ankara University)
Haluk Toroslu, LL.M., Ankara University Faculty of Law, 2007.
Ali Rıza Tümer, Ph.D., General Surgery, Ankara University, 1996.
Sinan Utku, JD, Ph.D. Physics, Yale University, 1994.
Gülriz Uygur, Ph.D., Philosophy, Hacettepe University, 1999. (Associate Professor at Ankara University)
Ceren Ünal, LL.M., Computer and Communications Law, Queen Mary, University of London, 2002.

UNDERGRADUATE CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
CS 121	Introduction to Computing for Social Sciences	3 / 6
ENG 101	English and Composition I	3 / 6
GE 100	Orientation	1 / 1
LAW 101	Introduction to Law	3 / 3
LAW 103	Constitutional Law I	3 / 5
LAW 105	Civil Law-I: Introduction to Civil Law-Basic Concepts-Law of Persons	3 / 5
MATH 119	Statistics for Lawyers	3 / 3
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
ECON 103	Principles of Economics	3 / 6
ENG 102	English and Composition II	3 / 6
HCIV 103	History of Civilization for Law	3 / 4
LAW 102	Roman Law	3 / 3
LAW 104	Constitutional Law II	3 / 5
LAW 106	Civil Law II: Family Law	3 / 5
TURK 102	Turkish II	2 / 1

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
ENG 241	Sophomore Academic English I	3 / 5
HISTR 201	History of Turkish Republic I	2 / 1
LAW 201	Law of Obligations I	3 / 6
LAW 203	Criminal Law I	3 / 6
LAW 205	Administrative Law I	3 / 6
PHIL 241	Social and Political Philosophy I	3 / 6

Spring Semester		Credits / ECTS Credits
ENG 242	Sophomore Academic English II	3 / 5
HISTR 202	History of Turkish Republic II	2 / 1
LAW 202	Law of Obligations II	3 / 5
LAW 204	Criminal Law II	3 / 5
LAW 206	Administrative Law II	3 / 5
LAW 208	Basic Concepts of Law	2 / 3
PHIL 242	Social and Political Philosophy II	3 / 6

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
LAW 301	Civil Procedure I	3 / 5
LAW 303	Public International Law	3 / 5
LAW 305	Civil Law III: Law of Property I	3 / 5
LAW 307	Commercial Law I	3 / 5
LAW 309	Law of Obligations (Special Part)	2 / 3
MAN 211	Principles of Accounting I	3 / 6
	Elective (1)	2 / 4

Spring Semester		Credits / ECTS Credits
LAW 302	Civil Procedure II	3 / 5
LAW 304	Private International Law	3 / 4
LAW 306	Civil Law III: Law of Property II	3 / 5
LAW 308	Commercial Law II	3 / 3
LAW 358	Criminal Law (Special Part)	2 / 3
MAN 216	Elements of Finance	3 / 6
	Elective(1)	2 / 4

FOURTH YEAR

Autumn Semester		Credits / ECTS Credits
LAW 401	Commercial Law III	3 / 5
LAW 403	Civil Law IV Inheritance Law	3 / 4
LAW 407	Tax Law	3 / 3
LAW 409	Intellectual Property Law	2 / 3
LAW 411	Criminal Procedure	3 / 3
LAW 412	Labor Law I	3 / 5
LAW 413	European Union Law	3 / 3
	Elective(1)	2 / 4

Spring Semester		Credits / ECTS Credits
LAW 402	Commercial Law IV	3 / 5
LAW 405	International Human Rights Law	3 / 4
LAW 406	International Business law	3 / 4
LAW 408	Competition Law	2 / 4
LAW 410	Enforcement and Bankruptcy Law	3 / 5
LAW 414	Labour Law II	3 / 4
	Elective(1)	2 / 4

ELECTIVES

LAW 351	American Law of Contracts	2 / 4
LAW 353	Environmental Law	2 / 4
LAW 354	Modern Contracts Law	2 / 4
LAW 355	History of Turkish Law	2 / 4
LAW 356	Comparative Private Law	2 / 4
LAW 357	Introduction to Anglo-American Law	2 / 4
LAW 359	Comparative Private Law	2 / 4
LAW 360	Public Finance	2 / 4
LAW 365	Legal Philosophy	2 / 4
LAW 366	Legal Sociology	2 / 4
LAW 368	American Law of Contracts	2 / 4
LAW 370	Comparative Constitutional Law	2 / 4
LAW 372	Gender and Law	2 / 4
LAW 420	International Commercial Arbitration	2 / 4
LAW 421	Internet Law	2 / 4
LAW 422	Maritime Law	2 / 4
LAW 423	Law of Capital Markets	2 / 4
LAW 424	EU Substantive Law	2 / 4
LAW 425	Forensic Medicine	2 / 4
LAW 426	Comparative Labour Law in the EU	2 / 4

LAW 427	Citizenship and Foreigners Law	2 / 4
LAW 429	Comparative Industrial Relations in the EU	2 / 4
LAW 430	Financial Institutions Law	2 / 4
LAW 431	Law of Carriage	2 / 4
LAW 432	Corporate Governance	2 / 4
LAW 433	Urban Development Law	2 / 4
LAW 434	Budget Law	2 / 4
LAW 435	The Legal Framework of Social Dialogue	2 / 4
LAW 436	The Evolution of Turkish Labour Relations and Labour Law	2 / 4
LAW 438	Case Study: Civil Proceedings	2 / 4
LAW 439	Law and Literature	2 / 4
LAW 441	Monetary Law	2 / 4
LAW 442	Law of Carriage	2 / 4
LAW 445	Advertising Law	2 / 4
LAW 446	Advertising Law	2 / 4
LAW 447	Moot Court I	2 / 2
LAW 448	Moot Court II	2 / 2
LAW 449	Protection of Cultural Heritage	2 / 4
LAW 451	Moot Court III	2 / 4
LAW 452	Moot Court IV	2 / 4
LAW 491	Selected Topics in Turkish Law I	3 / 4
LAW 492	Selected Topics in Turkish Law II	3 / 4

GRADUATE PROGRAM

Law and Economics

The rapid improvement of the relationship between law and economics brought multidisciplinary studies into the centre of 21st century legal education and practice. In todays world, where interaction between law and economics has become clearer under the light of the developments in relation to globalisation, the need for experts, who not only know the legal framework of market economy well, but also can comprehend the economic effects of legal rules and analyze the economic sides of different legal regimes, is growing. In order to meet this need, it is important to train university degree holders in economics as well as law.

Recent and rapid approximation of the objectives of law and economics that had been considered totally diverse academic fields for many years indicates some important points about the relationship between law and economics. Investors require experts, who can interpret the legal rules by taking economic points of view into consideration and comment on a certain economic behaviour in the contexts of different legal systems, rather than standard legal consultancy. Competition Law and the Law of Economic Regulation are the most significant ones of the law fields prominent regarding this perspective.

Main purpose of the LL.M. Programme of Bilkent Law Faculty is to provide students with expertise on the legal framework of market economy as well as in the fields of Competition Law and Economic Regulation and with ability to adopt the interaction between law and economics in modern practice of these disciplines.

CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
LAW 501	Economics Analysis and Law	3 / 6
LAW 503	Economics of Competition	3 / 6
LAW 505	Economics Regulation and Law	4 / 6
LAW 507	Public Economic Law	2 / 6
LAW 509	Term Project	- / -

Spring Semester		Credits / ECTS Credits
LAW 504	Competition Law	3 / 5
LAW 506	Energy Policy and Law	3 / 5

LAW 508	Telecommunications Law	3 / 5
LAW 510	Banking Regulation Law	3 / 5
LAW 520	Capital Markets and Market Abuse	3 / 4
	Elective	3 / 4

ELECTIVES

LAW 524	Banking and Criminal Law	3 / 4
LAW 526	Negotiation of Flexibility	3 / 4
LAW 528	International Law and Economics	3 / 4
LAW 530	Unfair Competition	3 / 4
LAW 534	Patent Law	3 / 4

COURSE DESCRIPTIONS

UNDERGRADUATE COURSES

LAW 101 Introduction to Law
Law and social order; the sources of law and the hierarchy of the norms; characteristics of common law and the continental legal systems; main branches of public and private law; organisation of the Turkish judicial system; the application of norms and the methods of interpretation; transactions and rights. (in Turkish) *Credit units: 3 ECTS Credit Units: 3. Aut (T. Akıllıoğlu, S. Çörtoğlu, H. Emiroğlu, H. Pınar)*

LAW 102 Roman Law
The subject of Roman Law and its importance in legal education; comparative study of Roman Law. Historical introduction and the sources of Roman Law. Law of persons and family law (slavery, citizens and non-citizens, the Roman family, corporations) Law of Actions - classification of actions, Law of Property (the law of things, classification of res, possession, ownership, modes of acquisition, servitudes, real securities). Law of Obligations: law of contracts (real, literal, verbal and consensual contracts); quasi contracts (condictio-negotiorum gestio); law of delicts (Furtum-Ratina-Iniuria-Damnum inuria datum); quasi delicts; transfer and discharge of obligations. (in Turkish) *Credit units: 3 ECTS Credit Units: 3. Spr (H. Emiroğlu)*

LAW 103 Constitutional Law I
This course deals with the general principles of constitutional law, Ottoman- Turkish constitutional developments, and the structure and functioning of the Turkish constitutional system based on the 1982 constitution. Particular attention will be given to questions of constitutional justice. (in Turkish) *Credit units: 3 ECTS Credit Units: 5. Aut (E. Göztepe Çelebi, E. Özbudun)*

LAW 104 Constitutional Law II
This course will deal with the structure and functions of governmental institutions in Turkey with special emphasis on constitutional justice. (in Turkish) *Credit units: 3 ECTS Credit Units: 5. Spr (E. Göztepe Çelebi, E. Özbudun, H. S. Türk)*

LAW 105 Civil Law-I: Introduction to Civil Law-Basic Concepts-Law of Persons
Subject matter, historical background, sources and application of civil law. Basic Concepts: Right, acquisition of rights and legal transactions; good faith (bonafides); protection of rights. Natural Persons: Beginning and end of personality, capacities, protection of personality. Legal Persons. (in Turkish) *Credit units: 3 ECTS Credit Units: 5. Aut (M. A. Erten, O. B. Gürzumar, C. Koçhisarlıoğlu)*

LAW 106 Civil Law II: Family Law
Law of Marriage: Engagement (the legal nature, conditions for a valid engagement, legal effects of engagement, end of engagement); marriage (the legal nature, conditions for a valid marriage, general legal effects of marriage and matrimonial property systems, dissolution of marital bond and its legal consequences); legitimacy (affinity); establishment of legitimacy, adoption, annulment of legitimacy, recognition, paternity suit, legal effects of legitimacy and especially the parental power (patria potestas). Family in broader sense. Guardianship (guardianship in technical sense, curatorship, statutory advisors). (in Turkish) *Credit units: 3 ECTS Credit Units: 5. Spr (M. A. Erten, C. Koçhisarlıoğlu)*

LAW 201 Law of Obligations I
Concepts of “obligational relationship” and “obligation”, sources of obligations, formation and validity of legal transactions; particularly contracts, representation, torts and unjust enrichment. (in Turkish) *Credit units: 3 ECTS Credit Units: 6. Aut (V. Buz, E. Kuntalp)*

LAW 202 Law of Obligations II
Performance of obligations, violation of obligations and its consequences, cease of obligations and some specialties related to obligations; namely conditional obligation, joint obligation, transfer of debt and assignment of obligation. (in Turkish) *Credit units: 3 ECTS Credit Units: 5. Spr (V. Buz, E. Kuntalp)*

LAW 203 Criminal Law I
Legality, sources and application of the criminal laws. General theory of crime; elements of a crime. *Actus reus* and defenses; superior orders, necessity. *Mens rea* and crimes of negligence; mistake and ignorance of the laws. (in Turkish) *Credit units: 3 ECTS Credit Units: 6. Aut (T. Katoğlu, S. Selçuk, N. Toroslu)*

LAW 204 Criminal Law II
Different aspects of a crime; accompliance, assistance after the offence, criminal attempt. Criminal responsibility; infancy, insanity. Theories of punishment; nature of punishment. Consequences and suspension of punishment. Amnesty. New perspectives in criminal law. (in Turkish) *Credit units: 3 ECTS Credit Units: 5. Spr (T. Katoğlu, S. Selçuk, N. Toroslu)*

LAW 205 Administrative Law I
Basic political and legal principles of Turkish administrative law. Structural and functional aspects of central and local administrations. Rule-making power of administration. Unilateral administrative acts and contracts. Legal regime of public personnel and public domain. (in Turkish) *Credit units: 3 ECTS Credit Units: 6. Aut (T. Akıllıoğlu, T. Tan)*

LAW 206 Administrative Law II
Basic principles of judicial control of administration. Organization of administrative courts and Council of State. Judicial remedies (action for annulment and full remedy action). Liability of the administration and its agents. (in Turkish) *Credit units: 3 ECTS Credit Units: 5. Spr (T. Akıllıoğlu, T. Tan)*

LAW 208 Basic Concepts of Law
Introduction to legal terminology, translation of legal texts, definition and analysis of legal terms. *Credit units: 2 ECTS Credit Units: 3. Spr (A. E. Gürbüz Usluel)*

LAW 301 Civil Procedure I
Courts' structure, competence and venue, status of the plaintiff and the defendant, filing the lawsuit, submissions exchange, the trial, investigation, oral trial and judgment. (in Turkish) *Credit units: 3 ECTS Credit Units: 5. Aut (M. Atalı)*

LAW 302 Civil Procedure II
The proof of claims, burden of proof, evidence, legal remedies, intermediate appeal and appeal procedures, arbitration. (in Turkish) *Credit units: 3 ECTS Credit Units: 5. Spr (M. Atalı)*

LAW 303 Public International Law
This course offers a survey of a branch of law dealing with the normative factor of international relations the source of which are the international agreements and international customary law. Topics include also the jurisdictional aspects of international law and the settlement of disputes. (in Turkish) *Credit units: 3 ECTS Credit Units: 5. Aut (S. H. Başeren, K. Başlar)*

LAW 304 Private International Law
A course offering an insight into the conflict of laws, international procedure law. (in Turkish) *Credit units: 3 ECTS Credit Units: 4. Spr (B. Tiryakioğlu)*

LAW 305 Civil Law III: Law of Property I
This course offers a study of possession and land register. (in Turkish) *Credit units: 3 ECTS Credit Units: 5. Aut (S. Çörtoğlu, C. Koçhisarlıoğlu, L. Sirmen)*

LAW 306 Civil Law III: Law of Property II
This course offers a study of ownership and limited real rights (servitudes, mortgage, pledge and land charges). (in Turkish) *Credit units: 3 ECTS Credit Units: 5. Spr (S. Çörtoğlu, C. Koçhisarlıoğlu, L. Sirmen)*

LAW 307 Commercial Law I
This course offers a comprehensive study of law of commercial enterprises. (in Turkish) *Credit units: 3 ECTS Credit Units: 5. Aut (Z. Aytaç)*

LAW 308 Commercial Law II
This course deals with law of partnerships and corporations. (in Turkish) *Credit units: 3 ECTS Credit Units: 3. Spr (Z. Aytaç, Ç. Manavgat, H. Pınar)*

LAW 309 Law of Obligations (Special Part)
This course deals with certain types of classical agreements specifically regulated in Turkish Code of Obligations and various types of agreements a lawyer may be faced with in modern business life. (in Turkish) *Credit units: 2 ECTS Credit Units: 3. Aut (M. A. Erten, E. Kuntalp)*

LAW 351 American Law of Contracts
After a general and historical introduction, the course will cover standard topics such as the concept of consideration as a basis for enforceability of promises, formation of the contract through offer and acceptance, interpretation of contracts, impossibility, breach of contract and remedies. The course will employ the case-study method, and, as a result, students will develop case-reading and understanding skills that should be useful for any further study of the law of common-law systems. *Credit units: 2 ECTS Credit Units: 4. Aut (S. Utku)*

LAW 353 Environmental Law
A course offering a survey of the rules and regulations protecting the environment. (in Turkish) *Credit units: 2 ECTS Credit Units: 4. Aut (R. Keleş)*

LAW 354 Modern Contracts Law
This course deals with all legal aspects of contracts newly introduced to the legal field due to the increase in international relations, technological developments and globalization. (in Turkish) *Credit units: 2 ECTS Credit Units: 4. Spr (E. Kuntalp)*

LAW 355 History of Turkish Law
Jewish legal system, a brief overlook to European legal history, basic principles of Islamic Law, Ottoman legal institutions and the Romanisation of Ottoman Law from Tanzimat to 1926. *Credit units: 2 ECTS Credit Units: 4. Aut (İ. Ortaylı)*

LAW 356 Comparative Private Law
A study and comparative analysis of various legal systems, focusing on the main features of private law. *Credit units: 2 ECTS Credit Units: 4. Spr (C. Koçhisarlıoğlu)*

LAW 357 Introduction to Anglo-American Law
Anglo-American legal system in the global community; American legal profession; legal history of the Anglo-American legal system; the common law tradition; legislative power; statutory interpretation; federalism; use of precedent / stare decisis; the adversary process and jury trials; Bill of Rights; selected topics (torts; contracts; corporations, etc.) *Credit units: 2 ECTS Credit Units: 4. Aut (G. Gürkaynak)*

LAW 358 Criminal Law (Special Part)
Particular crimes as homicide, assault, sexual offences, theft and related offences, offences of damage to property, offences against constitutional and public order, public health, forgery. *Credit units: 2 ECTS Credit Units: 3. Spr (T. Katoğlu, N. Toroslu)*

LAW 359 Comparative Private Law
A study and comparative analysis of various legal systems, focusing on the main features of private law. *Credit units: 2 ECTS Credit Units: 4. Aut (H. Emiroğlu)*

LAW 360 Public Finance
This course investigates government activities, taxing and spending. The emphasis of the course will be microeconomic of analysis of expenditure and taxing activities. It covers topics as public goods, political economy and externalities. *Credit units: 2 ECTS Credit Units: 4. Spr (K. Mutluer)*

LAW 365 Legal Philosophy
After focusing on the relationship between law, philosophy and science, the scope and subject of legal philosophy is going to be determined. Then, the doctrine of natural law -the oldest legal school- will be analysed in accordance with its Greek origin and contractualists, while evaluating the criticism against legal philosophy on ground of being metaphysical under modern epistemology. Lastly, the concept of legal justice, as the natural consequence of legal positivism, which is alleged to represent scientificality and impartiality in legal theory, will be analysed. *Credit units: 2 ECTS Credit Units: 4. Aut (G. Uygur)*

LAW 366 Legal Sociology
Firstly, the sociological currents, which influenced and penetrated legal theory will be described as an introduction; while concentrating on the history and cultural reasoning of these currents, followed by a focus on the methodology and meaning of the sociological analysis of law, with references to the Introduction to Law course. Afterwards, the sources of law, which represent the biggest contribution of the sociological approach will be analysed, with a particular focus on the works of important scholars. Finally, reaching to a balanced sociological definition of law under the light of this information will be attempted. *Credit units: 2 ECTS Credit Units: 4. Spr (G. Uygur)*

LAW 368 American Law of Contracts
After a general and historical introduction, the course will cover standard topics such as the concept of consideration as a basis for enforceability of promises, formation of the contract through offer and acceptance, interpretation of contracts, impossibility, breach of contract and remedies. The course will employ the case-study method, and, as a result, students will develop case-reading and understanding skills that should be useful for any further study of the law of common-law systems. *Credit units: 2 ECTS Credit Units: 4. Spr (S. Utku)*

LAW 370 Comparative Constitutional Law
In this lecture seminar, the historical development of the modern constitutional state which is the result of the European law tradition will be taken on a comparative basis. Thus the foundations of the modern constitutional state will be considered within the context of the theory of constitution in which main characteristics and functions of the nation-state will be explored. The jurisprudence of the Turkish Constitutional Court on specific topics is to be held on a comparative way with some European constitutional courts. The European Union as a new form of political organization is discussed regarding its new constitutional problems and questions. *Credit units: 2 ECTS Credit Units: 4. Spr (E. E. Özcan)*

LAW 372 Gender and Law
This course examines the theoretical, historical, and empirical basis for gender in law, and how and when gender-based laws have changed over time. Specific topics covered include, for example, constitutional doctrines of equality and privacy, and state policies on family law, criminal responsibility, and domestic violence. This course will also consider whether the gender of legal actors (litigants, lawyers, judges) makes a difference in their reasoning or decision-making. *Credit units: 2 ECTS Credit Units: 4. Spr (G. Uygur)*

LAW 401 Commercial Law III
This course deals with the subjects of negotiable instruments law. (in Turkish) *Credit units: 3 ECTS Credit Units: 5. Aut (İ. Kırca, Ç. Manavgat)*

LAW 402 Commercial Law IV
This course deals with the subjects of insurance law. (in Turkish) *Credit units: 3 ECTS Credit Units: 5. Spr (K. Şenocak)*

LAW 403 Civil Law IV Inheritance Law
Intestate succession, testate succession, reserved portion. A course dealing with a branch of law which regulates the passage of rights and depts of a person at his death. (in Turkish) *Credit units: 3 ECTS Credit Units: 4. Aut (Ş. Akipek)*

LAW 405 International Human Rights Law
This course covers the general principles of international human rights law and deals especially with European Human Rights Convention and with some selected decisions of European Court of Human Rights. The definition of human rights, the basic mechanisms for enforcing human rights and the role of the political realities in promoting human rights are some of the topics. *Credit units: 3 ECTS Credit Units: 4. Spr (T. Akıllıoğlu, H. Kühne)*

LAW 406 International Business law
A course dealing especially with international business transactions. *Credit units: 3 ECTS Credit Units: 4. Spr (J. Kindl, G. Masch)*

LAW 407 Tax Law
This course comprises the principles of tax law, taxation process, income tax, corporation tax, value added tax, real estate tax, inheritance tax, tax penalties, conflicts of taxation and some other taxes in the Turkish system. (in Turkish) *Credit units: 3 ECTS Credit Units: 3. Aut (K. Mutluer)*

LAW 408 Competition Law
Competition law is the area of public law, which aims to enhance and preserve competitive conditions in markets. The main subjects given in this course are anti-competitive agreements and concerted practices, cases of abuse of dominant position, mergers and acquisitions, procedural rules applied in competition law practice. (in Turkish) *Credit units: 2 ECTS Credit Units: 4. Spr (G. Gürkaynak, O. B. Gürzumar)*

LAW 409 Intellectual Property Law
This course deals not only with copyright in a brief sense but also and especially with industrial property rights which represent a special importance such as patents, trademarks, geographical indications, industrial designs etc. *Credit units: 2 ECTS Credit Units: 3. Aut (H. Pınar)*

LAW 410 Enforcement and Bankruptcy Law
The organisation of execution office, court orders enforcement, forcing of payments of debts, order of payment, objection, sequestration, forced sale, enforcement for negotiable instruments and bankruptcy. (in Turkish) *Credit units: 3 ECTS Credit Units: 5. Spr (Staff)*

LAW 411 Criminal Procedure
This course deals with criminal procedure involving jurisdiction, evidence, burden of proof, commencement and conduct of proceedings, legal remedy (review). (in Turkish) *Credit units: 3 ECTS Credit Units: 3. Aut (T. Katoğlu, N. Toroslu)*

LAW 412 Labor Law I
The main subject matters of this course are introduction into the labour law, individual labour law, contracts of employment. (in Turkish) *Credit units: 3 ECTS Credit Units: 5. Aut (A. R. Işık)*

LAW 413 European Union Law
The distinctive characteristics of European Union Law (the supranational character, the direct application, the priority etc.); the sources of European Union Law (treaties, secondary norms, agreements, sui generis norms, complementary law); European Court of Justice (structure, competences, procedure). *Credit units: 3 ECTS Credit Units: 3. Aut (Staff)*

LAW 414 Labour Law II
First section of the course deals with collective agreements, second section covers collective labour disputes mediation, conciliation, arbitration as well as the law of strikes and lockouts. (in Turkish) *Credit units: 3 ECTS Credit Units: 4. Spr (A. R. Işık)*

LAW 420 International Commercial Arbitration
This elective course deals with general procedural rules of international arbitration (such as the rules of International Chamber of Commerce). *Credit units: 2 ECTS Credit Units: 4. Spr (Y. Ersoy)*

LAW 421 Internet Law
Comparative analysis of legal impacts of the Internet; particular focus on e-commerce, formation and validity of online contracts, protection of IP rights over the Internet, data protection, cyber-crimes, cross-border jurisdictional issues and Internet regulation. (in Turkish) *Credit units: 2 ECTS Credit Units: 4. Aut (C. Ünal)*

LAW 422 Maritime Law
This course covers especially the ship owners liability, the agreement of freight and maritime accidents. (in Turkish) *Credit units: 2 ECTS Credit Units: 4. Spr (K. Şenocak)*

LAW 423 Law of Capital Markets
This course deals with the rules and regulations being applied on the instruments and transactions in the capital market. (in Turkish) *Credit units: 2 ECTS Credit Units: 4. Aut (Ç. Manavgat)*

LAW 424 EU Substantive Law
This course deals with the treaties underpinning the EU, the institutional structure of the EU, the Law-making procedures of the EU. *Credit units: 2 ECTS Credit Units: 4. Spr (S. Baykal)*

LAW 425 Forensic Medicine
This course deals with the application of the medicine as an instrument of evidence. (in Turkish) *Credit units: 2 ECTS Credit Units: 4. Spr (A. R. Tümer)*

LAW 426 Comparative Labour Law in the EU
Social policy from Rome Treaty to today. EU Social model, and its legal framework; social dialogue the role of government and social partners. Social protection and social security systems. *Credit units: 2 ECTS Credit Units: 4.*

LAW 427 Citizenship and Foreigners Law
This course deals with law of citizenship and Foreigners. *Credit units: 2 ECTS Credit Units: 4. Aut (B. Tiryakioğlu)*

LAW 429 Comparative Industrial Relations in the EU
This course focuses on social policies and industrial relations in EU with special references to Turkey. From master and servant to individual employment relations and to collective bargaining, new trends: flexible work arrangements: job re-design, flexible time and place: telecommuting, learning and innovation. The key issues in HR management: leadership, pay for performance, effectiveness, technology. Social protection and social security systems. *Credit units: 2 ECTS Credit Units: 4.*

LAW 430 Financial Institutions Law
This course deals with an overview of the financial markets and financial instruments; economic and legal functions of financial institutions, regulatory approach to the financial institutions; financial institutions in EU law; categories and natures of the financial institutions; the public authorities like BRSA and CMB; comparative analysis of the financial institutions and main features of banks and securities firms. *Credit units: 2 ECTS Credit Units: 4. Spr (Ç. Manavgat)*

LAW 431 Law of Carriage
Provisions of the Turkish Commercial Code related to carriage of goods, Convention on the Contract for the International Carriage of Goods by Road (CMR), Warsaw Convention for the Unification of Certain Rules for International Carriage by Air (VK), Convention Concerning International Carriage by Rail and Uniform Rules Concerning the Contract for International Carriage of Goods by Rail (COTIF-CIM) and United Nations Convention on the International Mixed Carriage of Goods will be analysed. *Credit units: 2 ECTS Credit Units: 4.*

LAW 432 Corporate Governance
This course deals with the history, meaning, function and importance of corporate governance; policy; nature of rules; basic principles of corporate governance regarding protection of shareholders, equal treatment to shareholders, rights of stakeholders, responsibility of board members, independent directors, public disclosure and transparency; special corporate governance rules on capital markets law, banking law and the approach of the Draft Turkish Commercial Code. *Credit units: 2 ECTS Credit Units: 4. Spr (Ç. Manavgat)*

LAW 433 Urban Development Law
The basic aim of this (elective)Öcourse is to familiarize our students as future lawyers with necessary information about the objectives, scope,Ösources, and fundamental concepts and principles of Urban development Law. Principal methods of protecting urban environmental and cultural values through judicial and administrative institutions will also be emphasized in the course. Students will be equipped with knowledge concerning the basic institutions, legal instruments and fundamental characteristics of the systems of urban development and planning in Turkey and abroad. All topics will be analyzed in the light of the relevant decisions of the Constitutional Court, the Council of State andÖthe Administrative Courts. *Credit units: 2 ECTS Credit Units: 4. Aut (R. Keleş)*

LAW 434 Budget Law
Budget law, mainly covers two sections referring budget. The first section comprises history of budget, budgetary principals, the characteristics of a budget and budgetary systems etc, whereas the second part covers budget law, as well as the Turkish budget system, its preparation, its execution and its budget control in particular. Moreover, local government budget has been included in budget law. *Credit units: 2 ECTS Credit Units: 4. Spr (K. Mutluer)*

LAW 435 The Legal Framework of Social Dialogue
Social dialogue, the "making" of EU Labour Law. The need for EU initiatives on social issues: European social dialogue: core concepts and mechanisms; structural and functional legal analysis. Rights to share information, to be consulted, to decide jointly, to produce joint opinions. Tripartite and bipartite platforms for dialogue. *Credit units: 2 ECTS Credit Units: 4. Aut (A. R. Işık)*

LAW 436 The Evolution of Turkish Labour Relations and Labour Law
The course aims at giving students to study, in-depth, the most recent developments on flexibilisation in the Labour Relations and Law with references to the related ILO conventions and EU directives. Implementation of flexible work provisions: flexibility, job security, part-time work, a-typical work, on-call work, tele-work, temporary work will be the sub - themes of the contents. Flexibility, also will be reviewed through collective bargaining. *Credit units: 2 ECTS Credit Units: 4.*

LAW 438 Case Study: Civil Proceedings
The students are expected to analyse the case and reach to a decision in place of the Court of First Instance after they are provided with information on actual cases that passed through the appeal process before the Court of Cassation and all related documents of plea and evidence. Further discussions would be held regarding the appeal process, whether the competent Chamber would uphold the judgment and in case of quashing what would the General Civil Chamber decide if the Court of First Instance insists. Then the students are given the opportunity to test themselves by comparing their decisions with the actual decisions of the Court of Cassation. This course also aims to give basic information regarding practical aspects of legal profession from the point of view of both legal counsels and judges. *Credit units: 2 ECTS Credit Units: 4. Spr (M. H. Surlu)*

LAW 439 Law and Literature
This course concentrates on possible relationships between law and literature and seeks to explore visions of the law and justice in selected works of literature; to expose students to broad legal themes (Law and Morality, Law and Authority, Law and Freedom, Law and Punishment) as presented in selected novels, short stories, movies and essays. *Credit units: 2 ECTS Credit Units: 4. Aut (G. Uygur)*

LAW 441 Monetary Law
Contents of the Lecture are; Monetary Law and its sources. The concept of money (economic and legal aspect of money, functions of money, types of money), monetary system (the establishment of monetary system, national monetary system, international monetary system), money market (financial market in general, money market, money market intermediaries and money market instruments), monetary obligations (national currency obligations, foreign currency obligations). *Credit units: 2 ECTS Credit Units: 4. Aut (O. R. Günver)*

LAW 442 Law of Carriage
Provisions of the Turkish Commercial Code related to carriage of goods, Convention on the Contract for the International Carriage of Goods by Road (CMR), Warsaw Convention for the Unification of Certain Rules for International Carriage by Air (VK), Convention Concerning International Carriage by Rail and Uniform Rules Concerning the Contract for International Carriage of Goods by Rail (COTIF-CIM) and United Nations Convention on the International Mixed Carriage of Goods will be analysed. *Credit units: 2 ECTS Credit Units: 4.*

LAW 443 Foreign Investment Law
Courses include both international and national dimensions of foreign investment law. In international level courses focus on following subjects: The principles of international law about foreign investments from colonial period to this century, international protection of investments, international regulations in the field of foreign investments, international safeguards for taking foreign property/investments, international standards for expropriation and nationalization of foreign investment, and dispute settlement procedure in the field of foreign investments. In national level, courses include national investment regulations of Turkey, role of international conventions on protection and encouragement of foreign investments in Turkey. *Credit units: 2 ECTS Credit Units: 4. Aut (B. Tiryakioğlu)*

LAW 445 Advertising Law
Advertising regulations in the European Union, advertising under unfair competition law, consumer law and other laws in Turkey, misleading and comparative advertising, TV specific and product specific advertisement regulations, sanctions against unfair advertising and self-control mechanisms. *Credit units: 2 ECTS Credit Units: 4. Aut (H. Pınar)*

LAW 446 Advertising Law
Regulations over advertising in the European Union, advertising in the law of unfair competition and consumer, advertising in the other laws in Turkey, misleading advertising and comparing advertising, TV specific advertise regulations and product specific advertise regulations, sanction against unfair advertising and advertise self-control. *Credit units: 2 ECTS Credit Units: 4. Spr (H. Pınar)*

LAW 447 Moot Court I
The aim of the Moot Court Course is to help students to present a case, in a clear and convincing way, and to refute clearly and convincingly with good arguments, the case presented by the opposite party. The course is designed as a combination of tutorials and mooting. Course basically deals with the issues concerning International Commercial Arbitration. *Credit units: 2 ECTS Credit Units: 2. Aut (B. Tiryakioğlu)*

LAW 448 Moot Court II
The aim of the Moot Court Course is to help students to present a case, in a clear and convincing way, and to refute clearly and convincingly with good arguments, the case presented by the opposite party. The course is designed as a combination of tutorials and mooting. Course basically deals with the issues concerning International Commercial Arbitration. *Credit units: 2 ECTS Credit Units: 2. Spr (B. Tiryakioğlu)*

LAW 449 Protection of Cultural Heritage
This course focuses on the legal protection of cultural heritage and different legal remedies foreseen for that purpose. *Credit units: 2 ECTS Credit Units: 4. Aut (T. Katoğlu)*

LAW 451 Moot Court III
The aim of the Moot Court Course is to help students to present a case, in a clear and convincing way, and to refute clearly and convincingly with good arguments, the case presented by the opposite party. The course is designed as a combination of tutorials and mooting. Course basically deals with the issues concerning International Commercial Arbitration. *Credit units: 2 ECTS Credit Units: 4.*

LAW 452 Moot Court IV
The aim of the Moot Court Course is to help students to present a case, in a clear and convincing way, and to refute clearly and convincingly with good arguments, the case presented by the opposite party. The course is designed as a combination of tutorials and mooting. Course basically deals with the issues concerning International Commercial Arbitration. *Credit units: 2 ECTS Credit Units: 4.*

LAW 491 Selected Topics in Turkish Law I
Common law and statutes relating to business with special reference to contract law and sale of goods. The law relating to business organizations, and other areas of law relevant to commerce including banker and customer, hire purchase insurance and bankruptcy. The industrial law, the law concerning the contract of employment. Trade unions. Legal aspects of international trade. The process and function of governmental regulation of free enterprise. (Course open for students of the Faculty of Economics, Administrative and Social Sciences) (in Turkish) *Credit units: 3 ECTS Credit Units: 4. Aut (Ö. F. Erdem)*

LAW 492 Selected Topics in Turkish Law II
Regulation and de-regulation, financial markets and globalization of business. Access to world markets and related regulations. (Course open for students of the Faculty of Economics, Administrative and Social Sciences) (in Turkish) *Credit units: 3 ECTS Credit Units: 4. Spr (Ö. F. Erdem)*

LAW 493 Introduction to Law
This course is designed to acquaint students basic definitions, concepts, sources and branches of law. It covers wide range of topics including constitutional law, administrative law, public international law, civil law, property law and law of obligations. *Credit units: 2 ECTS Credit Units: 4. Aut (A. E. Gürbüz Usluel)*

GRADUATE COURSES

LAW 501 Economics Analysis and Law
Economic analysis of law (or the doctrine of law and economics) is in today's world considered the most influential thought in foreign legal systems. This course aims to introduce this legal thought to students and to explain them how it is to be applied in some basic fields of Turkish Law. Economic analysis of law can be defined as the application of economic theory (theories of behaviour) to the legal rules and institutions. In this context, some basic terminology like rational choice theory, economic efficiency, social welfare and Coase theorem will be explained in the first part of the course. In the second part, the method of economic analysis will be applied in criminal law, laws of corporal property, contracts, consumer protection and mainly torts. The course language is English. *Credit units: 3 ECTS Credit Units: 6. Aut (S. Dillbary, K. C. Sanlı)*

LAW 503 Economics of Competition
Competition law regulates the economic activities; but the operation of competition law has important differences from what is traditionally called legal regulation or regulation. The regulation has a nature peculiar to industry. Direct and regular determination of prices is related with product standards or barriers to entry to - exit from the market. Competition law, on the other hand, has application that covers the whole economy. It focuses on certain fundamental rules that aim good and efficient solutions for the society by enabling competitive interaction

among firms. Interventions of authorities and proceedings, which may come into question in case of violation of these fundamental competition rules, are exceptional in nature. The main goal of this course is to introduce the theoretical approaches and basic techniques of economic analysis to graduate students in Turkey, where subjects of competition law and policy have developed parallel to the progressions in EU. The course language is English. *Credit units: 3 ECTS Credit Units: 6. Aut (H. B. Karabudak)*

LAW 504 Competition Law

Main theme of this course is substantive competition law concerning the related topics of public and private law. Thus, conditions for an act of an undertaking to become subject of administrative and private law sanctions because of being in violation of competition law will be elaborated. Decisions of Turkish Competition Authority, Turkish Council of State, European Union Commission, European Court of Justice and, as far as sufficient, American Supreme Court are to be discussed. While examining the consequences of competition breaches in private law related decisions of Turkish Court of Cassation and foreign supreme courts will also be considered. The adequateness of the sanctions with regard to competition economy and policy and the relationship between competition law and economic regulation are other important subjects of the course. *Credit units: 3 ECTS Credit Units: 5. Spr (G. Gürkaynak, O. B. Gürzumar)*

LAW 505 Economics Regulation and Law

This course has four main parts: In the first part, information about basic pricing theory will be given and the essential terminology that is going to be used in the other parts will be explained. In the second part, traditional approaches in regulation law, which focus on the relationship between market defects and regulation, will come into question. In the third part, it will be examined together with the results of positive regulation theory how the relationship between regulation and politic processes forms the law of regulation. In the fourth part, the methods of application of regulation in related markets will be analysed. The course language is English. *Credit units: 4 ECTS Credit Units: 6. Aut (Ş. Ardıyok, S. Peltzman)*

LAW 506 Energy Policy and Law

In this course, legal aspects of Electricity, Natural Gas, Petroleum and LPG services and activities as the main research topics of the energy sector and the powers of Turkish Energy Market Regulatory Authority (EMRA) are going to be studied. In this context, for each sector licence, tariff and monitoring mechanisms will be examined. The differences between current legal statuses arose within new regulations and the previous regulations and legal problems of the transition period going are to be assessed. Thereto relevant decisions of EMRA and current situation of competition complications within the energy sector will be analysed from a legal perspective. *Credit units: 3 ECTS Credit Units: 5. Spr (Ş. Ardıyok)*

LAW 507 Public Economic Law

In this course, the characteristics and sources of 'public economic law' that can be briefly defined as the law of the state intervention in the economy will be examined. In the second part of the course, the fundamental principles of public economic law, like right to property, freedom of enterprise and rule of law will be explained. In the third part, public organisation in the economy area will come into question. In the fourth part the public law framework of the market economy as well as the transition period from interventionist state to regulatory state (incentive granting state) will be examined. Main subjects of the fifth part are the privatisation of public economic enterprises, the legal mechanisms of public-private partnership in public services and the regulation of sectors. *Credit units: 2 ECTS Credit Units: 6. Aut (T. Tan)*

LAW 508 Telecommunications Law

This course is composed of two parts. Topics that are going to be studied in the first part are: (i) Basic terms and concepts of telecommunications, history of telecommunications law and economic substances of telecommunications regulations, (ii) Comparative study of European Union Communications Law and Turkish telecommunications regulations especially about access and interconnection, universal service obligations and privacy, (iii) Intercourse of telecommunications law and regulations with other codes and especially the competition law, (iv) Attitudes in Turkish and European Union regulations and basics of Turkish telecommunications regulation in the context of telecommunications law's future. In the second part, legal framework of access and interconnection arrangements is going to be examined. *Credit units: 3 ECTS Credit Units: 5. Spr (İ. Selçuk)*

LAW 509 Term Project

Term project is a non-credit program activity stipulated by the Regulation for Graduate Education of The Council of Higher Education for the post-graduate programs with no thesis. The students are required to be successful at the term project in order to obtain the Diploma. Within this activity, the students should accomplish a research project, internship and a similar assignment under the supervision of an academic instructor and submit their projects in the form of a written report or a research document to the related academic instructor. Subject of the project: It should be related to one of the first-term courses. The project supervisor can be any of the academic instructors lecturing at the program. *Credit units: None ECTS Credit Units: None. Aut (Staff)*

LAW 510 Banking Regulation Law

Banks have a major importance in the economics of a country. Fulfilling the functions of the banks, especially accepting small amounts of money for deposit and directing this source towards credits for the development

of the country, is very crucial for economic welfare. Profitable functioning of banking services depends on the regulation of this sector by an independent regulatory agency. This task lies within the responsibility of Banking Regulation and Supervision Agency (BRSA) in Turkey. BRSA is an independent regulatory agency, of recent date, given extensive supervision powers of banking services performs its duties within the terms of Banking Law. Legal grounds of the powers of BRSA, how these powers should be exerted and their legal consequences are going to be examined in this course. *Credit units: 3 ECTS Credit Units: 5. Spr (E. Kuntalp)*

LAW 520 Capital Markets and Market Abuse

In this course, first market and price formation mechanisms, then breaches in these mechanisms, insider trading and manipulation acts are going to be examined under the heading “Abuse of Capital Markets and Regulation Approach”. Subsequently transition to the market oriented approach and the principles of the EU Directive No. 2003/6 and its regulation approach are going to be analysed. Price formation mechanisms should be introduced in the survey of market-oriented approach. At this point, financial theories of efficient markets and conduct explaining price formation mechanisms in legal and financial terms are going to be studied and the term abuse of the market is going to be outlined. All in all, sanctions applied in case of abuse of the market are going to be examined market oriented and appropriateness of these sanctions is going to be discussed in accordance with criminal and legal liability. *Credit units: 3 ECTS Credit Units: 4. Spr (Ç. Manavgat)*

LAW 524 Banking and Criminal Law

Dimensions of criminal regulations of banking activities and types of related criminal offences are within the scope of this course. In this context, definitions of criminal offences especially in terms of Banking Law No. 5411, Law of Bank and Credit Cards No. 5464 and Turkish Criminal Code No. 5237, which guarantee the organization of banking activities and safeguard the interests of banks and customers, are going to be studied. Criminal liability of governors and employees of the banks, Banking Regulation and Supervision Agency (BRSA) and the Savings Deposit Insurance Fund (SDIF) are also going to be considered.

Credit card applications by using misleading information or document, forgery in credit cards or bankcards according to Law of Bank and Credit Cards are within the framework of this course. Criminal offences such as bank fraud or fraud by bank employees; fraud by Internet and IT, bank and credit cards theft or forgery will also be elaborated in this course. *Credit units: 3 ECTS Credit Units: 4. Spr (T. Katoğlu, N. Toroslu)*

LAW 526 Negotiation of Flexibility

This course discusses the extent to which the labour market is becoming more flexible, as well as the role which collective bargaining is playing, or can’t play, in the process of introducing this flexibility in its widest meaning including bipartite and tripartite negotiations at the national, sectoral, enterprise and shop-floor levels. Main topics of the course are : Types of flexibility (pay, working time and work organization flexibility); means of flexibility (legislation, collective bargaining, contracts of employment, employers? unilateral action); the role of the state and the bargaining structure; the position of the social partners; outcomes of negotiations over flexibility; some basic issues concerning trade-offs in flexibility bargaining at the central, sectoral and enterprise levels; over job security, redundancy alternatives, working-time and workers? life styles; shorter hours to expand employment. The course language is English. *Credit units: 3 ECTS Credit Units: 4. Spr (A. R. Işık)*

LAW 528 International Law and Economics

International Law and Economics is going to be considered as a fragment of International Law and in this context, International Law principles are going to be examined that directly affect the international economic relations. Special attention will be given to the topics such as new international economic order, effect of nationalization, protection of the environment, immunity of the state and international sanctions. Besides, bilateral economic relations among states, the role of international organizations in international economic relations, the United Nations, GATT and International Monetary Fund are going to be taken into account. Furthermore, individual in International Law and Economics, rights of the state, property rights of foreigners, international investment and the resolution of disputes in international investment as well as the use of economic power as a sanction in international relations are the topics that will be examined. The course language is English. *Credit units: 3 ECTS Credit Units: 4. Spr (S. H. Başeren)*

LAW 530 Unfair Competition

Regulation of the unfair competition law in the European Union, in Switzerland, in Germany and in Turkey; relation to the other right zone, especially to the competition law and law of the intellectual property; faithfully and belief; confusion, protection of know-how and against the abuse of fabrication secrets or business secrets; non-observance of work conditions; specials cases of the unfair competition through advertising, sponsorship; sanction in the right of the unfair competition and consumer right. *Credit units: 3 ECTS Credit Units: 4. Spr (H. Pınar)*

LAW 534 Patent Law

This class will provide an introduction to patent law and patent systems. Although U.S. patent law and cases will be the central focus, the class will also cover the international patent system as a whole, and consider the patent laws of other jurisdictions. Substantive topics will include the patent system as a social contract, the requirements for patentability, patent disputes and litigation, the interface of patent law and competition law, the

international patent system, and technology transfers and licensing. The class will use the case method, which will require students to be prepared to discuss assigned cases in class. *Credit units: 3 ECTS Credit Units: 4. Spr (S. Utku)*

FACULTY OF MUSIC AND PERFORMING ARTS

Işın Metin, Ph.D., Acting Dean
Selahattin Kağan Korad, Asst. Dean

The Faculty of Music and Performing Arts comprises two academic departments:

- Music
- Performing Arts

Bilkent University Faculty of Music and Performing Arts was founded in 1986 as one of the first three faculties of the University. With the exception of the state conservatories, it is the first faculty in Turkey offering higher education in the fields of music and performing arts.

The Music Department of the Faculty offers training in most artistic fields, including composition, piano, string and wind instruments, as well as opera and rhythmic music. The Theater department offers programs in acting, directing and opera directing.

The Faculty, aims to train artists who are creators, interpreters, educators and researchers in their respective fields, to take part in and contribute to international events and to provide an environment for creativity, interpretational excellence and research.

A pioneer in its work methods in Turkey, the Faculty of Music and Performing Arts is fast becoming an "International Art Center" with its programs ranging from preschool to proficiency in art (Doctor of Musical Arts) and its professional ensembles and artistic organizations. Among some activities of the Faculty are the Early Music Training Program, Music Preparatory Primary and High Schools, the Bilkent Youth Symphony Orchestra, Bilkent Youth Choir, the Bilkent Youth Theater, the Bilkent Symphony Orchestra and the Bilkent International Anatolian Music Festival.

The public and universal identity of art necessitates the early and dynamic integration of art education with the society and the international art world. Aiding the appreciation of music in Turkey and actively participating and contributing to the artistic world nationally and internationally, are among the primary objectives of the Faculty.

ACADEMIC STAFF

Feruza Abdullaeva, Instructor
M.M., Violin, Bilkent University, 1999. Principle Second Violin, BSO.

Seyran Ahundzade, Instructor
B.M., Violin, Azerbaijan State Conservatory, 1978. Member, BSO.

Selen Akçora, Instructor
M.M., Clarinet, Bilkent University, 1998. Member, BSO.

Selçuk Akyol, Instructor
D.M.A., Oboe, Robert Schumann Hochschule, 2006.

Davut Ali, Instructor
B.M., Violin, Erivan State Conservatory, 1985. Member, BSO.

Gökçe Altay, Instructor
M.A., Composition, Electro Acoustic, Codarts Rotterdam, 2006.

Giorgi Antadze, Instructor
B.A., Acting, S. Rustaveli Georgian State Theater Institute, 1963. Directing.

Ebru Naile Aykal, Instructor
M.M., Flute, Bilkent University, 1998. Member, BSO.

Gürer Aykal, Adjunct Professor
D.M.A., Conducting, Santa Cecilia Academy of Music, 1973. “State Artist” Republic of Turkey, 1981. Conducting.

Adelya Azikeyeva Ateşoğlu, Instructor
B.M., Violin, Tashkent State Conservatory, 1999. Member, BSO.

Adilhoca Aziz, Instructor
B.M., Violin, Tashkent State Conservatory, 1978. Member, BSO.
Gülnara Aziz, Instructor
D.M.A., Aspirantura, Piano, Moscow "Tchaikovsky" State Conservatory, 1979.
Adil Babacan, Instructor
D.M.A., Aspirantura, Violencello, Azerbaijan State Conservatory, 1987. Member, BSO.
Viktoriya Babaeva, Instructor
B.M., Oboe, "Gnesin" State Institute of Music Education, 1987. Member, BSO.
Rasim Bağırov, Instructor
B.M., Violin, Azerbaijan State Conservatory, 1977. Member, BSO.
Suzana Bezhani, Instructor
B.M., Violin, "Tirana" National Academy of Fine Arts, 1979. Member, BSO.
Boris Bubnov, Instructor
B.M., Viola, Tashkent State Conservatory, 1973. Member, BSO.
Cavid Cafer, Instructor
B.M., Viola, Moscow "Tchaikovsky" State Conservatory, 1983. Principle Viola, BSO.
Mahir Cetiz, Instructor (on leave)
M.M., Composition Memphis University, 2001. D.M.A., Proficiency in Art, Diploma of Postgraduate Studies in Professional Composition, Royal Northern College of Music, 2003.
Nezihe Nil Cetiz, Instructor
M.M., Violin, Bilkent University, 2004. Member, BSO.
Halide Hande Dalkılıç, Instructor
D.M.A., Proficiency in Art, Piano, Bilkent University, 2003.
Süreyya Defne, Instructor
M.M., Violin, Bilkent University, 1995. Member BSO.
Elif Enacar Baykal, Instructor
M.M., Chamber Music, Bilkent University, 1995.
Zaliha Didem Erken, Instructor
M.M., Violoncello, İstanbul Technical University, 2001. M.M.Ed., Victoria Conservatory, 2003. D.M.A., Bilkent University, 2008. Member, BSO.
Deren Eryılmaz Pöğün, Instructor
M.M., Piano Performance Başkent University , 2007. B.M, Hogeschool vor Musiek en dans Rotterdam, 2007.
Nugzar Gachava, Instructor
D.M.A., Acting, S. Rustaveli Institute of Theater and Cinema.
Shalva Gagua, Instructor
B.M., Double Bass, "Tbilisi" State Conservatory, 1980. Member, BSO.
Dritan Gani, Instructor
B.M., Double Bass, State Academy of Fine Arts, Tirana, 1989. Member, BSO.
Sarvar Ganiev, Visiting Professor
D.M.A., Aspirantura, Moscow "Tchaikovsky" State Conservatory, 1963. "Peoples Artist" Azerbaijan Government, 1982. Concertmaster BSO.
Nermina Ganieva, Instructor
B.M., Piano, Azerbaijan State Conservatory, 1986.
Toğroul Ganioğlu, Instructor
D.M.A., Aspirantura, Violin, Azerbaijan State Conservatory, 1993. Concertmaster, BSO.
Salim Gayıblı, Instructor
D.M.A., Aspirantura, Violoncello, Azerbaijan State Conservatory, 1980. Member, BSO.
Elena Gnezdilova, Instructor
B.M., Viola, Leningard State Conservatory, 1981. Member, BSO.

Cüneyt Gökçer, Visiting Professor
D.M.A., Acting, Ankara State Conservatory, 1942. “State Artist” Republic of Turkey.
Marina Agapova Görmüşoğlu, Instructor
M.M., Violin, Bilkent University, 1997. Member, BSO.
Ferhat Gülmehmet, Instructor
B.M., Violin, Leningard State Conservatory, 1970. Member, BSO.
Cem Güngör, Instructor
B.M., Trombone, Hacettepe University, 2002. Principle Trombone BSO.
Sema Celil Hakioğlu, Instructor
M.M., Viola, Bilkent University, 1998. Member, BSO.
Hajredin Hoxha, Instructor
B.M., Violoncello, “Tirana” Institute of Fine Arts, 1982. Principle Violoncello, BSO.
Elena Hristova, Instructor
M.M., Choral Conducting, Sofia State Conservatory, 1968. Conductor, “Bilkent Youth Choir”.
Nusret İspir, Instructor
M.M., Clarinet, Conservatoire Régional de Musique de Rouen, 1996. Principle Clarinet, BSO.
Mert Karabey, Instructor
D.M.A., Proficiency in Art, Composition, Bilkent University, 2003.
Gamze Kırtıl, Instructor
D.M.A., Piano, “Diplome Superieur Concertiste de Musique” Ecole Normale de Musique de Paris "Alfred Cortot" 2004. “Diplome de Pedagogy” E.N.M.P 2001.
Krassimir Koniarov, Instructor
B.M., Trumpet, State Academy of Music, Sofia, 1990. Member, BSO.
Selahattin Kağan Korad, Assistant Professor
D.M.A., Proficiency in Art, Classic Guitar, Bilkent University, 2001.
Füsun Köksal, Instructor (on leave)
D.M.A., Proficiency in Art, Composition, Hochschule Für Musik, Cologne, 2000. Proficiency in Art Tonsatz, Hochschule Für Musik, Cologne, 2002. Composition and Orchestration, Form and Musical Analysis.
Peter Körner, Instructor
D.M.A., Konzertexamen - Doctor Arbeit, Trombone, Hochschule für Musik, München, 2002. Member, BSO.
Vseslava Kudinova, Instructor
D.M.A., Violin, Bilkent University, 2007. Member, BSO.
Elif Onay, Instructor
M.M., Viola, Bilkent University, 2004. Member, BSO.
Bahar Kutay, Instructor
M.M., Violin, Bilkent University, 1995. Member, BSO.
Julian Lupu, Instructor
B.M., Trumpet, “Iasi” Academy of Music, 1992. Principle Trumpet, BSO.
Violeta E. Lupu, Instructor
B.M., Oboe, Music Pedagogy, “Iasi” Academy of Music, 1993. Member, BSO.
Sergei Margulis, Instructor
B.M., Double Bass, Moscow “Tchaikovsky” State Conservatory, 1993. Principle Double Bass, BSO.
Aydın Mecid, Instructor
M.M., Percussion, Azerbaijan State Conservatory, 1990. Principle Percussion, Inspector, BSO.
Alexey Medvedev, Instructor
B.M., Trombone, Moscow “Tchaikovsky” State Conservatory, 1990. Member, BSO.

İrşad Mehmet, Instructor
B.M., Viola, Azerbaijan State Conservatory, 1981. Member, BSO.
Işın Metin, Assistant Professor
D.M.A., Proficiency in Art, Composition, Bilkent University, 2000.
Leonid Mironiouk, Instructor
M.M., Horn, Leningrad "Petrozavodsky" State Conservatory, 1979. Member, BSO.
Arif Möhsünoğlu, Instructor
M.M., Violin, Azerbaijan State Conservatory, 1984. Member, BSO.
Tsotne Nakashidze, Instructor
B.A., Acting, "S. Rustaveli" Georgian State Institute of Theater.
Raguim Namazov, Instructor
M.M., Percussion, Azerbaijan State Conservatory, 1994. Member, BSO.
İrina Nikotina, Instructor
D.M.A., Aspirantura, Violin, Moskow Tchaikovsky State Conservatory, 1986. Member, BSO.
Maria Nowotna, Instructor
M.M., Theory, Instrument Pedagogy, Lodz Music Academy, 1983.
Burak Noyan, Instructor
M.M., Double Bass, Bilkent University, 2007. Member, BSO.
İskander Okeev, Instructor
M.M., Violin, "Gnessin" State Institute of Music, 1986. Member, BSO.
Ersin Onay, Professor
D.M.A., "Diplome Superieur Concertiste de Musique" Ecole Normale de Musique de Paris "Alfred Cortot", 1973.
Gülsin Onay, Artist in Residence
D.M.A., "Diplome Superieur Concertiste de Musique" Ecole Normale de Musique de Paris "Alfred Cortot".
Verda Özel, Instructor
M.M., Violoncello, Bilkent University, 1998. Member, BSO.
Eda Özer, Instructor
D.M.A., Proficiency in Art, Bilkent University, 2007. Member, BSO.
Albena Petrova, Instructor
M.M., Flute, Sofia State Music Academy, 1995. Principle Flute BSO.
Elena Postnova, Instructor
D.M.A., Proficiency in Art, Violin, Bilkent University, 1998. Member, BSO.
Turgut Fahri Pöğün, Instructor
M.M., Composition, Hogeschool voor Muziek, 2004. D.M.A., Bilkent University, 2008.
Artur Rahmatulla, Instructor
M.M., Violoncello, Moscow "Tchaikovsky" State Conservatory, 1982. Member, BSO.
Sardor Rasulov, Instructor
M.M., Violoncello, Moscow "Tchaikovsky" State Conservatory, 1982. Member, BSO.
Uluğbek Rishi, Instructor
B.M., Viola, Tashkent State Conservatory, 1985. Member, BSO.
Elena Rykhsiyeva, Instructor
B.M., Violin, Tashkent State Conservatory, 1986. Member, BSO.
Sekina Saidova, Instructor
M.M., Viola, Moscow "Tchaikovsky" State Conservatory, 1973. Member, BSO.
Teymur Shamsiyev, Instructor
D.M.A., Aspirantura, Piano, Azerbaijan State Conservatory, 1983.

Shota Skhirtladze, Instructor
B.A., Acting, S. Rustaveli Georgian State Theater Institute, 1958. Acting, stage, movement.
Svetlana Smolina, Instructor
B.M., Viola, Tashkent State Conservatory, 1986. Member, BSO.
Stiliana Stavreva Markova, Instructor
M.M., Flute, Sofia National Academy of Music, 1983.
Lyubomira Aleksandrova Subasheva, Instructor
B.M., Choral Conducting, Sofia State Conservatory, 1984.
Emre Şen, Instructor
M.M., Concert Performance-Piano, Royal College of Music, London, 2004.
Andrey Trifonov, Instructor
M.M., Diploma, Tuba, Moscow "Tchaikovsky" State Conservatory, 1985. Member, BSO.
Zurab Tsitsuashvili, Instructor
M.M. Double Bass, Tbilisi State Conservatory, 1993. Member, BSO.
Muhammedjan Turdiev, Instructor
M.M., Violin, Moscow "Tchaikovsky" State Conservatory, 1981.
Onur Türkmen, Instructor
D.M.A., Composition, I.T.U. Center for Advanced Resarch Musical, 2008.
Yiğit Ülgen, Instructor
D.M.A., Proficiency in Art, Violoncello, Bilkent University, 1999. Member, BSO.
Sadaget Velibekova, Instructor
B.M., Piano, Azerbaijan State Conservatory.
Leonid Volkov, Instructor
M.M., Clarinet, Moscow "Tchaikovsky" State Conservatory, 1993. Member, BSO.
Klaus Weise, Professor
Music director and resident conductor, D.M.A., Folkwang Hochschule für Musik, Essen, 1970.
Rafig Zamanov, Instructor
B.M., Violin, Azerbaijan State Conservatory, 1977. Member, BSO.
Zita Zempleni, Instructor
B.M., Flute, "Ferenc Liszt" Academy of Music, 1980. Member, BSO.
Vladimir Zverev, Instructor
D.M.A., Aspirantura, Clarinet, Moscow "Tchaikovsky" State Conservatory, 1978.

VOCATIONAL SPECIALISTS

Guram Apkhazava
B.S., Tbilisi University, Georgia, 1969. Translator.
Leonard Chelov
B.M., Violoncello, Leningrad State Conservatory, 1966. Piano Tuning.
Anzor Shamugia
B.S., Tbilisi State University, Faculty of Geography and Geology. Translator.

PART-TIME ACADEMIC STAFF

Cem Akçora, D.M.A., Proficiency in Art, Horn, 1998.
Sevcan Akıncı, Ph.D., Science Specialist, Institute of Science of Education, Education of Fine Arts, Ankara University, 2002.
Füsun Ataman, B.A., Ankara University, 2001. History of Theatre.
Lemi Bilgin, M.A., Acting, Ankara State Conservatory, 1980.
Johan Botka, B.M., Diplôme, Piano, Conservatoire National Supérieur du Paris.
Gürçil Çeliktaş, B.M., Dilôme Prix d'Excellence, Direction du Régie, Département du Val de Marne, Union des Conservatoires de Musique, de Danse et d'Art Dramatique, 1978.
Keriman Davran, D.M., Singing, Hacettepe University, 1984.
Serklana Gani, M.M., "Tiran" Higher Institute of Fine Arts, 1990.

Zeliha Meral Gökoğlu, B.M., Singing, Ankara State Conservatory, 1974. Ankara State Opera and Balet, Singing.
Engin Güngördü, M.M., Bassoon, Hacettepe University, 1998.
Dimitar Stefanov Hristov, M.A., Higher Institute of National Economy, 1970. Librarian BSO.
Sukün Işıtan, B.A., Acting, Bilkent University, 1998.
Ayşe Kaptan Sayın, M.M., Piano, Bilkent University, 2005.
Erdal Küçükkömürcü, B.A., Directing, Ankara State Conservatory, 1981.
İlke Malkoç, M.M., Piano, Hogeschool voor de Kunsten Utrecht Faculteit Musiek, 2005.
Fazlı Orhun Orhon, M.M., Composition, Bilkent University, 2004.
Elif Önal Çubukçu, M.M., Piano, İstanbul State Conservatory, 2000.
Ahmet Muhlis Partal, B.A., Management, Gazi University, 1990. Movement-Tai-Chi.
Ahmet Sinan Pekinton, B.A., Voice and Speech, Ankara State Conservatory, 1983.
Nino Skhvitaridze, B.M., Musicology and Theory of Music, Tbilisi “V. Saracisvili” Conservatory 1986.
Ayşe Gülüm Sürmen, B.M., Piano, Hacettepe University, 2002.
Gölge Şekeranber, B.M., Singing, Ankara State Conservatory, 1973.
Fürüzan Tercan, B.A., Acting, Ankara University, 1975. Dramaturgy.
Sema Tuğsal, Make-UpThe Park School of Beauty Therapy, 1982.
Osman Uzgören, B.A., Anadolu University Faculty of Economy, 1988, Ligthing.
Oya Ünler Bayka, M.M., Piano, Ecole Normale de Musique de Paris, 1981.

DEPARTMENT OF MUSIC

I. Metin (Chair), F. Abdullaeva, S. Ahundzade, S. Akçora, S. Akyol, D. Ali, G. Altay, E. N. Aykal, G. Aykal, A. Azikeyeva Ateşoğlu, A. Aziz, G. Aziz, A. Babacan, V. Babaeva, R. Bağırov, S. Bezhani, B. Bubnov, C. Cafer, M. Cetiz, N. N. Cetiz, H. H. Dalkılıç, S. Defne, E. Enacar Baykal, Z. D. Erken, D. Eryılmaz Pöğün, S. Gagua, D. Gani, S. Ganiev, N. Ganieva, T. Ganioğlu, S. Gayıblı, E. Gnezdilova, M. A. Görmüşoğlu, F. Gülmehmet, C. Güngör, S. C. Hakioğlu, H. Hoxha, E. Hristova, N. İspir, M. Karabey, G. Kırtıl, K. Koniarov, S. K. Korad, F. Köksal, P. Körner, V. Kudinova, E. Onay, B. Kutay, J. Lupu, V. E. Lupu, S. Margulis, A. Mecid, A. Medvedev, İ. Mehmet, L. Mironiouk, A. Möhsünoğlu, R. Namazov, İ. Nikotina, M. Nowotna, B. Noyan, İ. Okeev, E. Onay, G. Onay, V. Özel, E. Özer, A. Petrova, E. Postnova, T. F. Pöğün, A. Rahmatulla, S. Rasulov, U. Rishi, E. Rykhsiyeva, S. Saidova, T. Shamsiyev, S. Smolina, S. Stavreva Markova, L. A. Subasheva, E. Şen, A. Trifonov, Z. Tsitsuashvili, M. Turdiev, O. Türkmen, Y. Ülgen, S. Velibekova, L. Volkov, K. Weise, R. Zamanov, Z. Zempleni, V. Zverev.

Part-time: C. Akçora, L. Bilgin, J. Botka, G. Çeliktaş, K. Davran, S. Gani, Z. M. Gökoğlu, E. Güngördü, D. S. Hristov, A. Kaptan Sayın, İ. Malkoç, F. O. Orhon, E. Önal Çubukçu, N. Skhvitaridze, A. G. Sürmen, G. Şekeranber, O. Ünler Bayka.

The Faculty's departments are today internationally renowned for their excellence in education, international artistic ensembles and activities. Since it's founding the main objective has been to train artists, educators and researchers with high creative and interpretative skills in various fields of music.

In addition to the undergraduate and graduate programs, preparatory primary and high schools for music were also founded with the aim of starting music education at the earliest possible age. In order to expand music education to everyone, regardless of age and profession, programs such as the Early Music Training Program for children and "Part-time Music Education" have been ongoing since its founding. The Institute of Music and Performing Arts was established to provide graduate education through its Master's and Proficiency in Art (doctorate) level programs.

The Music Department offers Bachelor of Music-B.M., Master of Music-M.M, Proficiency in Art/Doctor of Music-D.M.A. degrees in the following programs and fields;

Theory and Composition Option - B.M., M.M., D.M.A.
Music Theory, Composition.

Instrument Option - B.M., M.M., D.M.A.
Piano, Classical Guitar, Percussion,
Violin, Viola, Violoncello, Double Bass,
Flute, Oboe, Clarinet, Bassoon, Horn, Trumpet, Trombone, Tuba.

Singing Option - B.M., M.M.

Amongst numerous artistic activities of the faculty are the "International Chopin Piano Competition" 1999 and the "International Theater Meeting" 1998. Since 2001, the students of the music department won many prizes in national and international competitions including "Sarasate", "Palmeres 30. Concours International de Musique et d'Art Sonore Electroacoustiques", IBLA, Charles B. Olson Young Composers Competition. In 2003, the Bilkent Youth Choir won a gold medal in the 21st International Preveze Choir Contest and achieved the runner-up position in the 33rd Florilege Vocal de Tours 2004 competition in France.

Bilkent Symphony Orchestra

The Bilkent Symphony Orchestra was founded in September 1993 as an original artistic project of the Bilkent University, developed by the Faculty of Music and Performing Arts, the orchestra is

composed of experienced artists in the Faculty from various countries as well as Turkish and foreign young artists, who continue their studies at "masters" and "proficiency in art" (doctorate) levels, at the Institute. With these characteristics the Bilkent Symphony Orchestra, consisting of 90 proficient artists from 12 different countries, is the first private, academic and international artistic group in Turkey.

Starting as a "Sinfonietta" the Symphonic orchestra now has the identity of an "Ensemble of Orchestras" comprising the "Bilkent Chamber Orchestra" and an "Ensemble of String Instruments". With a minimum of 50 concerts a year and the participation of Turkish and foreign conductors, soloists and choirs, the ensemble of Orchestras has distinguished itself through the recording, television and radio broadcasting of its numerous performances. Through events such as "Bilkent Concert Series", "Turkish Composers Week", "Education Concerts" and "The Bilkent Anatolia Music Festival", the orchestra aims to bring a wide range of activities to large audiences; to spread the appreciation of music at the national level through its tours; to undertake international activities and develop cooperation with institutions abroad organizing such events; to help gain permanent academic staff at the Faculty; and to form a bridge of artistic communication with other countries.

Along these objectives the orchestra has toured to Italy, Germany, Belgium, Portugal, Switzerland and recently to Japan. The orchestra has recorded over 40 CD's with labels such as BMP and EMI.

UNDERGRADUATE PROGRAMS

COMPOSITION OPTION

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
ENG 101	English and Composition I	3 / 6
GE 100	Orientation	1 / 1
MSC 101	Department Seminar I	- / -
MSC 111	Composition I	5 / 6
MSC 113	Orchestration I	2 / 4
MSC 171	Techniques and Materials of Tonal Music I	3 / 7
MSC 173	History of Western Music I	3 / 6
MSC 181	Ear Training I	3 / 6
MSC 183	Keyboard Skills I	2 / 3

Spring Semester		Credits / ECTS Credits
ENG 102	English and Composition II	3 / 6
MSC 100	Concert/Recital I	- / -
MSC 102	Department Seminar II	- / -
MSC 112	Composition II	5 / 6
MSC 114	Orchestration II	2 / 4
MSC 172	Techniques and Materials of Tonal Music II	3 / 7
MSC 174	History of Western Music II	3 / 6
MSC 182	Ear Training II	3 / 6
MSC 184	Keyboard Skills II	2 / 3

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
HCIV 101	History of Civilization I	3 / 6
MSC 201	Department Seminar III	- / -
MSC 211	Composition III	5 / 6
MSC 213	Orchestration III	2 / 4
MSC 271	Techniques and Materials of Tonal Music III	3 / 7
MSC 273	History of Western Music III	3 / 6
MSC 281	Ear Training III	3 / 6
MSC 283	Keyboard Skills III	2 / 3

Spring Semester		Credits / ECTS Credits
HCIV 102	History of Civilization II	3 / 6
MSC 200	Concert/Recital II	- / -

MSC 202	Department Seminar IV	- / -
MSC 212	Composition IV	5 / 6
MSC 214	Orchestration IV	2 / 4
MSC 272	Techniques and Materials of Tonal Music IV	3 / 7
MSC 274	History of Western Music IV	3 / 6
MSC 282	Ear Training IV	3 / 6
MSC 284	Keyboard Skills IV	2 / 3

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
HISTR 201	History of Turkish Republic I	2 / 1
MSC 301	Department Seminar V	- / -
MSC 311	Composition V	5 / 6
MSC 315	Score Reading I	3 / 5
MSC 321	Polyphony and Fugue	3 / 5
MSC 323	Form and Analysis I	3 / 6
MSC 373	History of 20th Century Music	3 / 6
	Elective Language	3 / 6

Spring Semester		Credits / ECTS Credits
HISTR 202	History of Turkish Republic II	2 / 1
MSC 300	Concert/Recital III	- / -
MSC 302	Department Seminar VI	- / -
MSC 312	Composition VI	5 / 6
MSC 316	Score Reading II	3 / 5
MSC 322	Post - Tonal Music I	2 / 4
MSC 324	Form and Analysis II	3 / 6
MSC 326	Conducting I	2 / 4
MSC 374	Traditional Turkish Music and Divan Music	2 / 3
	Elective Language	3 / 6

FOURTH YEAR

Autumn Semester		Credits / ECTS Credits
MSC 401	Department Seminar VII	- / -
MSC 411	Composition VII	5 / 6
MSC 415	Score Reading III	3 / 5
MSC 421	Post - Tonal Music II	2 / 4
MSC 425	Conducting II	2 / 4
MSC 473	Contemporary Turkish Music	2 / 3
TURK 101	Turkish I	2 / 1
	Elective Language	3 / 6
	Elective (1)	3 / 6

Spring Semester		Credits / ECTS Credits
MSC 400	Graduation Project Concert	1 / 1
MSC 402	Department Seminar VIII	- / -
MSC 412	Composition VIII	5 / 6
MSC 416	Score Reading IV	3 / 5
TURK 102	Turkish II	2 / 1
	Elective Language	3 / 6
	Electives (2)	6 / 12

SINGING OPTION

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
ENG 101	English and Composition I	3 / 6
GE 100	Orientation	1 / 1

MSC 101	Department Seminar I	- / -
MSC 103	Orchestra/Chorus/Ensemble I	2 / 3
MSC 151	Singing Voice I	5 / 11
MSC 181	Ear Training I	3 / 6
MSC 183	Keyboard Skills I	2 / 3
THEA 181	Acting Techniques I-Singing	3 / 3
THR 103	Voice and Speech I	3 / -
	Elective Language Italian I	3 / 6

Spring Semester Credits / ECTS Credits

ENG 102	English and Composition II	3 / 6
MSC 100	Concert/Recital I	- / -
MSC 102	Department Seminar II	- / -
MSC 104	Orchestra/Chorus/Ensemble II	2 / 3
MSC 152	Singing Voice II	5 / 11
MSC 182	Ear Training II	3 / 6
MSC 184	Keyboard Skills II	2 / 3
THEA 182	Acting Techniques II-Singing	3 / 3
THR 104	Voice and Speech II	3 / -
	Elective Language Italian II	3 / 6

SECOND YEAR

Autumn Semester Credits / ECTS Credits

HCIV 101	History of Civilization I	3 / 6
MSC 171	Techniques and Materials of Tonal Music I	3 / 7
MSC 173	History of Western Music I	3 / 6
MSC 201	Department Seminar III	- / -
MSC 203	Orchestra/Chorus/Ensemble III	2 / 3
MSC 251	Singing Voice III	5 / 11
MSC 253	Opera Studies I	1 / -
MSC 281	Ear Training III	3 / 6
MSC 283	Keyboard Skills III	2 / 3
THR 105	Movement and Combat I	3 / -
	Elective Language Italian III	3 / 6

Spring Semester Credits / ECTS Credits

HCIV 102	History of Civilization II	3 / 6
MSC 172	Techniques and Materials of Tonal Music II	3 / 7
MSC 200	Concert/Recital II	- / -
MSC 202	Department Seminar IV	- / -
MSC 204	Orchestra/Chorus/Ensemble IV	2 / 3
MSC 252	Singing Voice IV	5 / 11
MSC 254	Opera Studies II	1 / -
MSC 282	Ear Training IV	3 / 6
MSC 284	Keyboard Skills IV	2 / 3
THR 106	Movement and Combat II	3 / -
	Elective Language Italian IV	3 / 6

THIRD YEAR

Autumn Semester Credits / ECTS Credits

HISTR 201	History of Turkish Republic I	2 / 1
MSC 271	Techniques and Materials of Tonal Music III	3 / 7
MSC 301	Department Seminar V	- / -
MSC 303	Orchestra/Chorus/Ensemble V	2 / 3
MSC 351	Singing Voice V	5 / 11
MSC 383	Keyboard Skills V	2 / 3
THR 205	Movement and Combat III	3 / -
	Elective Language German I	3 / 6

Spring Semester Credits / ECTS Credits

HISTR 202	History of Turkish Republic II	2 / 1
MSC 174	History of Western Music II	3 / 6

MSC 272	Techniques and Materials of Tonal Music IV	3 / 7
MSC 300	Concert/Recital III	- / -
MSC 302	Department Seminar VI	- / -
MSC 304	Orchestra/Chorus/Ensemble VI	2 / 3
MSC 352	Singing Voice VI	5 / 11
MSC 384	Keyboard Skills VI	2 / 3
THR 206	Movement and Combat IV	3 / -
	Elective Language German II	3 / 6

FOURTH YEAR

Autumn Semester		Credits / ECTS Credits
MSC 273	History of Western Music III	3 / 6
MSC 401	Department Seminar VII	- / -
MSC 403	Orchestra/Chorus/Ensemble VII	2 / 3
MSC 451	Singing Voice VII	5 / 11
MSC 453	Opera Studies III	1 / -
THR 314	Make Up for the Stage	3 / -
TURK 101	Turkish I	2 / 1
	Elective Language German III	3 / 6

Spring Semester		Credits / ECTS Credits
MSC 274	History of Western Music IV	3 / 6
MSC 400	Graduation Project Concert	1 / 1
MSC 402	Department Seminar VIII	- / -
MSC 404	Orchestra/Chorus/ Ensemble VIII	2 / 3
MSC 452	Singing Voice VIII	5 / 11
MSC 454	Opera Studies IV	1 / -
TURK 102	Turkish II	2 / 1
	Elective Language German IV	3 / 6

INSTRUMENT OPTION

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
ENG 101	English and Composition I	3 / 6
GE 100	Orientation	1 / 1
MSC 101	Department Seminar I	- / -
MSC 103	Orchestra/Chorus/Ensemble I	2 / 3
MSC 131	Instrument I	5 / 11
MSC 133	Chamber Music I	3 / 6
MSC 171	Techniques and Materials of Tonal Music I	3 / 7
MSC 173	History of Western Music I	3 / 6

Spring Semester		Credits / ECTS Credits
ENG 102	English and Composition II	3 / 6
MSC 100	Concert/Recital I	- / -
MSC 102	Department Seminar II	- / -
MSC 104	Orchestra/Chorus/Ensemble II	2 / 3
MSC 132	Instrument II	5 / 11
MSC 134	Chamber Music II	3 / 6
MSC 172	Techniques and Materials of Tonal Music II	3 / 7
MSC 174	History of Western Music II	3 / 6

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
HCIV 101	History of Civilization I	3 / 6
MSC 201	Department Seminar III	- / -
MSC 203	Orchestra/Chorus/Ensemble III	2 / 3
MSC 231	Instrument III	5 / 11

MSC 233	Chamber Music III	3 / 6
MSC 271	Techniques and Materials of Tonal Music III	3 / 7
MSC 273	History of Western Music III	3 / 6

Spring Semester Credits / ECTS Credits

HCIV 102	History of Civilization II	3 / 6
MSC 200	Concert/Recital II	- / -
MSC 202	Department Seminar IV	- / -
MSC 204	Orchestra/Chorus/Ensemble IV	2 / 3
MSC 232	Instrument IV	5 / 11
MSC 234	Chamber Music IV	3 / 6
MSC 272	Techniques and Materials of Tonal Music IV	3 / 7
MSC 274	History of Western Music IV	3 / 6

THIRD YEAR

Autumn Semester Credits / ECTS Credits

HISTR 201	History of Turkish Republic I	2 / 1
MSC 301	Department Seminar V	- / -
MSC 303	Orchestra/Chorus/Ensemble V	2 / 3
MSC 331	Instrument V	5 / 11
MSC 333	Chamber Music V	3 / 6
MSC 373	History of 20th Century Music	3 / 6
	Elective Language	3 / 6
	Elective	3 / 6

Spring Semester Credits / ECTS Credits

HISTR 202	History of Turkish Republic II	2 / 1
MSC 300	Concert/Recital III	- / -
MSC 302	Department Seminar VI	- / -
MSC 304	Orchestra/Chorus/Ensemble VI	2 / 3
MSC 332	Instrument VI	5 / 11
MSC 334	Chamber Music VI	3 / 6
MSC 374	Traditional Turkish Music and Divan Music	2 / 3
	Elective Language	3 / 6
	Elective	3 / 6

FOURTH YEAR

Autumn Semester Credits / ECTS Credits

MSC 401	Department Seminar VII	- / -
MSC 403	Orchestra/Chorus/Ensemble VII	2 / 3
MSC 431	Instrument VII	5 / 11
MSC 433	Chamber Music VII	3 / 6
MSC 473	Contemporary Turkish Music	2 / 3
TURK 101	Turkish I	2 / 1
	Elective Language	3 / 6
	Electives (2)	5 / 10

Spring Semester Credits / ECTS Credits

MSC 400	Graduation Project Concert	1 / 1
MSC 402	Department Seminar VIII	- / -
MSC 404	Orchestra/Chorus/ Ensemble VIII	2 / 3
MSC 432	Instrument VIII	5 / 11
MSC 434	Chamber Music VIII	3 / 6
TURK 102	Turkish II	2 / 1
	Elective Language	3 / 6
	Electives (2)	5 / 10

GRADUATE PROGRAM

The aim of the graduate program is to train professional artists in the areas of performance and creativity, and to prepare them for further development in the fields of music education, research

and musicianship. Candidates should possess a good undergraduate degree in one of the major subject areas and be successful in the entrance examination. Since 1997 the recording production of two compact discs comprising solo, accompanied and chamber repertoire per student has become mandatory for graduation. (Also refer to the “Graduate Admissions” section in the introduction of this catalog for the general graduate admission requirements.)

The students will have the opportunity to study and develop under the direction of internationally renowned Turkish and foreign artists at the Faculty, and to display the knowledge and experience they acquire in recitals and concerts. These public performances are organized by the Faculty of Music and Performing Arts to equip the student with advanced professional experience thereby widening their horizons in the artistic world.

CURRICULUM FOR THE MASTER OF MUSIC PROGRAM

COMPOSITION OPTION

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
MUS 543	Composition I	3 / -
MUS 547	Orchestration I	2 / -
MUS 549	Score Reading and Playing I	1 / -

Spring Semester		Credits / ECTS Credits
MUS 544	Composition II	3 / -
MUS 548	Orchestration II	2 / -
MUS 550	Score Reading and Playing II	1 / -
MUS 608	Twentieth Century Music	2 / -

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
MUS 651	Composition III	3 / -
MUS 653	Orchestration III	2 / -
MUS 655	Score Reading and Playing III	1 / -
MUS 877	Twentieth Century Music	2 / -

Spring Semester		Credits / ECTS Credits
MUS 652	Composition IV	3 / -
MUS 654	Orchestration IV	2 / -
MUS 656	Score Reading and Playing IV	1 / -
MUS 875	Modern Writing Techniques	2 / -

GRADUATION

MUS 600	Graduation Project	- / -

INSTRUMENT OPTION

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
MUS 519	Instrument I	3 / -
MUS 527	Chamber Music I	2 / -
MUS 536	Orchestra Repertoire I(String-Wind)	2 / -
MUS 545	Decipher I (Piano)	2 / -
MUS 615	Transcription I (Guitar)	2 / -

Spring Semester		Credits / ECTS Credits
MUS 520	Instrument II	3 / -
MUS 528	Chamber Music II	2 / -
MUS 537	Orchestra Repertoire II (String-Wind)	2 / -
MUS 546	Decipher II (Piano)	2 / -
MUS 616	Transcription II (Guitar)	2 / -

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
MUS 605	Orchestra Repertoire III (String-Wind)	2 / -
MUS 607	Instrument Training	2 / -
MUS 617	Instrument III	3 / -
MUS 619	Chamber Music III	2 / -
MUS 645	Decipher III (Piano)	2 / -
MUS 647	Transcription III (Guitar)	2 / -

Spring Semester		Credits / ECTS Credits
MUS 606	Orchestra Repertoire IV (String-Wind)	2 / -
MUS 618	Instrument IV	3 / -
MUS 620	Chamber Music IV	2 / -
MUS 646	Decipher IV (Piano)	2 / -
MUS 648	Transcription IV (Guitar)	2 / -

GRADUATION

MUS 600	Graduation Project	- / -

CHAMBER MUSIC OPTION

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
MUS 536	Orchestra Repertoire I(String-Wind)	2 / -
MUS 667	Instrument I	2 / -
MUS 671	Chamber Music Repertoire I	3 / -

Spring Semester		Credits / ECTS Credits
MUS 537	Orchestra Repertoire II (String-Wind)	2 / -
MUS 668	Instrument II	2 / -
MUS 672	Chamber Music Repertoire II	3 / -

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
MUS 605	Orchestra Repertoire III (String-Wind)	2 / -
MUS 607	Instrument Training	2 / -
MUS 669	Instrument III	2 / -
MUS 673	Chamber Music Repertoire III	3 / -

Spring Semester		Credits / ECTS Credits
MUS 606	Orchestra Repertoire IV (String-Wind)	2 / -
MUS 670	Instrument IV	2 / -
MUS 674	Chamber Music Repertoire IV	3 / -

GRADUATION

MUS 600	Graduation Project	- / -

SINGING OPTION

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
MUS 533	Stage I	1 / -
MUS 538	Singing I	3 / -
MUS 638	Movement I	1 / -

Spring Semester		Credits / ECTS Credits
MUS 534	Stage II	1 / -
MUS 539	Singing II	3 / -
MUS 635	Character and Techniques of Make-up	1 / -
MUS 637	Diction	2 / -
MUS 863	Movement II	1 / -

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
MUS 535	Mythology	2 / -
MUS 627	Singing III	3 / -
MUS 629	Stage III	2 / -
MUS 640	Dance I	2 / -
MUS 865	Foniatri	1 / -

Spring Semester		Credits / ECTS Credits
MUS 628	Singing IV	3 / -
MUS 630	Stage IV	2 / -
MUS 823	Dance II	2 / -

GRADUATION

MUS 600	Graduation Project	- / -

CURRICULUM FOR THE PROFICIENCY IN MUSIC PROGRAM
COMPOSITION OPTION
FIRST YEAR

Autumn Semester		Credits / ECTS Credits
MUS 828	Modern Writing Techniques	1 / -
MUS 851	Composition I	2 / -
MUS 853	Orchestration I	2 / -

Spring Semester		Credits / ECTS Credits
MUS 808	Research Methods	2 / -
MUS 852	Composition II	2 / -
MUS 854	Orchestration II	2 / -

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
MUS 985	Composition III	2 / -
MUS 987	Orchestration III	2 / -

Spring Semester		Credits / ECTS Credits
MUS 908	Twentieth Century Music	1 / -
MUS 986	Composition IV	3 / -
MUS 988	Orchestration IV	2 / -

GRADUATION

MUS 866	Graduation Project	- / -

INSTRUMENT OPTION

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
MUS 803	Chamber Music I	1 / -
MUS 824	Decipher I (Piano)	2 / -
MUS 878	Instrument I	2 / -
MUS 881	Orchestra Repertoire I (String-Wind)	1 / -
MUS 889	Transcription I (Guitar)	1 / -

Spring Semester		Credits / ECTS Credits
MUS 804	Chamber Music II	1 / -
MUS 808	Research Methods	2 / -
MUS 825	Decipher II (Piano)	2 / -
MUS 879	Instrument II	2 / -
MUS 882	Orchestra Repertoire II (String-Wind)	1 / -
MUS 890	Transcription II (Guitar)	1 / -

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
MUS 907	Program Development in Instrument Training	1 / -
MUS 913	Instrument III	2 / -
MUS 917	Chamber Music III	1 / -
MUS 921	Orchestra Repertoire III (String-Wind)	1 / -
MUS 927	Transcription III (Guitar)	1 / -

Spring Semester		Credits / ECTS Credits
MUS 908	Twentieth Century Music	1 / -
MUS 914	Instrument IV	3 / -
MUS 918	Chamber Music IV	1 / -
MUS 922	Orchestra Repertoire IV (String-Wind)	1 / -
MUS 928	Transcription IV (Guitar)	1 / -

GRADUATION

MUS 866	Graduation Project	- / -

CHAMBER MUSIC OPTION

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
MUS 872	Instrument I	1 / -
MUS 881	Orchestra Repertoire I (String-Wind)	1 / -
MUS 888	Chamber Music Repertoire I	2 / -

Spring Semester		Credits / ECTS Credits
MUS 808	Research Methods	2 / -
MUS 874	Instrument II	1 / -
MUS 882	Orchestra Repertoire II (String-Wind)	1 / -
MUS 960	Chamber Music Repertoire II	2 / -

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
MUS 876	Instrument III	1 / -
MUS 907	Program Development in Instrument Training	1 / -
MUS 921	Orchestra Repertoire III (String-Wind)	1 / -
MUS 996	Chamber Music Repertoire III	2 / -

Spring Semester		Credits / ECTS Credits
MUS 880	Instrument IV	1 / -
MUS 908	Twentieth Century Music	1 / -
MUS 922	Orchestra Repertoire IV (String-Wind)	1 / -
MUS 982	Chamber Music Repertoire IV	3 / -

GRADUATION

MUS 866	Graduation Project	- / -

SINGING OPTION

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
MUS 883	Singing I	2 / -
MUS 885	Stage I	1 / -

Spring Semester		Credits / ECTS Credits
MUS 808	Research Methods	2 / -
MUS 884	Singing II	2 / -
MUS 886	Stage II	1 / -

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
MUS 958	Singing III	2 / -
MUS 977	Stage III	1 / -
MUS 981	History of Opera	3 / -

Spring Semester		Credits / ECTS Credits
MUS 908	Twentieth Century Music	1 / -
MUS 959	Singing IV	3 / -
MUS 978	Stage IV	1 / -
MUS 997	Opera Directing	2 / -

GRADUATION

MUS 866	Graduation Project	- / -

COURSE DESCRIPTIONS

MSC 100 Concert/Recital I
Annual concert presenting works from fall and spring semesters. The event is arranged and held by students. *Credit units: None ECTS Credit Units: None. Aut (Staff)*

MSC 101 Department Seminar I
Organized with the contribution of faculty, students, guest speakers to aid students in developing skills on verbalizing music, following current trends in composition, learning to approach music from different perspectives, getting to meet living composers and hear them talk about their own music. *Credit units: None ECTS Credit Units: None. Aut (G. Altay, T. F. Pöğün, O. Türkmen)*

MSC 102 Department Seminar II
Credit units: None ECTS Credit Units: None, Prerequisite: MSC 101. Aut (Staff)

MSC 103 Orchestra/Chorus/Ensemble I
The FMPA orchestras are the Bilkent Youth Symphony Orchestra, The Bilkent Preparatory Symphony Orchestra and the Bilkent Youth Virtuosi. Students take part in one of the orchestras and are chosen to the Bilkent Youth Virtuosi. The course is realized with weekly rehearsals. Each orchestra rehearses an average of 84 hours per semester. The FMPA chorus is Bilkent Youth Chorus. Selected repertoire listing consisting of a-capella, accompanied, and cantata, oratorio, operatic forms to be performed progressively through weekly rehearsals. The Bilkent Youth Chorus rehearses an average of 56 hours per semester. The FMPA ensemble is the Bilkent Youth Chamber Music Ensemble consisting of a variety of performance majors from different tracks. Selected repertoire listings varying from baroque to contemporary music to be performed throughout the semesters. *Credit units: 2 ECTS Credit Units: 3. Aut (E. Hristova, I. Metin, F. O. Orhon)*

MSC 104 Orchestra/Chorus/Ensemble II
The FMPA orchestras are the Bilkent Youth Symphony Orchestra, The Bilkent Preparatory Symphony Orchestra and the Faculty Concert Strings. Students take part in one of the symphonic orchestras and are chosen to the Concert String Orchestra. The course is realized with weekly double rehearsals at the Bilkent Concert Hall. Each ensemble rehearses an average of 84 hours per semester. *Credit units: 2 ECTS Credit Units: 3, Prerequisite: MSC 103. Aut (E. Hristova, I. Metin, F. O. Orhon)*

MSC 111 Composition I
Introduction to composition. Single musical idea applications for choices of solo instruments. Composition dossier consisting of pieces with total duration no less than 5 minutes must include piece for piano solo. Students are expected to analyze their works before a jury at the final examination. *Credit units: 5 ECTS Credit Units: 6. Aut (T. F. Pöğün)*

MSC 112 Composition II
Compositions for small-scale chamber music ensembles such as duos or trios. Introduction to composing contrasting material from single musical ideas. Dossier of pieces with total duration no less than 5 minutes. Students are expected to analyze their works before a jury at the final examination. *Credit units: 5 ECTS Credit Units: 6, Prerequisite: MSC 111.*

MSC 113 Orchestration I
The orchestra, past and present. Ensemble structures of orchestras. Knowledge of instruments. Basic acoustic principles. The Divisions and subdivisions of the orchestral instruments according to various principles. Basic characteristics of the string, woodwind, brass and percussion section instruments. Detailed historic and technical inquiry into the characteristics of instruments belonging to these sections. Basics of scoring techniques. Bowed

string instruments, as group and individually. Plucked string instruments. Scoring for strings - transcription and instrumentation. *Credit units: 2 ECTS Credit Units: 4. Aut (F. O. Orhon)*

MSC 114 Orchestration II
The woodwind ensemble. Individual woodwinds. Scoring for woodwind and woodwind with string combinations. Introduction to Brass Instruments. Scoring for a pre-classical orchestra - transcription and instrumentation. *Credit units: 2 ECTS Credit Units: 4, Prerequisite: MSC 113.*

MSC 131 Instrument I
The course aims to help acquire the basic principles of professional interpretation through the establishment of professional study techniques. To help the students in finding their own true musical understanding. To guide them in using the right techniques on their instruments by the benefit of various schools and methods. Selected repertoire listing to be performed progressively throughout the semester. *Credit units: 5 ECTS Credit Units: 11. Aut (G. Aziz, E. Güngördü, P. Körner, E. Şen, M. Turdiev)*

MSC 132 Instrument II
The continuation of further studies on a new repertoire with the aim to achieve the artistic-technical goals presented in MUSS 101. *Credit units: 5 ECTS Credit Units: 11, Prerequisite: MSC 131. Aut (H. H. Dalkılıç, E. Gnezdilova)*

MSC 133 Chamber Music I
Score analysis, discussion and study of various composers' principal chamber works. Comparison of formal characteristics, scoring, and compositional practices. Performance of the repertoire consisting of baroque to pre-classic era with particular emphasis on the works of Boccherini, Hummel and Stamitz with various chamber ensembles consisting of various instruments. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

MSC 134 Chamber Music II
Analysis and application of the interpretative styles of the selected repertoire. Practices on the selected repertoire towards achieving unity and balance in performance. Pre-classic to classic repertoire consisting mainly of Haydn's early quartets, trios and Beethoven's duo and trios. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MSC 133. Aut (Staff)*

MSC 151 Singing Voice I
Credit units: 5 ECTS Credit Units: 11. Aut (K. Davran, Z. M. Gökoğlu, E. Hristova)

MSC 152 Singing Voice II
Credit units: 5 ECTS Credit Units: 11, Prerequisite: MSC 151.

MSC 171 Techniques and Materials of Tonal Music I
Aural and analytical skills necessary to define and analyse music composition and theory. Rudimentary theory, harmony, counterpoint and basic form. Terminology of music theory and some basic musical concepts, elements of music, musical composition as paradigm (rudimentary theory); basic principles of functional harmony, simple harmonic progressions, cadence types (harmony); introduction to modality and renaissance counterpoint in accordance with the species system (counterpoint). *Credit units: 3 ECTS Credit Units: 7. Aut (G. Altay)*

MSC 172 Techniques and Materials of Tonal Music II
Basics of diatonic harmony, diatonic modulation, secondary functions and non-chord tones (harmony); complete species system on renaissance counterpoint, counterpoint with mixed values and simple imitation techniques (counterpoint). *Credit units: 3 ECTS Credit Units: 7, Prerequisite: MSC 171.*

MSC 173 History of Western Music I
A general view of the content and frontiers of different periods in Western Music History. Music in Antiquity. The establishment of Christian Church in Europe and its effects on music. Roman Liturgy. The genesis of polyphony. Evolution of early sacred and secular genres.
Ars nova. Ars subtilior. The idea of Renaissance. La Contenance Angloise. Burgundy in the Fifteenth Century. Franco-Flemish Composers, 1450-1520. The impact of Reformation. Leading composers of the late sixteenth century. Instrumental music during the age of Renaissance. *Credit units: 3 ECTS Credit Units: 6. Aut (O. Türkmen)*

MSC 174 History of Western Music II
The genesis of the baroque idea. Florentine Camerata. Birth of Opera. Early baroque vocal music genres. Early baroque instrumental music genres. Development of early opera. Intermezzi. Jacopo Peri. Stile Recitativo. Monteverdi Operas. Opera in Rome, Venice and Naples in seventeenth century. Other vocal genres in the late seventeenth century. Development of keyboard music in the late seventeenth century. The evolution of sonata. Genesis of Orchestral Music during the late seventeenth century. The evolution of concerto. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MSC 173.*

MSC 181 Ear Training I
Definition of music. Fundamental properties of sound, elementary acoustics. Structural elements of music. Grammar and literature of music. Music notation: time and pitch, rhythm, meter, tempo, musical time, staff,

solfege syllables, accidentals, manuscript writing. Designation of pitch, duration, tempo, expressions and dynamics. Intervals, scales and modes. Polyphonic and harmonic approach. Chords. Designation of chords. Written and aural exercises on these subjects. Methods of musical dictation. Homophonic, polyphonic and rhythmic perception. Harmonic and formal perception. Dictation of difficult two period one-part, two-part and three-part 16 measure dictees containing mixed rhythms, syncopation, agogy; Homophonic style all the intervals with diatonic and chromatic modulation to relative keys. Basic reading skills. One part solo solfege. Sol and Fa keys. Introduction to collective solfege. The solo and collective musical reading and simultaneous sight singing of repertoire consisting of these musical criteria. *Credit units: 3 ECTS Credit Units: 6. Aut (E. Hristova, M. Nowotna, L. A. Subasheva)*

MSC 182 Ear Training II

Tonality and key feeling. Functions. Expression marks and terminology cont. Style, phrasing and articulation, abbreviations. Basic triads and their inversions. Seventh chords and their inversions. Ninth chords. Modulation. Secondary degrees. Melody writing. Symmetry and balance, metric structure, melodic cadences. Cadences. Introduction to the form in music. Transposition. Written and aural exercises on these subjects. Dictation of two very difficult two period one-part, two-part and three-part 16 measure dictees containing mixed rhythms, syncopation, agogy; Polyphonic style including all the intervals with diatonic and chromatic modulation to relative keys and modulation to remote keys. Moderate reading skills. Self accompanied solfege. Do keys. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MSC 181. Aut (M. Nowotna, L. A. Subasheva)*

MSC 183 Keyboard Skills I

Basic to intermediate skills of piano playing. Piano as an auxiliary instrument. Sight reading at the piano. Basic methods of realization as defined by O. Gartenlaub. Selected repertoire listing to be performed progressively throughout the semesters. *Credit units: 2 ECTS Credit Units: 3. Aut (E. Önal Çubukçu, A. G. Sürmen)*

MSC 184 Keyboard Skills II

Further study to enhance the skills gained in MUSS 251 on a new repertoire. *Credit units: 2 ECTS Credit Units: 3, Prerequisite: MSC 183. Aut (A. G. Sürmen)*

MSC 200 Concert/Recital II

A yearly recital project for the Instrument and Singing option students. May be given for spring or fall semesters of the senior undergraduate academic year. *Credit units: None ECTS Credit Units: None, Prerequisite: MSC 100. Aut (Staff)*

MSC 201 Department Seminar III

Credit units: None ECTS Credit Units: None, Prerequisite: MSC 102. Aut (Staff)

MSC 202 Department Seminar IV

Credit units: None ECTS Credit Units: None, Prerequisite: MSC 201. Aut (Staff)

MSC 203 Orchestra/Chorus/Ensemble III

The FMPA orchestras are the Bilkent Youth Symphony Orchestra, The Bilkent Preparatory Symphony Orchestra and the Faculty Concert Strings. Students take part in one of the symphonic orchestras and are chosen to the Concert String Orchestra. The course is realized with weekly double rehearsals at the Bilkent Concert Hall. Each ensemble rehearses an average of 84 hours per semester. *Credit units: 2 ECTS Credit Units: 3. Aut (E. Hristova, I. Metin, F. O. Orhon)*

MSC 204 Orchestra/Chorus/Ensemble IV

The FMPA orchestras are the Bilkent Youth Symphony Orchestra, The Bilkent Preparatory Symphony Orchestra and the Faculty Concert Strings. Students take part in one of the symphonic orchestras and are chosen to the Concert String Orchestra. The course is realized with weekly double rehearsals at the Bilkent Concert Hall. Each ensemble rehearses an average of 84 hours per semester. *Credit units: 2 ECTS Credit Units: 3, Prerequisite: MSC 203. Aut (E. Hristova, I. Metin, F. O. Orhon)*

MSC 211 Composition III

Composition for small-scale chamber music ensembles such as quartets. Analysis of similar structures from a broad chronology corresponding with own work. Dossier including completed works of contrasting and related musical ideas with total duration no less than 7 minutes. Students are expected to defend their works at the final jury in terms of intellectual approach, composition technique, orchestration, style, form and related criteria. *Credit units: 5 ECTS Credit Units: 6, Prerequisite: MSC 112. Aut (T. F. Pöğün)*

MSC 212 Composition IV

Composition for large-scale chamber music ensembles of at least five musicians. Dossier including completed works of at least one single movement with total duration no less than 10 minutes. Students are expected to defend their works at the final jury in terms of intellectual approach, composition technique, orchestration, style, form and related criteria. *Credit units: 5 ECTS Credit Units: 6, Prerequisite: MSC 211.*

MSC 213 Orchestration III

Individual brass instruments. Scoring for brass and brass combined with woodwinds and strings. The percussion ensemble. Individual orchestral and exotic percussion instruments. Keyboard instruments. Scoring for percus-

sion with keyboard instruments and combinations. *Credit units: 2 ECTS Credit Units: 4, Prerequisite: MSC 114. Aut (I. Metin)*

MSC 214 Orchestration IV
Scoring for orchestra. Analysis of various orchestration styles. Advanced scoring of orchestral sections. Basic scoring for double and triple orchestral formations. Contemporary techniques of instrumentation. The orchestra as accompanist. Transcribing for an orchestral ensemble. Scoring for band and/or wind ensemble. Orchestration. The score and parts. Orchestral transcription. Orchestration. *Credit units: 2 ECTS Credit Units: 4, Prerequisite: MSC 213. Aut (I. Metin)*

MSC 231 Instrument III
The course aims to develop musicality and mechanical facilities. To help gain an understanding for the compositional formations of the pieces by establishing a feel for form and harmonic fundamentals. To help the student acquire the habit of working on both the whole and the details of pieces thus establishing micro and macro understanding of the piece. Selected repertoire listing to be performed progressively throughout the semester. *Credit units: 5 ECTS Credit Units: 11, Prerequisite: MSC 132. Aut (E. Enacar Baykal, E. Gnezdilova, G. Kırtıl, S. K. Korad, J. Lupu)*

MSC 232 Instrument IV
The continuation of further studies on a new repertoire with the aim to achieve the artistic-technical goals presented in MUSS 103. *Credit units: 5 ECTS Credit Units: 11, Prerequisite: MSC 231. Aut (E. Şen)*

MSC 233 Chamber Music III
Performance of the classic era repertoire consisting of works by Beethoven, Mozart and Schubert. Group study on the pieces towards achieving professionalism in the technique of ensemble playing. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MSC 134. Aut (Staff)*

MSC 234 Chamber Music IV
Performance of the classic era repertoire consisting of works by Schubert and Beethoven. Group study on the pieces towards achieving brilliance in balance and unity of the ensemble. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MSC 233. Aut (Staff)*

MSC 251 Singing Voice III
Credit units: 5 ECTS Credit Units: 11, Prerequisite: MSC 152. Aut (E. Hristova)

MSC 252 Singing Voice IV
Credit units: 5 ECTS Credit Units: 11, Prerequisite: MSC 251.

MSC 253 Opera Studies I
Cornerstone works of opera repertoire are performed in collaboration with Bilkent Youth Symphony Orchestra. *Credit units: 1 ECTS Credit Units: None. Aut (G. Çeliktaş)*

MSC 254 Opera Studies II
Cornerstone works of opera repertoire are performed in collaboration with Bilkent Youth Symphony Orchestra. *Credit units: 1 ECTS Credit Units: None, Prerequisite: MSC 253.*

MSC 271 Techniques and Materials of Tonal Music III
Chromatic harmony, chromatic modulation, introduction to mode mixtures and complex progressions of secondary functions (harmony); baroque counterpoint, imitation techniques, invention and fugue (counterpoint). *Credit units: 3 ECTS Credit Units: 7, Prerequisite: MSC 172. Aut (G. Altay, L. A. Subasheva)*

MSC 272 Techniques and Materials of Tonal Music IV
Mode mixtures, enharmonic spellings and modulation to further regions, complex harmonic progressions and further elements of harmonic regions (harmony); basic formal concepts, period, sentence, small ternary and binary forms (form and analysis). *Credit units: 3 ECTS Credit Units: 7, Prerequisite: MSC 271.*

MSC 273 History of Western Music III
Jean-Baptiste Lully. Henry Purcell and early opera in England. Singspiel. Handel Operas. Jean-Philippe Rameau. Early eighteenth century music in Italy and France. German composers of the late Baroque. The age of enlightenment and early classical period. Italian Opera Buffa in the early classical period. Pergolesi and the Querelle des Bouffons. Opra Comique. Ballad Opera. Opera Seria. Christoph Willibald Gluck and the opera reform. The evolution of the symphony. Haydn. The general comprehension of the classical form. Operas of the classical period. Mozart. Mozart Operas. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MSC 174. Aut (O. Türkmen)*

MSC 274 History of Western Music IV
Beethoven. The romantic generation. Opera trends in the nineteenth century. Beethoven's Fidelio. Grand Opera, Opra Comique, Operetta, Lyric Opera. Hector Berlioz. Chamber and orchestral musical innovations of the nineteenth century. Nineteenth century Italian Opera. Verdi Operas. Birth of romantic German Opera. Richard Wagner. The German, Austrian and French composers of the late nineteenth century. Romanticism and

church music. French naturalism in Opera. Verismo opera. Nationalism in music and its new trends during late nineteenth century. Operas of Richard Strauss. Debussy's Pelleas et Melisande. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MSC 273.*

MSC 281 Ear Training III
Principles of theoretical analysis. Melodic elaboration. Altered chords and chromaticism. Modulation cont. Style and music. Modes (antique, national etc.) Musical media and special designations. Written and aural exercises on these subjects. Dictation of difficult two period one-part, two-part, three part and four-part 16 measure dictees containing mixed rhythms, syncopation, agogy; Homophonic style including all the intervals with diatonic and chromatic modulation to relative keys and modulation to remote keys. Intermediate reading skills. Mixed keys. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MSC 182. Aut (M. Nowotna, N. Skhvitaridze, L. A. Subasheva)*

MSC 282 Ear Training IV
Twentieth century materials of music. Designations. Graphic notation. Recapitulation of music theory subjects. Colloquium. Written and aural exercises on these subjects. Dictation of very difficult two period one to four-part 16 measure dictees containing mixed rhythms, syncopation, agogy; Polyphonic style including all the intervals with diatonic and chromatic modulation to relative keys, modulation to remote keys, enharmonic modulation. Advanced reading skills. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MSC 281.*

MSC 283 Keyboard Skills III
Progress of the skills acquired in the previous year. Progress of technique. The use of piano as an auxiliary instrument. Selected repertoire listing to be performed progressively throughout the semester. *Credit units: 2 ECTS Credit Units: 3, Prerequisite: MSC 184. Aut (A. G. Sürmen)*

MSC 284 Keyboard Skills IV
Basic to intermediate skills of piano playing. Piano as an auxiliary instrument. Sight reading at the piano. Basic methods of realization as defined by O. Gartenlaub. Selected repertoire listing to be performed progressively throughout the semesters. *Credit units: 2 ECTS Credit Units: 3, Prerequisite: MSC 283.*

MSC 297 History of Opera I
Opera as an art form. Effects that influenced the preparation of opera and initial performances. Theatre and Music in Antique Art. Primitive marks of Opera in the Middle Ages. First impressions of opera in Renaissance. Monteverdi-Venetian Opera in the 17th century. Naples Opera styles. National Opera establishment in France, Germany and England. Opera Comic in the 18th century. Opera creation by Gluck and Mozart. Opera in the 19th century. Musical characteristics of romanticism. Opera in Germany: C.M. von Weber. Opera in Italy: C. Rossini, V.Bellini, G.Donizetti. Opera in France: C. Meyerbeer, H. Berlioz. Opera in Russia: Glinka, Dargomijski. Opera in Poland: Moniuska. *Credit units: 2 ECTS Credit Units: 2.*

MSC 298 History of Opera II
The formation of new musical-theatre genres in French Art. Offenbach, a classic in French operetta Lyric Drama Gounod, Massenet, Bizet. Opera in Italy: Verdi. Opera in Russia: Tchaikovsky and members of the "Russian Five" union. Mussorgsky, Borodin, Rimsky-Korsakov. Opera in Czechoslovakia: B. Smetana, Dworak. Opera at the end of the 19th century and the beginning of the 20th century. French Music culture "Impressionism": Debussy, Ravel. Germany: Strauss and Late Romanticism. The "New Vienna School", Schoeneberg, Berg and Webern. Italian Opera: "Verismo" Mascagni, Leoncavallo and Puccini. Opera in Hungary, Bartok. Opera in Spain: M. de Falla. Opera in England: Britten. *Credit units: 2 ECTS Credit Units: 2, Prerequisite: MSC 297.*

MSC 300 Concert/Recital III
Credit units: None ECTS Credit Units: None, Prerequisite: MSC 200. Aut (Staff)

MSC 301 Department Seminar V
Credit units: None ECTS Credit Units: None, Prerequisite: MSC 202. Aut (Staff)

MSC 302 Department Seminar VI
Credit units: None ECTS Credit Units: None, Prerequisite: MSC 301. Aut (Staff)

MSC 303 Orchestra/Chorus/Ensemble V
The FMPA orchestras are the Bilkent Youth Symphony Orchestra, The Bilkent Preparatory Symphony Orchestra and the Faculty Concert Strings. Students take part in one of the symphonic orchestras and are chosen to the Concert String Orchestra. The course is realized with weekly double rehearsals at the Bilkent Concert Hall. Each ensemble rehearses an average of 84 hours per semester. *Credit units: 2 ECTS Credit Units: 3, Prerequisite: MSC 204. Aut (E. Hristova, I. Metin, F. O. Orhon)*

MSC 304 Orchestra/Chorus/Ensemble VI
The FMPA orchestras are the Bilkent Youth Symphony Orchestra, The Bilkent Preparatory Symphony Orchestra and the Faculty Concert Strings. Students take part in one of the symphonic orchestras and are chosen to the Concert String Orchestra. The course is realized with weekly double rehearsals at the Bilkent Concert Hall. Each ensemble rehearses an average of 84 hours per semester. *Credit units: 2 ECTS Credit Units: 3, Prerequisite: MSC 303. Aut (E. Hristova, I. Metin, F. O. Orhon)*

MSC 311 Composition V
Vocal music composition and/or large chamber music ensemble consisting of at least eight musicians. Analysis of similar structures from a broad chronology corresponding with own work as well as current trends in composition. Dossier including completed work(s) with total duration no less than 15 minutes. Students are expected to defend their works at the final jury in terms of intellectual approach, composition technique, orchestration, style, form and related criteria. *Credit units: 5 ECTS Credit Units: 6, Prerequisite: MSC 212. Aut (Staff)*

MSC 312 Composition VI
As the core of composition studies in general becomes apparent at this stage, composition for large-scale music ensembles with an emphasis on achieving own original musical language is expected. Dossier including completed work(s) promising genuine original musical language with total duration no less than 15 minutes. Students are expected to defend their works at the final jury in terms of intellectual approach, composition technique, orchestration, style, form and related criteria as well as own musical language. *Credit units: 5 ECTS Credit Units: 6, Prerequisite: MSC 311. Aut (Staff)*

MSC 315 Score Reading I
Introduction to score notion and its realization. Notion of ancient clefs. Realization of one and two part music by ancient clefs. Idea of transposition. Basic idea of transposing instruments and actual sounding. Realization of one and two part music with transposing instruments. Introduction to sight reading music with more than two parts. Realization of easy to moderate difficulty scores with three and four parts from repertoire by both ancient clefs and transposing instruments where only up to two transposing instruments co-exist. Realization of simple chamber music scores up to four parts. *Credit units: 3 ECTS Credit Units: 5.*

MSC 316 Score Reading II
Idea of following musical lines in scores. Realization of music with four parts with crossing parts. Extended sight reading with five parts both by ancient clefs and transposing instruments where only up to two different transposing instruments co-exist. Realization of examples from repertoire up to moderate difficulty with five parts. Sight reading of multiple transposing scores. Basic idea of different transposition utilization. Realization of scores with difficult transposing parts. Examples from brass and wind parts from late romantic works where at least three different transposing instruments co-exist. *Credit units: 3 ECTS Credit Units: 5, Prerequisite: MSC 315. Aut (F. O. Orhon)*

MSC 321 Polyphony and Fugue
Contrapuntal practices of the Baroque era, with special emphasis on imitation techniques and the "Art of Fugue". The style of J. S. Bach, his predecessors, contemporaries, and followers. Regular assignments, including composition exercises, as well as the analysis of short compositions in the related styles are compulsory. *Credit units: 3 ECTS Credit Units: 5, Prerequisite: MSC 272.*

MSC 322 Post - Tonal Music I
Composition and music processes of 20th century post-tonal music. The accessibility of it by understanding issues such as pitch organization, rhythm and meter, form, texture, and aesthetics. *Credit units: 2 ECTS Credit Units: 4, Prerequisite: MSC 373.*

MSC 323 Form and Analysis I
Review of the theme structures: Periods, sentences, hybrids and compound structures. Transition. Subordinate theme. Development. Recapitulation. Coda. Slow movement forms. Minuet and trio. Variation forms. Rondo forms. Concerto. Review of the "vagrant" chords. Neapolitan chord as a tonal region and the usage of augmented sixth chords in modulation. Mozart K.454, K.421. Beethoven, Op.18, No1. The equal divisions of the octave and the octatonic scale. The tonal balance in Beethoven's works: Op.13, Op. 53, Op. 57, Op. 110. Three key exposition and Schubert's Death and the Maiden, String Quartet in d minor. The emphasis of flat tonal regions in the romantic period. Schubert Symphony No.8, movement I. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MSC 272. Aut (Staff)*

MSC 324 Form and Analysis II
Sonata form and Brahms' music, Symphony No.4, movement I. Voice leading in Brahms' intermezzos. Augmented triad in Liszt's piano pieces. Idea of topologic transformation and Liszt's piano sonata in b minor. Review of the octatonic scale. Wagner's Tristan Prelude. Hugo Wolf's "Im Frühling". Stravinsky's Symphony of Psalms, Concerto in D. Defining the differences of tonality and modality. Discussions on the perfect fourth interval. Mussorgsky's Sunless, In the Crowd. Debussy's Sarabande from "Pour le piano" (1894-1901). Defining poly-tonality, poly-modality. Bartok's Harvard Lectures. Examples form Bartok's Microcosmos. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MSC 323.*

MSC 326 Conducting I
Brief history of conducting. Basic analysis of a given piece using harmonic, formal and polyphonic skills. Basic beating patterns with the hand. Practical choral conducting techniques. The preparatory beat. The hold. Starting on other beats and offbeat. Tempo. Continuity. Conducting a chorale. Complex beating patterns. Advanced conducting techniques. Balance, and expression. Expression conducting. Dealing with voices. Basic vocal

techniques. Basic rehearsal techniques. Conducting a madrigal. Conducting plainchant. Soloists. Stage performance. Selected repertoire to be conducted and sight played at the piano. *Credit units: 2 ECTS Credit Units: 4.*

MSC 331 Instrument V
The course aims to improve stylistic understanding by the introduction of the instrumental repertoire of various historical periods. To achieve a high level of musicality and technique in interpretation. To help gain physical and psychological ease during stage performance. Selected repertoire listing to be performed progressively throughout the semester. *Credit units: 5 ECTS Credit Units: 11, Prerequisite: MSC 232. Aut (D. Ali, G. Aziz, H. H. Dalkılıç, M. A. Görmüşoğlu, L. Mironiouk, A. Möhsünoğlu, S. Stavreva Markova, E. Şen, M. Turdiev)*

MSC 332 Instrument VI
The continuation of further studies on a new repertoire with the aim to achieve the artistic-technical goals presented in MUSS 105. *Credit units: 5 ECTS Credit Units: 11, Prerequisite: MSC 331. Aut (G. Aziz, H. H. Dalkılıç, G. Kırtıl, S. K. Korad, S. Saidova)*

MSC 333 Chamber Music V
Performance of the early romantic era repertoire consisting of works by Schubert, Schumann and Mendelssohn. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MSC 234. Aut (Staff)*

MSC 334 Chamber Music VI
Analytic analysis of the repertoire and interpretation styles of the romantic and contemporary chamber music repertoire. Brahms's chamber compositions. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MSC 333. Aut (Staff)*

MSC 351 Singing Voice V
Credit units: 5 ECTS Credit Units: 11, Prerequisite: MSC 252.

MSC 352 Singing Voice VI
Credit units: 5 ECTS Credit Units: 11, Prerequisite: MSC 351. Aut (G. Şekeranber)

MSC 373 History of 20th Century Music
Definitions of the basic composition practices in twentieth century music: Quotation, transformation, timbre and structure. The idea of modernism and its relation to the history of philosophy. Modernism-Post Modernism controversy. Quotation technique and its relation to post-modernism. Quotation examples from earlier periods of Western music history. Gustav Mahler's symphony. The comparison of Mahler and Strauss. Charles Ives' music and quotation. Igor Stravinsky and modeling, montage techniques. Luciano Berio and post modernism. The collage technique. John Zorn and the post modern movement during the late twentieth century. Definition of transformation. Transformation examples from earlier periods of Western music history. Definition of atonality. Analyses and discussion on atonal music examples. Serialism and the second Viennese School. Stravinsky and his approach to Serialism. Olivier Messiaen and the birth of the integral serialism. Pierre Boulez, Karl Heinz Stockhausen, Milton Babitt and their approach to serialism. John Cage and indeterminacy. Witold Lutoslawski and indeterminacy. Indeterminacy and notation. Definition of timbre. Orchestration in Debussy's music. Single pitch framework and the timbral perception in Edgar Varese's music. Avant-garde composers and their approach to timbre. Music of Giacinto Scelsi. Definition of process. Minimalism. Process and structure. Spectral music. Definition of neo-classicism. Stravinsky and neo-classicism. Les Six and neo-classicism. Russian composers and neo-classicism. American composers and neo-classicism. *Credit units: 3 ECTS Credit Units: 6. Aut (O. Türkmen)*

MSC 374 Traditional Turkish Music and Divan Music
Brief history of traditional Turkish Music and Divan Music. Basic knowledge and recognition of fundamental concepts such as makam, seyir, usul and some traditional musical forms. General analysis of the selected repertoire and aural exercises on related subjects *Credit units: 2 ECTS Credit Units: 3.*

MSC 383 Keyboard Skills V
Applied studies on string, wind, brass and percussion instruments. Basic skills of performance mechanics. Extended information on the instrument and its capabilities. Selected repertoire listing to be performed progressively throughout the semesters. *Credit units: 2 ECTS Credit Units: 3, Prerequisite: MSC 283. Aut (E. Önal Çubukçu, A. G. Sürmen)*

MSC 384 Keyboard Skills VI
Applied studies on string, wind, brass and percussion instruments. Basic skills of performance mechanics. Extended information on the instrument and its capabilities. Selected repertoire listing to be performed progressively throughout the semesters. *Credit units: 2 ECTS Credit Units: 3, Prerequisite: MSC 383. Aut (A. G. Sürmen)*

MSC 400 Graduation Project Concert
A dossier consisting of all works presented in the composition course juries must include music for solo instruments, small and large-scale chamber ensembles, vocal music and orchestral music. The dossier including works totaling no less than one hour should be presented to the jury 10 working days prior to the graduation

project concert. The composition student must organize a concert covering selection of his compositions. *Credit units: 1 ECTS Credit Units: 1, Prerequisite: MSC 412 and MSC 432 and MSC 452. Aut (Staff)*

MSC 401 Department Seminar VII
Credit units: None ECTS Credit Units: None, Prerequisite: MSC 302. Aut (Staff)

MSC 402 Department Seminar VIII
Credit units: None ECTS Credit Units: None. Aut (Staff)

MSC 403 Orchestra/Chorus/Ensemble VII
The FMPA orchestras are the Bilkent Youth Symphony Orchestra, The Bilkent Preparatory Symphony Orchestra and the Faculty Concert Strings. Students take part in one of the symphonic orchestras and are chosen to the Concert String Orchestra. The course is realized with weekly double rehearsals at the Bilkent Concert Hall. Each ensemble rehearses an average of 84 hours per semester. *Credit units: 2 ECTS Credit Units: 3, Prerequisite: MSC 304. Aut (E. Hristova, I. Metin, F. O. Orhon)*

MSC 404 Orchestra/Chorus/ Ensemble VIII
The FMPA orchestras are the Bilkent Youth Symphony Orchestra, The Bilkent Preparatory Symphony Orchestra and the Bilkent Youth Virtuosi. Students take part in one of the orchestras and are chosen to the Bilkent Youth Virtuosi. The course is realized with weekly rehearsals. Each orchestra rehearses an average of 84 hours per semester. The FMPA chorus is Bilkent Youth Chorus. Selected repertoire listing consisting of a-capella, accompanied, and cantata, oratorio, operatic forms to be performed progressively through weekly rehearsals. The Bilkent Youth Chorus rehearses an average of 56 hours per semester. The FMPA ensemble is the Bilkent Youth Chamber Music Ensemble consisting of a variety of performance majors from different tracks. Selected repertoire listings varying from baroque to contemporary music to be performed throughout the semesters. *Credit units: 2 ECTS Credit Units: 3, Prerequisite: MSC 403. Aut (E. Hristova, I. Metin, F. O. Orhon)*

MSC 411 Composition VII
Composition of a large-scale genuinely creative work for orchestra. Dossier to include advanced sketches including orchestral fragments of work in progress. Students are expected to present thorough domination on their work and use appropriate technical jargon while they defend their work at the final jury in terms of intellectual approach, composition technique, orchestration, style, form and related criteria as well as own musical language. *Credit units: 5 ECTS Credit Units: 6, Prerequisite: MSC 312. Aut (Staff)*

MSC 412 Composition VIII
The work submitted at the final jury of composition vii should be completed. The work should portray originality and advanced skills on compositional technique, form and orchestration. Students are expected to present thorough domination on their work and use appropriate technical jargon while they defend their work at the final jury in terms of intellectual approach, composition technique, orchestration, style, form and related criteria as well as own musical language. *Credit units: 5 ECTS Credit Units: 6, Prerequisite: MSC 411. Aut (T. F. Pöğün)*

MSC 415 Score Reading III
Realization of full scores up to late romantic period. Advanced information about score and its features. General information about changes in orchestration up to mentioned period. General idea of timbre and sound balance. General information about sight reading of scores. Idea of aural expectancy. Playing a score on piano. Voice leading according to hand position. Correct omission of duplicated sounds in piano realization. Idea of transcription. Exercises on transcription. *Credit units: 3 ECTS Credit Units: 5, Prerequisite: MSC 316. Aut (F. O. Orhon)*

MSC 416 Score Reading IV
Realization of difficult full scores mainly starting from late romantic period. Extended information about timbre and sound balance. Playing difficult scores on piano. Transcription exercises. Modern scores and idea of effect. Idea of changing orchestra and ensemble. Information on extended techniques and color. Idea of extended aural expectancy in modern scores. *Credit units: 3 ECTS Credit Units: 5, Prerequisite: MSC 415.*

MSC 421 Post - Tonal Music II
Centricity, referential collections, serialism and further developments from 1940's onwards with an analytical point of view. *Credit units: 2 ECTS Credit Units: 4, Prerequisite: MSC 322.*

MSC 425 Conducting II
The baton. Basic beating patterns with the baton. Practical conducting techniques using the baton. The expression hand. Conducting a string orchestra. Selected repertoire to be conducted and sight played on the piano. Preparatory study methods. Rehearsal planning. Advanced beating patterns with the baton. Dealing with solo passages. Improvement of manual skills. Flow of movement. Methods on eye contact. Balance. The rehearsal versus the performance. Conducting a classical orchestra. Sight conducting. The known intricacies of some important orchestral passages. Performance psychology and fundamentals of stage. Further study of rehearsal planning. The soloist. The Cadence. Rehearsing a double orchestra. Conducting a double orchestra. Rehearsing with the soloist or soloists. Conducting styles. Orchestra versus choir. Concert planning. Program planning. Rehearsing and conducting a triple orchestra with choir. Selected repertoire to be conducted and sight played at the piano. *Credit units: 2 ECTS Credit Units: 4, Prerequisite: MSC 326.*

MSC 431 Instrument VII
The course aims to achieve maturity in every aspect of interpretation. Analysis of style and interpretation through the study of detail on pieces. To help gain physical and psychological ease during stage performance of rather difficult and long masterpieces. Selected repertoire listing to be performed progressively throughout the semester. *Credit units: 5 ECTS Credit Units: 11, Prerequisite: MSC 332. Aut (G. Aziz, A. Babacan, H. H. Dalkılıç, S. Ganiev, S. Gayıblı, S. K. Korad, A. Rahmatulla)*

MSC 432 Instrument VIII
The continuation of further studies on a new repertoire with the aim to achieve the artistic-technical goals presented in MUSS 107. Preparation and rehearsal of the graduation repertoire also including a must piece that is chosen by the graduation jury and submitted to each student two weeks prior to the graduation concert. *Credit units: 5 ECTS Credit Units: 11, Prerequisite: MSC 431. Aut (H. H. Dalkılıç, E. Enacar Baykal, E. Onay, Z. Tsitsuashvili)*

MSC 433 Chamber Music VII
Introduction to the chamber music compositions of Turkish Composers. Beethoven's late quartets. Study and practices with the aim of achieving maturity in stage performance. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MSC 334. Aut (Staff)*

MSC 434 Chamber Music VIII
Analytic analysis and interpretation of the contemporary chamber music repertoire consisting of compositions by Dvorak, Shostakovitch, Ravel, Debussy, Webern, Bartok, Saygun, Erkin. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MSC 433. Aut (Staff)*

MSC 451 Singing Voice VII
Credit units: 5 ECTS Credit Units: 11, Prerequisite: MSC 352. Aut (E. Hristova)

MSC 452 Singing Voice VIII
Credit units: 5 ECTS Credit Units: 11, Prerequisite: MSC 451.

MSC 453 Opera Studies III
Cornerstone works of opera repertoire are performed in collaboration with Bilkent Youth Symphony Orchestra. *Credit units: 1 ECTS Credit Units: None, Prerequisite: MSC 254. Aut (G. Çeliktaş)*

MSC 454 Opera Studies IV
Cornerstone works of opera repertoire are performed in collaboration with Bilkent Youth Symphony Orchestra. *Credit units: 1 ECTS Credit Units: None, Prerequisite: MSC 453.*

MSC 473 Contemporary Turkish Music
Introduction to the historic development of the national art in general from the Independence War until present. A brief look in to the Revolutions of Ataturk from the artists point of view. Musical creativity of various Turkish composers. Observations on Turkish folkloric materials and their transformations in the works of the "Turkish Five" union and other Turkish composers. Turkish composers following different currents *Credit units: 2 ECTS Credit Units: 3, Prerequisite: MSC 374. Aut (G. Altay)*

MSC 901 Music Appreciation I
Credit units: 3 ECTS Credit Units: 5. Aut (O. Türkmen)

MSC 902 Music Appreciation II
Credit units: 2 ECTS Credit Units: 4, Prerequisite: MSC 901.

MSC 911 Individual Music Studies
To aid the multi-disciplinary education aim of the University, the instrument courses are offered to all non-majors as elective courses. Students wishing to enroll go through an admission process in which their music abilities are examined. The course is offered for various instruments including flute, clarinet, trumpet and trombone. *Credit units: 2 ECTS Credit Units: 4.*

MSC 912 Individual Music Studies II
To aid the multi-disciplinary education aim of the University, the instrument courses are offered to all non-majors as elective courses. Students wishing to enroll go through an admission process in which their music abilities are examined. The course is offered for various instruments including flute, clarinet, trumpet and trombone. *Credit units: 2 ECTS Credit Units: 4, Prerequisite: MSC 911.*

MSC 921 Individual Music Studies III
To aid the multi-disciplinary education aim of the University, the instrument courses are offered to all non-majors as elective courses. Students wishing to enroll go through an admission process in which their music abilities are examined. The course is offered for various instruments including flute, clarinet, trumpet and trombone. *Credit units: 2 ECTS Credit Units: 4, Prerequisite: MSC 912.*

MSC 922 Individual Music Studies IV
To aid the multi-disciplinary education aim of the University, the instrument courses are offered to all non-majors as elective courses. Students wishing to enroll go through an admission process in which their music abilities are

examined. The course is offered for various instruments including flute, clarinet, trumpet and trombone. *Credit units: 2 ECTS Credit Units: 4, Prerequisite: MSC 921.*

MSC 931 Individual Music Studies V
To aid the multi-disciplinary education aim of the University, the instrument courses are offered to all non-majors as elective courses. Students wishing to enroll go through an admission process in which their music abilities are examined. The course is offered for various instruments including flute, clarinet, trumpet and trombone. *Credit units: 2 ECTS Credit Units: 4, Prerequisite: MSC 922.*

MSC 932 Individual Music Studies VI
To aid the multi-disciplinary education aim of the University, the instrument courses are offered to all non-majors as elective courses. Students wishing to enroll go through an admission process in which their music abilities are examined. The course is offered for various instruments including flute, clarinet, trumpet and trombone. *Credit units: 2 ECTS Credit Units: 4, Prerequisite: MSC 931.*

MSC 941 Individual Music Studies VII
To aid the multi-disciplinary education aim of the University, the instrument courses are offered to all non-majors as elective courses. Students wishing to enroll go through an admission process in which their music abilities are examined. The course is offered for various instruments including flute, clarinet, trumpet and trombone. *Credit units: 2 ECTS Credit Units: 4, Prerequisite: MSC 932.*

MSC 942 Individual Music Studies VIII
To aid the multi-disciplinary education aim of the University, the instrument courses are offered to all non-majors as elective courses. Students wishing to enroll go through an admission process in which their music abilities are examined. The course is offered for various instruments including flute, clarinet, trumpet and trombone. *Credit units: 2 ECTS Credit Units: 4, Prerequisite: MSC 941.*

MSC 950 Music of Igor Stravinsky
Studies on the composer's works with consideration of four different periods: Early pieces, Russian Phase, Neo-Classicism and Serialism. A broad review of the Western history of Music thorough Stravinsky's face to face dialogues with Machaut, Monteverdi, Giovanni Gabrieli, Gesualdo, Bach, Mozart, Pergolesi, Gluck, Beethoven, Tchaikovsky and Verdi. During this unique voyage the student witnesses his philosophical questions on ontology, expressionism and Apollon/Dionysos controversy. *Credit units: 3 ECTS Credit Units: 4, Prerequisite: MSC 172.*

MSC 951 Symphonies of Gustav Mahler
Studies on Mahler's symphonies. Discussions on tonality, orchestration, process, form, transformation, programmaticsm, quotation, post-modernism, modernism, Nietche, Schophenauer, Wagner, Beethoven, Adorno, Richard Strauss and Schoenberg. *Credit units: 3 ECTS Credit Units: 4, Prerequisite: MSC 174.*

MSC 952 Studies on Modality
A clear definition of modality provides/requires a deeper understanding of tonality. Review of the theory and ear training of modes. Analyzing examples from Machaut, Dufay, Josquin, Greig, Mussorgsky, Debussy, Bartok, Samuel Barber. *Credit units: 3 ECTS Credit Units: 4, Prerequisite: MSC 172. Aut (O. Türkmen)*

MSC 953 Studies on Just Intonation
Sound, sound-wave, frequency, pitch, amplitude, wave-shape, timbre, spectrum, sine-wave, complex tone, overtone series, harmonic and inharmonic sound, noise, harmonic ratios, consonance-dissonance, beating, harmonic map, comma, comma types, temperament, brief history of the history of temperaments. *Credit units: 2 ECTS Credit Units: 2, Prerequisite: MSC 172.*

MSC 954 Improvisation Ensemble
Students experience different musical situations that range from totally free improvisation to controlled compositions using graphic notation. These experiences supply not only a deeper comprehension of timbre, texture, rhythm, harmony but also, develop a clear idea about the distinction of organized and intuitive process of composition. *Credit units: 2 ECTS Credit Units: 2.*

MSC 955 Notation
Does notation reflect the actual composition that we have in mind? How much does music notation affect the actual performance? Can we increase our musical communication skills through notation? A brief historical overview on music notation. Basic notation principles and contemporary notation styles. The course focuses on handwriting skills (no notation software will be used). *Credit units: 2 ECTS Credit Units: 2.*

MSC 956 Source Readings in Music
Discussion group based on important writings and speeches in music history from ancient Greece through the twentieth century. Anthological readings on music and musical concepts throughout the ages. Active participation is required. *Credit units: 2 ECTS Credit Units: 2.*

MSC 957 Modern Music Before 1945
Music of fin de siecle and pre-war period in Europe and U.S.A. Observation of the artistic and socio-cultural environment of the related period. Samples of a broad spectrum of musical life in the twentieth century, including orchestral, choral, band, chamber music, and solo repertoire, both instrumental and vocal. *Credit units: 2 ECTS Credit Units: 2.*

MSC 958 Modern Music After 1945
A socio-historical view on the music of post-war generation in Europe and U.S.A. Focus on the major trends (such as of avant-gardism) and technical developments in music (such as serialism) of the related period. *Credit units: 2 ECTS Credit Units: 2, Prerequisite: MSC 957.*

MSC 959 Introduction to Electronic Music I
A brief history of the electronic music from the end of the nineteenth century till today. Introduction to sound generation and sound processing, getting acquainted with electronic music instruments and repertoire. *Credit units: 2 ECTS Credit Units: 2. Aut (G. Altay)*

MSC 960 Introduction to Electronic Music II
Extension of the listening repertoire. Basics of sound generation and sound processing. Making a short tape composition by use of editing and/or sampling music software. *Credit units: 2 ECTS Credit Units: 2, Prerequisite: MSC 959.*

MSC 961 Rey,Erkin,Saygun,Akses and Their Piano Works
General information on the musical styles of Rey, Erkin, Saygun and Akses. Observation on the development of the piano literature among these national composers. Detailed analysis and discussion group on the style and performance of the selected repertoire. *Credit units: 2 ECTS Credit Units: 2, Prerequisite: MSC 272.*

MSC 962 Performance Anxiety
Performance Anxiety, a subtype of social phobia is a broad and interesting research area as well as a phenomena that musicians experience. Theoretical background of Stage Performance Anxiety. Practical approaches to the process. Psychological, behavioral and cognitive factors that trigger SPA. Barlow's Model of Anxiety, Rapee and Heimberg's Cognitive-Behavioral Model of Social Phobia. Current trends on handling SPA. *Credit units: 3 ECTS Credit Units: 4.*

MSC 963 Music Theory in Performance Practice
Research on relations between performance and analysis. Opening new possibilities for such interaction. Analysis for performance through the study of formal models and practice with performers. Performance practice in relation to historical and contemporary context. Lecture recitals. *Credit units: 3 ECTS Credit Units: 4, Prerequisite: MSC 272.*

MSC 964 Applied Instrument Pedagogy I
Methodology of individual course teaching, syllabi and repertoire planning, instrument training practice. Pedagogic applications for various age groups. Communication practices. Assessment principles in applied performance. *Credit units: 2 ECTS Credit Units: 1.*

MSC 965 Applied Instrument Pedagogy II
Credit units: 2 ECTS Credit Units: 1, Prerequisite: MSC 964.

MSC 966 Applied Instrument Pedagogy III
Credit units: 2 ECTS Credit Units: 1, Prerequisite: MSC 965.

MSC 967 Applied Instrument Pedagogy IV
Credit units: 2 ECTS Credit Units: 1, Prerequisite: MSC 966.

MSC 968 Piano Literature
Survey of instruments historic development and its repertoire with emphasis on cornerstone works. Comparative listening to master artists' renditions their interpretations and style practices. Building programs for concerts, recitals, recordings, competitions. *Credit units: 2 ECTS Credit Units: 3.*

DEPARTMENT OF PERFORMING ARTS

S. K. Korad (Acting Chair), G. Antadze, N. Gachava, C. Gökçer, T. Nakashidze, S. Skhirtladze.

Part-time: S. Akıncı, F. Ataman, L. Bilgin, S. Gani, S. Işıtan, E. Küçükkömürcü, A. M. Partal, A. S. Pekinton, F. Tercan, S. Tuğsal, O. Uzgören.

CURRICULUM

ACTING OPTION

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
ENG 101	English and Composition I	3 / 6
GE 100	Orientation	1 / 1
MSC 901	Music Appreciation I	3 / 5
SOC 101	Introduction to Sociology	3 / 5
THR 101	Fundamentals of Acting I	4 / -
THR 103	Voice and Speech I	3 / -
THR 105	Movement and Combat I	3 / -
THR 107	Tap Dance I	3 / -

Spring Semester		Credits / ECTS Credits
ENG 102	English and Composition II	3 / 6
MSC 902	Music Appreciation II	2 / 4
PSYC 100	Introduction to Psychology	3 / 6
THR 102	Fundamentals of Acting II	4 / -
THR 104	Voice and Speech II	3 / -
THR 106	Movement and Combat II	3 / -
THR 108	Tap Dance II	3 / -

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
ELIT 223	World Mythology	3 / 6
HCIV 101	History of Civilization I	3 / 6
MSC 181	Ear Training I	3 / 6
THR 201	Acting I	4 / -
THR 203	Voice and Speech III	3 / -
THR 205	Movement and Combat III	3 / -
THR 227	History of Theater I: Origins to Renaissance	3 / -

Spring Semester		Credits / ECTS Credits
HCIV 102	History of Civilization II	3 / 6
MSC 281	Ear Training III	3 / 6
THR 202	Acting II	4 / -
THR 204	Voice and Speech IV	3 / -
THR 206	Movement and Combat IV	3 / -
THR 228	History of Theater II: Renaissance to 20th Century	3 / -
	Elective (1)	3 / 6

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
THR 301	Acting III	4 / -
THR 303	Voice and Speech V	3 / -
THR 309	Tai Chi I	3 / -
THR 327	History of Theater III: 20th Century	3 / -
THR 331	Textual Interpretation and Analysis I	3 / -
	Acting Elective (1)	3 / 6
	Elective (1)	3 / 6

Spring Semester		Credits / ECTS Credits
THR 310	Tai Chi II	3 / -
THR 314	Make Up for the Stage	3 / -
THR 332	Textual Interpretation and Analysis II	3 / -
THR 352	Junior Project	5 / -
	Acting Elective (1)	3 / 6
	Electives (2)	6 / 12

FOURTH YEAR

Autumn Semester		Credits / ECTS Credits
HISTR 201	History of Turkish Republic I	2 / 1
THR 411	Acting for Camera	3 / -
THR 431	Textual Interpretation and Analysis III	3 / -
THR 435	Set and Costume Design I	3 / -
THR 451	Senior Project I	5 / -
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
HISTR 202	History of Turkish Republic II	2 / 1
THR 428	History of Turkish Theater	3 / -
THR 432	Textual Interpretation and Analysis IV	3 / -
THR 436	Set and Costume Design II	3 / -
THR 452	Senior Project II	5 / -
TURK 102	Turkish II	2 / 1

DIRECTING OPTION

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
ENG 101	English and Composition I	3 / 6
GE 100	Orientation	1 / 1
MSC 901	Music Appreciation I	3 / 5
SOC 101	Introduction to Sociology	3 / 5
THR 101	Fundamentals of Acting I	4 / -
THR 103	Voice and Speech I	3 / -
THR 105	Movement and Combat I	3 / -
THR 151	Fundamentals of Directing I	4 / -

Spring Semester		Credits / ECTS Credits
ENG 102	English and Composition II	3 / 6
MSC 902	Music Appreciation II	2 / 4
PSYC 100	Introduction to Psychology	3 / 6
THR 102	Fundamentals of Acting II	4 / -
THR 104	Voice and Speech II	3 / -
THR 106	Movement and Combat II	3 / -
THR 152	Fundamentals of Directing II	4 / -

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
HCIV 101	History of Civilization I	3 / 6
THR 201	Acting I	4 / -
THR 203	Voice and Speech III	3 / -
THR 205	Movement and Combat III	3 / -
THR 227	History of Theater I: Origins to Renaissance	3 / -
THR 251	Directing I	4 / -
	Elective (1)	3 / 6

Spring Semester		Credits / ECTS Credits
HCIV 102	History of Civilization II	3 / 6
THR 202	Acting II	4 / -

THR 204	Voice and Speech IV	3 / -
THR 206	Movement and Combat IV	3 / -
THR 228	History of Theater II: Renaissance to 20th Century	3 / -
THR 252	Directing II	4 / -
	Elective (1)	3 / 6

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
ELIT 223	World Mythology	3 / 6
THR 327	History of Theater III: 20th Century	3 / -
THR 331	Textual Interpretation and Analysis I	3 / -
THR 351	Directing III	4 / -
THR 435	Set and Costume Design I	3 / -
	Electives (2)	6 / 12

Spring Semester		Credits / ECTS Credits
THR 314	Make Up for the Stage	3 / -
THR 332	Textual Interpretation and Analysis II	3 / -
THR 342	Design Portfolio I	3 / -
THR 362	Junior Directing Project	5 / -
THR 390	Summer Practice	- / -
THR 436	Set and Costume Design II	3 / -
	Electives (2)	6 / 12

FOURTH YEAR

Autumn Semester		Credits / ECTS Credits
HISTR 201	History of Turkish Republic I	2 / 1
THR 411	Acting for Camera	3 / -
THR 431	Textual Interpretation and Analysis III	3 / -
THR 441	Design Portfolio II	3 / -
THR 461	Senior Directing Project I	5 / -
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
HISTR 202	History of Turkish Republic II	2 / 1
THR 428	History of Turkish Theater	3 / -
THR 432	Textual Interpretation and Analysis IV	3 / -
THR 442	Design Portfolio III	3 / -
THR 462	Senior Directing Project II	5 / -
TURK 102	Turkish II	2 / 1

ELECTIVES

AMER 343	American Theater	3 / 6
AMER 437	American Film in Context	3 / 6
COMD 322	Film Theory	3 / 6
ECON 103	Principles of Economics	3 / 6
ELIT 342	Modern Drama	3 / 6
ELIT 351	Shakespeare I (Comedies, Romances, Problem Plays)	3 / 7
ELIT 352	Shakespeare II (Tragedies, Roman Plays, Histories)	3 / 7
ELIT 441	British Drama I (from the Restoration to the 1950s)	3 / 6
ELIT 442	British Drama II (from the 1950s to present)	3 / 6
FA 223	Visual Perception and Color	3 / 4
FA 271	History of Art I	3 / 5
FA 272	History of Art II	3 / 5
FA 461	Philosophy of Art	3 / 4
HART 102	History of Art II	2 / -
HART 120	Human Evolution and World Prehistory	3 / 6
HUM 112	Cultures Civilizations and Ideas II	3 / 4
HUM 114	The Seventh Art:Film Analysis and Theory	3 / -
LAUD 475	Cinema and Space	3 / 6

LAW 101	Introduction to Law	3 / 3
PHIL 103	Introduction to Philosophy I	3 / 6
PHIL 104	Introduction to Philosophy II	3 / 6
PHIL 402	Aesthetics	3 / 6
PSYC 102	Introduction to Social Psychology	3 / 5
SOC 203	Sociology of the Family	3 / -

ACTING ELECTIVES

THR 307	Jazz Dance I (Restricted Elective)	3 / -
THR 308	Jazz Dance II (Restricted Elective)	3 / -

COURSE DESCRIPTIONS

THR 101 Fundamentals of Acting I
This course is an introduction to the elements of performance, including exercises in concentration, sensory awareness, relaxation, communication, imagination, observation. It is based on the development of theatrical creativity through objectives, obstacles, action, conflict, spontaneity. It aims to develop an understanding of the dramatic situation. *Credit units: 4 ECTS Credit Units: None. Aut (Staff)*

THR 102 Fundamentals of Acting II
This module is the continuation of Fundamentals of Acting I and it emphasizes developing creative expression through theatre exercises, improvisations and scenes. It aims at preparing and presenting scenes in class, preparing written scenes and character analyses, attending plays, and writing performance critiques. *Credit units: 4 ECTS Credit Units: None, Prerequisite: THEA 101 or THR 101.*

THR 103 Voice and Speech I
Devoted to the examination and practice of the basic principles of breathing, resonance, articulation, diaphragm support, pitch, rhythm and expressiveness, placement and diction. *Credit units: 3 ECTS Credit Units: None. Aut (Staff)*

THR 104 Voice and Speech II
The course aims to help students integrate voice, breath, and text. It concentrates on the formation of the individual sounds of spoken Turkish and the development of ability to speak clearly, expressively and without impediments. *Credit units: 3 ECTS Credit Units: None, Prerequisite: THEA 103 or THR 103.*

THR 105 Movement and Combat I
The course is based on fundamentals of theatrical stage movement. This course is designed to increase the physical power and range of the student through control, balance, stretching and flexibility exercises. *Credit units: 3 ECTS Credit Units: None. Aut (S. Skhirtladze)*

THR 106 Movement and Combat II
The course provides an introduction to unarmed theatrical fighting. Basic principles belonging to the single rapier and dagger are studied while developing safe and effective performance technique. Unarmed stage combat explores falls, kicks, punches and slaps. *Credit units: 3 ECTS Credit Units: None, Prerequisite: THEA 107 or THR 105.*

THR 107 Tap Dance I
This module aims to develop students' tap dance techniques, based on the style known as rhythm tap which emphasizes fundamental skills and rhythms, time steps, flash footwork, short combinations and styling. *Credit units: 3 ECTS Credit Units: None. Aut (Staff)*

THR 108 Tap Dance II
In this course the emphasis is on developing on-stage choreography. The course aims to develop pre-dancing warm-up exercises for balance and body alignment. Turns, spins, and focus are introduced and coordination with precision tap combinations is established. *Credit units: 3 ECTS Credit Units: None, Prerequisite: THEA 144 or THR 107.*

THR 151 Fundamentals of Directing I
The course is based on investigation of role of the director in theatrical production and theories of play direction and fundamental consideration of directorial analysis. It helps students in text analysis, determining the purpose of the writing and it focuses on the conceptual as well as the practical phases of directing a play beginning with the question: What moved the playwright to tell this story? *Credit units: 4 ECTS Credit Units: None. Aut (Staff)*

THR 152 Fundamentals of Directing II
The course explores the concepts of action and change, emphasis and action, practical use of the Six Aristotelian Elements of Drama, the dramatic question, theme and idea, conflict analysis, interpretation, genre and style, tempo and rhythm, values of stage space, levels in the creative process, The Method of Physical Actions. *Credit units: 4 ECTS Credit Units: None, Prerequisite: DIR 103 or THR 151.*

THR 201 Acting I
The course aims to explore experientially and analytically the foundation of the acting process based on Stanislavski's System and The Method of Physical Actions. It is based on characterization, roles, special problems, and application of acting techniques through exercises and two-character scenes from the Ancient Greek and Realist plays. *Credit units: 4 ECTS Credit Units: None, Prerequisite: THEA 102 or THR 102. Aut (Staff)*

THR 202 Acting II
Sequel to Acting I. The course aims to explore experientially and analytically the foundation of the acting process based on Stanislavski's System and The Method of Physical Actions. It is based on characterization, roles, special problems, and application of acting techniques through exercises and three or more character scenes from the Ancient Greek and Realist plays. *Credit units: 4 ECTS Credit Units: None, Prerequisite: THEA 201 or THR 201.*

THR 203 Voice and Speech III
The course is a continuation of the first-year work, which now becomes integrated into the rehearsal of the second-year acting studio. Development of the student's vocal instrument as an integrated organic function of self and character. *Credit units: 3 ECTS Credit Units: None, Prerequisite: THEA 104 or THR 104. Aut (Staff)*

THR 204 Voice and Speech IV
Credit units: 3 ECTS Credit Units: None, Prerequisite: THEA 203 or THR 203.

THR 205 Movement and Combat III
Techniques of broadsword and small sword are covered in this course. Safe and realistic fighting for stage is emphasized. Students have the opportunity to create their own fight scenes under the supervision of the instructor. *Credit units: 3 ECTS Credit Units: None, Prerequisite: THEA 108 or THR 106. Aut (Staff)*

THR 206 Movement and Combat IV
This course is based on presentation skills and choreography. Students work on and incorporate their learned skills into classical, text-based, physical and devised performance projects and finally to a graduation project. *Credit units: 3 ECTS Credit Units: None, Prerequisite: THEA 207 or THR 205.*

THR 227 History of Theater I: Origins to Renaissance
A study of the origins and development of theatre from ancient civilizations through the Renaissance. The course aims to emphasize the idea of theatre, the development of dramatic forms, the evolution of theatre architecture, the relationship between actor and audience, and productions of these historical periods in the western theatre. *Credit units: 3 ECTS Credit Units: None. Aut (Staff)*

THR 228 History of Theater II: Renaissance to 20th Century
A study of development of western theatre from the 17th century to the 20th century. The course aims to emphasize the idea of theatre, the development of dramatic forms, the evolution of theatre architecture, the relationship between actor and audience and productions of these historical periods in the western theatre. *Credit units: 3 ECTS Credit Units: None.*

THR 251 Directing I
The course is based on discussion and the analysis of the chosen play. It aims to determine the facts, the main conflict and the specialties of characters and the relationships. The course helps to form students' own styles through evaluating values and analysis. It aims to develop relationship between director and actor. A scene for twenty minutes of a play is expected from each student. *Credit units: 4 ECTS Credit Units: None, Prerequisite: DIR 104 or THR 152. Aut (Staff)*

THR 252 Directing II
This course is a study and practice of directing techniques including composition, dramatization, rhythm, organizational procedures, and rehearsal process. Students are familiarized with directorial vision by the careful examination of plays and utilizing an Aristotelian based mode of analysis. The course aims to explore director's tools using specific scenes from dramatic texts or one act plays. *Credit units: 4 ECTS Credit Units: None, Prerequisite: DIR 203 or THR 251.*

THR 301 Acting III
This course aims to cover historical theories and techniques of styles of acting: from the neoclassical periods to contemporary styles. *Credit units: 4 ECTS Credit Units: None, Prerequisite: THEA 202 or THR 202. Aut (Staff)*

THR 303 Voice and Speech V
The course focuses on building power and range by developing breath muscles of the ribs and diaphragm, limbering the resonators of the chest, mouth, teeth, sinus, nasal, and skull, and finally, work on the entire range of the voice. It aims to help students work through spoken text through their own creative writing, sonnets, and monologues, dialogues, which are all rehearsed and performed. *Credit units: 3 ECTS Credit Units: None, Prerequisite: THEA 204 or THR 204. Aut (Staff)*

THR 307 Jazz Dance I (Restricted Elective)
This course is an introduction to fundamental jazz techniques, exercises, walks, and movement phases of the jazz style. It emphasizes the use of energy, rhythm, improvisation while emphasizing body control, alignment, use of weight changes and quality within a jazz dance movement vocabulary. *Credit units: 3 ECTS Credit Units: None.*

THR 308 Jazz Dance II (Restricted Elective)
In this course the emphasis is on creating basic jazz compositions. It offers a review of basic exercises and terminology. Rock, funky lyric, and percussive movements are studied. Jazz-turns, body isolations, and steps of elevation are incorporated. *Credit units: 3 ECTS Credit Units: None, Prerequisite: THR 307.*

THR 309 Tai Chi I
Tai- Chi is a slow-motion form of exercise and meditation which develops external and internal balance and flexibility. The emphasis is on centering, grounding, and breathing. It fosters the harmony of mind and body. *Credit units: 3 ECTS Credit Units: None.*

THR 310 Tai Chi II
In this module students learn more difficult movements, begin to practice the self-defense aspects of the form, cultivate a heightened awareness of the discipline's therapeutic applications and build a firm foundation for a lifelong relationship with the form. *Credit units: 3 ECTS Credit Units: None, Prerequisite: THEA 107 or THR 309.*

THR 314 Make Up for the Stage
The course is a studio-based exploration of design and implementation of makeup for stage and film. Topics include makeup history, facial structure, color theory, products and their uses, the creation and use of prosthetics and wigs. It is based on executions of straight and character make-up. *Credit units: 3 ECTS Credit Units: None. Aut (Staff)*

THR 327 History of Theater III: 20th Century
This course aims to examine the development of avant-garde art and theatre within historical conditions in terms of spheres of interest (consciousness of environment and community, globalization, multiculturalism, relationship of technology and human being etc.). It is based on defining the properties of contemporary art movements on samples by focusing on the preparation of basic facilities of the lecture, analyzing historical conditions, spheres of interest of the 20th century art and defining art terminologies. *Credit units: 3 ECTS Credit Units: None. Aut (Staff)*

THR 331 Textual Interpretation and Analysis I
A close study of dramatic texts and source material, with emphasis on dramaturgical praxis, including an overview of the history/theory of dramaturgy from Ancient Greece to Renaissance. *Credit units: 3 ECTS Credit Units: None, Prerequisite: THEA 320 or THEA 419 or THEA 420 or THR 228. Aut (Staff)*

THR 332 Textual Interpretation and Analysis II
The course aims to make analysis of dramatic texts, with special emphasis on play structure, plot, character, dialogue, ideas, and various other elements essential to effective theatrical interpretation and realization from Renaissance to Realism. *Credit units: 3 ECTS Credit Units: None, Prerequisite: THR 331.*

THR 342 Design Portfolio I
This course is based on preparation of complete designs and drawings for "Directing Production" and it helps the students to prepare a design portfolio and rsum under the guidance. *Credit units: 3 ECTS Credit Units: None.*

THR 351 Directing III
This course is the application of stage directing techniques to the production of a short play or project. Rehearsal techniques and directorial approaches for pre-planning directing project are studied. *Credit units: 4 ECTS Credit Units: None, Prerequisite: THR 252. Aut (Staff)*

THR 352 Junior Project
This course focuses on scene study and character development of a chosen play by the instructor. Students will learn to use the script, research, and their imaginations to enter the world of the play and bring characters to life. Memorization and rehearsal outside of class are required for most projects. *Credit units: 5 ECTS Credit Units: None, Prerequisite: THEA 301 or THR 301.*

THR 362 Junior Directing Project
Students direct one-act play or project. It is based on the rehearsal planning, performance psychology and fundamentals of stage. Further study of rehearsal planning is part of this course. *Credit units: 5 ECTS Credit Units: None, Prerequisite: THR 351.*

THR 390 Summer Practice
Credit units: None ECTS Credit Units: None.

THR 411 Acting for Camera
Credit units: 3 ECTS Credit Units: None. Aut (Staff)

THR 428 History of Turkish Theater
This module focuses on the changes and evolution of Turkish Theatre from 1839 to the present and Traditional Turkish Theatre. *Credit units: 3 ECTS Credit Units: None, Prerequisite: THEA 219 or THEA 220 or THEA 319 or THR 227.*

THR 431 Textual Interpretation and Analysis III
A survey of some diverse ways of analyzing scripts for dramatic production. The course aims to define different roles and different tools, and aims to choose from a veritable smorgasbord of methods. It is based on theatrical interpretation and realization from Realism to Avantgarde. The course explores critical methods based on psychoanalysis, cognitive science, Marxism, the various feminisms, and historicism. *Credit units: 3 ECTS Credit Units: None.*

THR 432 Textual Interpretation and Analysis IV
A survey of some diverse ways of analyzing scripts for dramatic production. This module aims to define different roles and different tools, and aims to choose from a veritable smorgasbord of methods. It is based on theatrical interpretation and realization from Realism to Avantgarde. The courses explores critical methods based on psychoanalysis, cognitive science, Marxism, the various feminisms, historicism. *Credit units: 3 ECTS Credit Units: None.*

THR 435 Set and Costume Design I
Credit units: 3 ECTS Credit Units: None, Prerequisite: THEA 320 or THEA 419 or THEA 420 or THR 228.

THR 436 Set and Costume Design II
Credit units: 3 ECTS Credit Units: None.

THR 441 Design Portfolio II
This course is based on preparation of complete designs and drawings for “Senior Directing Project I” and it helps the students to prepare a design portfolio and résumé under the guidance. *Credit units: 3 ECTS Credit Units: None, Prerequisite: THR 342.*

THR 442 Design Portfolio III
This course is the preparation of complete designs and drawings for “Senior Directing Project II” and it helps the students to prepare a design portfolio and résumé under the guidance. *Credit units: 3 ECTS Credit Units: None, Prerequisite: THR 441.*

THR 451 Senior Project I
The course requires working with a director and being in whole process to constitute a play. *Credit units: 5 ECTS Credit Units: None, Prerequisite: THEA 302 or THR 352. Aut (Staff)*

THR 452 Senior Project II
Sequel to Senior Project I. The course requires working with another director and being in whole process to constitute a play. *Credit units: 5 ECTS Credit Units: None, Prerequisite: THEA 401 or THR 451.*

THR 461 Senior Directing Project I
This course requires the production of a play. It is a public, fully-designed presentation directed by a senior an directing student with the following goals: To publicly realize a playwright’s purpose for a live audience; to tell entire theatrical story with a beginning, progression and ending; to work as a team with actors and design team to shape a cohesive and coherent theatrical presentation; to extend practical understanding of theatre as a collaborative process. The course is based on rehearsal planning, performance psychology and fundamentals of stage. Further study of rehearsal planning is part of the course. *Credit units: 5 ECTS Credit Units: None, Prerequisite: THR 362.*

THR 462 Senior Directing Project II
This course requires the production of a play. It is a public, fully-designed presentation directed by a senior directing student with the following goals: To publicly realize a playwright’s purpose for a live audience; to tell an entire theatrical story with a beginning, progression and ending; to work as a team with actors and design team to shape a cohesive and coherent theatrical presentation; to extend practical understanding of theatre as a collaborative process. The course is based on rehearsal planning, performance psychology and fundamentals of stage. Further study of rehearsal planning is part of the course. *Credit units: 5 ECTS Credit Units: None, Prerequisite: THR 461.*

FACULTY OF SCIENCE

Hasan N. Erten, Ph.D., Dean
Atilla Erçelebi, Ph.D., Asst. Dean

The Faculty of Science comprises four academic departments:

- Chemistry
- Mathematics
- Molecular Biology and Genetics
- Physics

The Departments of Chemistry, Mathematics, Molecular Biology and Genetics, and Physics offer both graduate and undergraduate programs leading to B.S., M.S. and Ph.D. degrees. In addition, there is an interdisciplinary graduate program that offers M.S. and Ph.D. degrees in the area of Materials Science and Nanotechnology.

At the undergraduate level, the Faculty admits a small number of highly qualified students to each program. The undergraduate curricula are designed to prepare the students for graduate study by providing a strong background in the general area of study with further opportunities of developing a deeper knowledge in various areas of emphasis.

The graduate programs aim to develop students into scientists who can pursue original and creative research. Graduate education in the Faculty is an inseparable part of the research activity which aims to produce significant scientific output at the international level.

The faculty also offers a number of service courses to students from other faculties.

ACADEMIC STAFF

Kamil Can Akçalı, Assistant Professor
Ph.D., Cell Biology, University of Cincinnati, 1998. Apoptosis, stem cell biology, liver regeneration.

Engin Umut Akkaya, Professor
Ph.D., Chemistry, The Ohio State University, Columbus 1989. Molecular and Supramolecular Synthetic Chemistry and Exploration of Emerging Functions.

Meral Aydın, Instructor
Ph.D., Middle East Technical University, 1984. Statistical mechanics.

Atilla Aydınlı, Professor
Ph.D., Condensed Matter Physics, University of Virginia, 1981. Raman and photoluminescence in compound semiconductor structures, physics of nanostructures, physics and technology of optoelectronic devices, surface physics, beam-solid interactions.

Laurence J. Barker, Associate Professor
Ph.D., Mathematics, Oxford University, 1992. Finite groups, representation theory, local and clifford theory, G-algebras, G-posets.

Erman Bengü, Assistant Professor
Ph.D., Materials Science, Northwestern University, 2000. Neutral and ion-beam deposition systems, fundamentals of nucleation and growth of BN-nanotubes, ion and electron beam irradiation on BN and growing cubic-BN films, computational methods for the analysis of X-ray Reflectivity data.

Ceyhun Bulutay, Associate Professor
Ph.D., Electrical Engineering, Middle East Technical University, 1997. Computational semiconductor physics.

Rengül Çetin-Atalay, Associate Professor
Ph.D., Biochemistry, C.N.R.S./Ecole Polytechnique, 1997. Anti-cancer drug discovery, oxidative stress, liver cancer, bioinformatics.

Salim Çıracı, Professor
Ph.D., Condensed Matter Physics, Stanford University, 1974. Surface physics, electronic structures of solids, electron systems of lower dimensionality, mesoscopic physics, scanning tunneling and atomic force microscopy, chemisorption theory, metalization, strained semiconductor superlattices.

Ömer Dağ, Professor
Ph.D., Chemistry, Middle East Technical University, 1994. Synthesis, characterization and spectroscopy of solid-state materials.

Güneş Davenport, Instructor
Ph.D., Electronics, Birmingham University, 1982. Underwater acoustics, applied mathematics.

Alexandre Degtiarev, Associate Professor
Ph.D., Mathematics, Steklov Mathematical Institute, 1988. Algebraic topology, algebraic geometry.

Hilmi Volkan Demir, Assistant Professor
Ph.D., Electrical Engineering, Stanford University, 2004. Ultrafast photonic switching devices, quantum-confined nano-structures, high-performance semiconductor devices, nano-photonics, ultrafast optoelectronics, integrated photonic circuits, micro-electro-mechanical systems (MEMS), bio-implants, telecommunication systems, and semiconductor nanofabrication.

Atilla Erçelebi, Professor
Ph.D., Condensed Matter Physics, Middle East Technical University, 1980. Polarons and bipolarons, electron-phonon interactions, excitons, low dimensional systems.

Gülay Ertaş, Instructor
Ph.D., Chemistry, Middle East Technical University, 2003. Surface enhanced Raman Spectroscopy (SERS), magnetic microparticles, evaluation of the SERS substrate, use of synthetic biopolymers for metal extraction.

Hasan N. Erten, Professor
Ph.D., Nuclear Chemistry, Massachusetts Institute of Technology, 1971. Nuclear and radiochemistry, nuclear fission, nuclear structure and spectroscopy, radioactive waste studies, dating of lake sediments.

Aurelian Gheondea, Associate Professor
Ph.D., Mathematics, University of Bucharest 1990. Functional analysis, operator theory, mathematical physics, matrix and numerical analysis, systems theory, spectral theory of differential operators.

Alexandre Gontcharov, Associate Professor
Ph.D., Mathematics, Rostov State University, 1986. Functional analysis. Topological vector spaces, spaces of infinitely differentiable functions.

Ahmet M. Güloğlu, Assistant Professor
Ph.D., Mathematics, Ohio State University, 2005. Analytic number theory, automorphic forms.

Oğuz Gülseren, Associate Professor
Ph.D., Condensed Matter Physics, Bilkent University, 1992. Theoretical Solid State Physics, nanoscience, metal nanowires, carbon nanotubes, exotic superconductors high pressure-high temperature properties of metals, phonons and vibrational spectra.

Ali Güre, Assistant Professor
Ph.D., Cornell University, Graduate School of Medical Sciences, 1995. Tumor serology and epigenetics.

İhsan Gürsel, Associate Professor
Ph.D., Biomaterials and Biology, Middle East Technical University, 1995. Innate immunity, immunothreapy, drug delivery, nanobiotechnology.

Metin Gürses, Professor
Ph.D., Physics, Middle East Technical University, 1975. General relativity, string theory, integrable systems, partial differential equations.

Dilek Güvenç, Instructor
Ph.D., Statistics, Ankara University, 1984. Probability and statistics.

Tuğrul Hakioğlu, Associate Professor
Ph.D., Condensed Matter Physics, University of Arizona, 1991. Phase in quantum mechanics, group theory in condensed matter and quantum optics, wavelets, quantum groups, theory of high temperature superconductivity.

Fatih Ömer İlday, Assistant Professor
Ph.D., Cornell University, 2003. Non-linear optics ultrafast optical phenomena.

Margarita Kantcheva, Associate Professor
Ph.D., Chemistry, Institute of General and Inorganic Chemistry, Bulgarian Academy of Sciences, Sofia, 1981. Inorganic chemistry, structure and reactivity, surface chemistry, catalysis.

Hakkı Turgay Kaptanoğlu, Associate Professor
Ph.D., Mathematics, University of Wisconsin, 1991. Complex analysis and operator theory in spaces of holomorphic functions of several variables, especially in Besov spaces.

Salih Karadağ, Instructor
Ph.D., Mathematics, Hacettepe University, 1983. Topology, functional analysis.

Azer Kerimov, Associate Professor
Ph.D., Mathematics, Landau Institute of Theoretical Physics and Academy of Sciences of Azerbaijan, 1988. Mathematical theory of statistical physics, probability, mathematical analysis.

Alexandre Klyachko, Visiting Professor
Ph.D., Mathematics, Saratov State University, 1973. Algebra, algebraic geometry, number theory, models of classical finite groups, integer and modular representations, vector-bundles and moduli spaces.

Coşkun Kocabaş, Assistant Professor
Ph.D., Physics, University of Illinois at Urbana-Champaign, 2007.

Mefharet Kocatepe, Professor
Ph.D., Mathematics, University of Michigan, 1978. Functional analysis, nuclear spaces, Köthe spaces.

Özlen Konu, Assistant Professor
Ph.D., Biology, Texas Tech University, 1999. Microarray data analysis, gene networks in nicotine's pharmacological effects, zebrafish genetics.

Yosum Kurtulmaz, Instructor
Ph.D., Mathematics, Middle East Technical University, 1998. Ring theory, number theory, formal concept analysis.

Zeki C. Kuruoğlu, Professor
Ph.D., Theoretical Chemistry/Chemical Physics, University of Florida, 1978. Chemical reaction dynamics, quantum theory of scattering, few-body problems, numerical methods for quantum mechanical calculations.

Uğurhan Muğan, Professor
Ph.D., Mathematics, Clarkson University, 1987. Nonlinear ordinary and partial differential equations, asymptotic analysis, boundary value problems, singular integral equations.

Mehmet Özgür Oktel, Associate Professor
Ph.D., Physics, Massachusetts Institute of Technology, 2000. Theoretical condensed matter physic, atomic physics.

Iossif V. Ostrovskii, Adjunct Professor
Ph.D., Mathematics, Kharkov State University, 1959. The theory of entire and meromorphic functions, analytic problems of probability theory.

Ekmel Özbay, Professor
Ph.D., Electrical Engineering, Stanford University, 1992. Photonic band gap materials, physics and applications of nanostructures, photonic devices, micro electro-mechanical devices, ultrafast phenomena, quantum optics.

Tayfun Özçelik, Professor
M.D., İstanbul University, 1986. Human molecular genetics, gene mapping, mutation analysis, identification of disease genes, X-chromosome inactivation.

Emrah Özensoy, Assistant Professor
Ph.D., in Physical Chemistry, Texas A&M University , 2004. Catalytic properties of surfaces and nanostructures, model catalyst design at the atomic level, spectroscopic investigation of single crystals and ultra-thin metal-oxide films.

Ümit Özger, Instructor
Ph.D., Mathematics, Ankara University, 1975. Numerical Analysis.

Mehmet Öztürk, Professor
Ph.D., Biochemistry, Universite de Paris XI, 1985. Molecular carcinogenesis, tumor suppressor genes, genetic predisposition to cancer, liver cancer, viral carcinogenesis, cell cycle regulation, monoclonal antibodies, gene cloning, recombinant proteins.

Aydan Pamir, Instructor
Ph.D., Mathematics, Middle East Technical University, 1992. Numerical analysis, computer programming, applied mathematics, effective teaching in mathematics.

Ulrike Salzner, Associate Professor
Ph.D., Chemistry, Universität Erlangen,1993. Computational chemistry, quantum chemistry, band structure calculations, band gap engineering, polymer chemistry.

Sinan Sertöz, Professor
Ph.D., Mathematics, University of British Columbia, 1984. Algebraic geometry.

Müfit Sezer, Assistant Professor
Ph.D., Mathematics, Purdue University, 2003. Invariant theory, commutative algebra.

Şefik Süzer, Professor
Ph.D., Chemistry, University of California, Berkeley, 1976. Electron, ion and photon spectroscopic analyses of gases, solids and surfaces.

Bilal Tanatar, Professor
Ph.D., Condensed Matter Physics, University of Delaware, 1987. Theory of quantum solids and liquids, low dimensional electron systems, computational physics.

Uygar H. Tazebay, Assistant Professor
Ph.D., Universite de Paris XI, 1998. Hormonal regulation of the Na+/iodide symporter, sodium or proton coupled symporters, amino acid transport and amino acid catabolism in lower eukaryotes.

Okan Tekman, Lecturer
Ph.D., Mathematics, University of Minnesota, 1992. Automorphic forms, special values of L-functions.

Dönüş Tuncel, Assistant Professor
Ph.D., Organic and Polymer Chemistry, University of Cambridge and Imperial College, London 1999. Synthesis, characterisation and application of functional materials, supramolecular and polymer chemistry.

Bülent Ünal, Assistant Professor
Ph.D., Mathematics, University of Missouri, 2000. Differential geometry, Riemannian geometry, pseudo-Riemannian geometry and Lorentzian geometry, global analysis on manifolds, general relativity and quantum field theories.

Özgün Ünlü, Assistant Professor
Ph.D., Mathematics, University of Wisconsin-Madison, 2004. Algebraic toplogy, geometric group theory.

Tamer Yağcı, Instructor
Ph.D., in Tumor Biology and Immunology from Institute of Oncology, İstanbul University, 1993. Tumor immunosurveillance, immunologic tolerance, tumor specific antigens.

M. Cengiz Yakıcıer, Assistant Professor
Ph.D., Molecular Biology and genetics, Lyon I University. Cancer genetics, molecular genetics of familial cancer, diagnostic genetic testing for familial cancer, gene identification.

Cemal Yalabık, Professor
Ph.D., Condensed Matter Physics, Brown University, 1976. Statistical mechanics: dynamics of phase transitions and critical phenomena, quantum mechanical simulation of electronic devices.

Ergün Yalçın, Associate Professor
Ph.D., Mathematics, University of Wisconsin-Madison, 1998. Cohomology of groups, finite group actions on topological spaces, geometric structures associated to groups.

Hamza Yeşilyurt, Assistant Professor
Ph.D., Mathematics, University of Illinois, Urbana-Champaign, 2004. Analytic theory of partitions, elliptic functions, basic hypergeometric series, and q-series.

Işık Yuluğ, Associate Professor
Ph.D., Molecular Genetics, University of London, 1996. Gene analysis in breast cancer, gene identification, gene expression in eukaryotic systems.

Natalia Zheltukhina, Instructor
Ph.D., Mathematics, Bilkent University, 2002. Analytic properties of entire functions, zero distributions.

DEPARTMENT OF CHEMISTRY

Ö. Dağ (Chair), E. U. Akkaya, E. Bengü, G. Ertaş, H. N. Erten, M. Kantcheva, Z. C. Kuruoğlu, E. Özensoy, U. Salzner, Ş. Süzer, D. Tuncel.

The Chemistry Department provides graduate and undergraduate courses in basic and applied areas of Chemistry. The undergraduate program offers the B.S. degree and the graduate program leads to M.S. and Ph.D. degrees in Chemistry. Current research areas are solid-state chemistry, organometallic chemistry, nuclear chemistry, molecular spectroscopy, theoretical chemistry, polymer and surface chemistry. Research in progress include studies of nuclear fission, radiochemical dating studies, sorption studies of radioactive wastes, synthesis and characterization of inorganic materials, liquid crystals, adsorption, catalysis and mechanism of heterogeneous reactions, quantum theory of chemical reactions, few-body problems in chemistry and physics, modification and characterization of material surfaces, theoretical design of conducting polymers, mechanism of diastereoselection in organic reactions, protein conformations, optical studies of molecular aggregates, cage compounds, polymer chemistry, structure-property -performance relationships, electrochemistry and fuel cells.

Laboratory facilities include teaching and modern research laboratories for nuclear, electro, solid-state and surface chemistry.

UNDERGRADUATE PROGRAM

The undergraduate program aims to equip students with basic chemical knowledge and experimental skills so that they can contribute to modern scientific and technological developments. The program is designed to lead to a professional career or advanced study in chemistry.

UNDERGRADUATE CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
CHEM 101	Principles of Chemistry I	4 / 6
ENG 101	English and Composition I	3 / 6
GE 100	Orientation	1 / 1
MATH 101*	Calculus I	4 / 7
PHYS 101	General Physics I	4 / 6
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
CHEM 102	Principles of Chemistry II	4 / 6
ENG 102	English and Composition II	3 / 6
MATH 102*	Calculus II	4 / 7
PHYS 102	General Physics II	4 / 6
TURK 102	Turkish II	2 / 1

* Depending on the result of the calculus placement exam given at the beginning of the first year, students may take MATH 111 - MATH 112 - MATH 116 in place of MATH 101 - MATH 102.

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
CHEM 211	Analytical Chemistry I	4 / 7
CHEM 231	Organic Chemistry I	4 / 7
HISTR 201	History of Turkish Republic I	2 / 1
MATH 220	Linear Algebra	3 / 6
MBG 105	Principles of Biology	3 / 5
	Technical Elective (1)	3 / 6

Spring Semester		Credits / ECTS Credits
CHEM 212	Analytical Chemistry II	4 / 7
CHEM 232	Organic Chemistry II	4 / 7
CS 111	Introduction to Computing in Engineering and Science	3 / 5
HISTR 202	History of Turkish Republic II	2 / 1
MATH 240	Differential Equations	3 / 6

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
CHEM 323	Physical Chemistry I	4 / 7
CHEM 341	Inorganic Chemistry I	4 / 7
HUM 121	The Mediterranean World to 1600	3 / 6
PHYS 327	Quantum Mechanics	3 / -
	Technical Elective (1)	3 / 6

Spring Semester		Credits / ECTS Credits
CHEM 324	Physical Chemistry II	4 / 7
CHEM 328	Quantum Chemistry II	4 / -
CHEM 342	Inorganic Chemistry II	4 / 7
HUM 122	The Mediterranean World and Beyond, 1600 to the Present	3 / 6
	Technical Elective (1)	3 / 6

Summer Practise Credits / ECTS Credits

FOURTH YEAR

Autumn Semester		Credits / ECTS Credits
CHEM 422	Introduction to Statistical Thermodynamics	3 / 6
CHEM 450	Applied Quantum Chemistry	3 / 6
CHEM 491	Senior Project I	3 / 6
	Technical Elective (1)	3 / 6
	Non-Technical Elective (1)	3 / 6

Spring Semester		Credits / ECTS Credits
CHEM 461	Biochemistry	3 / 6
CHEM 492	Senior Project II	3 / 6
	Restricted Elective (1)	3 / 6
	Technical Elective (1)	3 / 6
	Non-Technical Elective (1)	3 / 6

Note: Technical electives can be chosen from CHEM 201, any 300 or higher level MBG, PHYS, CS, EE, IE, MATH, or CHEM course, or with the consent of the advisor.

RESTRICTED ELECTIVES

Note: Restricted electives are to be chosen from among the courses below.

CHEM 452	Group Theory in Chemistry	3 / 6
CHEM 460	Environmental Chemistry	3 / 6
CHEM 465	Nuclear Chemistry	3 / 6
CHEM 470	Polymer Chemistry	3 / 6
CHEM 472	Industrial Chemistry	3 / 6
CHEM 480	Photochemistry	3 / 6
CHEM 483	Spectroscopy	3 / 6

GRADUATE PROGRAMS

The graduate program is tailored to develop research skills of students so that they can pursue original and creative research at the highest level. Current research areas are nuclear chemistry, organic and inorganic chemistry, polymer chemistry, theoretical and computational chemistry and surface chemistry. The experimental facilities include a Multichannel Analyzer together with α, β and γ counters, Raman, FTIR, UV-Vis-NIR Spectrometer, AAS, GC, GC/MS, ESCA, XRD, POM and Electrochemical instruments.

Master of Science in Chemistry

Admission: Applicants are required to have a B.S. degree in Chemistry, Chemical Engineering or a related field. Students with a B.S. degree in other areas of science and engineering may also apply. However such students are first accepted as a special student and only after acquiring the necessary

background in Chemistry are admitted to the graduate program. All applicants must be fluent in written and oral English. Evaluation of applicants is based on their ALES scores, past academic record, reference letters and the interview at Bilkent University. Applicants who cannot take the ALES exam will be evaluated based on their GRE scores. (Also refer to the "Graduate Admissions" section in the introduction of this catalog for the general graduate admission requirements.)

Degree Requirements: In addition to at least 24 credit units of course work, the M.S. degree candidate must prepare and successfully defend a thesis. The normal duration of M.S. study is 4 semesters. However, this duration may be extended for up to two more semesters subject to the approval of the Graduate Institute.

Doctor of Philosophy in Chemistry

Admission: Applicants must have an M.S. degree in Chemistry or a closely related field and must take the graduate program entrance examination at Bilkent, given at the end of Spring Semester each year. Applicants who cannot take the entrance examination at Bilkent, will be evaluated based on GRE scores. Satisfactory knowledge of English is required. (Also refer to the "Graduate Admissions" section in the introduction of this catalog for the general graduate admission requirements.)

Degree Requirements: Twenty-four credit units of course work beyond the M.S. level or forty-eight credits of course work beyond the B.S. level is required. The Ph.D. candidate is expected to pass an English examination, a qualifying examination and thesis proposal. Preparing and defending a dissertation based on original research is the essence of the program. The normal duration of Ph.D. study is 8 semesters for students with M.S. degree and ten semesters for students with B.S. degree. However, subject to the approval of the Graduate Institute, these durations may be extended for up to two more semesters.

COURSE DESCRIPTIONS

UNDERGRADUATE COURSES

CHEM 100 General Chemistry
The atomic structure. Chemical bonding. Stoichiometry. Thermochemistry. Gases, kinetic theory of gases. Liquids, solids, phase diagrams. Solutions, colligative properties. Electrochemistry. Chemical kinetics. Chemical thermodynamics: enthalpy, entropy, Gibbs free energy and equilibrium. (Laboratory work is obligatory). *Credit units: 4 ECTS Credit Units: 6. Aut (G. Ertaş)*

CHEM 101 Principles of Chemistry I
A basic course in chemical systems, stoichiometry, structural and physical properties of matter, chemical equilibrium, ionic equilibrium, chemical thermodynamics, electrochemistry, chemical kinetics. (Laboratory work is obligatory). *Credit units: 4 ECTS Credit Units: 6. Aut (Ö. Dağ, U. Salzner, D. Tuncel)*

CHEM 102 Principles of Chemistry II
Atomic theory and molecular structure. Covalent, ionic and metallic bonding. Structure of metals, ceramics, and polymers. (Laboratory work is obligatory). *Credit units: 4 ECTS Credit Units: 6, Prerequisite: CHEM 101.*

CHEM 201 Materials Science and Technology
Selected characteristics of materials. Mechanical, thermal, electrical properties. Atomic structure and chemical bonding. Structure of solids. Crystals, noncrystals. Metals, semiconductors. Alloys, polymers, polymeric properties. Ceramics. Electromagnetic and mechanical behavior of ceramics. Multiphase equilibria. Mechanical and physical properties of multiphase materials. Thermal processing. Corrosion of metals. *Credit units: 3 ECTS Credit Units: 6. Aut (E. Bengü)*

CHEM 211 Analytical Chemistry I
Fundamental principles and theories of analytical chemistry. Qualitative and quantitative analysis by gravimetric, volumetric and electrochemical methods. (Laboratory work is obligatory). *Credit units: 4 ECTS Credit Units: 7, Prerequisite: CHEM 102. Aut (G. Ertaş)*

CHEM 212 Analytical Chemistry II
Modern instrumental methods of chemical analysis based upon electrochemical and spectroscopic methods. (Laboratory work is obligatory). *Credit units: 4 ECTS Credit Units: 7, Prerequisite: CHEM 102 and CHEM 211.*

CHEM 231 Organic Chemistry I
Basic principles of organic chemistry. A survey of the principal classes of organic compounds. Synthesis and characteristics reactions of various functional groups. (Laboratory work is obligatory.) *Credit units: 4 ECTS Credit Units: 7, Prerequisite: CHEM 102. Aut (E. U. Akkaya)*

CHEM 232 Organic Chemistry II
Modern physical organic chemistry with emphasis on mechanistic and spectroscopic methods. (Laboratory work is obligatory.) *Credit units: 4 ECTS Credit Units: 7, Prerequisite: CHEM 102 and CHEM 231.*

CHEM 233 Principles of Organic Chemistry I
Basic principles of organic chemistry. A survey of the principal classes of organic compounds. Synthesis and characteristic reactions of various functional groups. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CHEM 102. Aut (D. Tuncel)*

CHEM 234 Principles of Organic Chemistry II
Modern physical organic chemistry with emphasis on mechanistic and spectroscopic methods. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CHEM 233.*

CHEM 300 Practical Summer Training
Credit units: None ECTS Credit Units: None.

CHEM 323 Physical Chemistry I
Chemical thermodynamics. Solution and phase equilibria. Electrochemistry. Solid and liquid states. (Laboratory work is obligatory.) *Credit units: 4 ECTS Credit Units: 7. Aut (E. Özensoy)*

CHEM 324 Physical Chemistry II
Chemical kinetics. Transport phenomena. Surface chemistry. Chemistry of macromolecules. (Laboratory work is obligatory). *Credit units: 4 ECTS Credit Units: 7, Prerequisite: CHEM 323.*

CHEM 325 Principles of Physical Chemistry I
Chemical thermodynamics. Solution and phase equilibria. Electro chemistry. Solid and liquid states. *Credit units: 3 ECTS Credit Units: 6. Aut (E. Özensoy)*

CHEM 326 Principles of Physical Chemistry II
Chemical kinetics. Transport phenomena. Surface chemistry. Chemistry of macromolecules. *Credit units: 3 ECTS Credit Units: 6.*

CHEM 327 Quantum Chemistry I
Wave functions, Time-independent Schrödinger equation, formalism, one, two and three dimensional systems, angular momentum, H-like systems. *Credit units: 4 ECTS Credit Units: None. Aut (Ş. Süzer)*

CHEM 328 Quantum Chemistry II
Self-consistent field method, atomic structure, Born-Oppenheimer approximation, Molecular orbitals, valence-bond method, hybrid orbitals, correlation diagrams, Hückel Method, semi-empirical methods, electron correlation, configuration interaction. *Credit units: 4 ECTS Credit Units: None, Prerequisite: PHYS 327.*

CHEM 341 Inorganic Chemistry I
The nature of chemical bond. Shapes of molecules. Acid-Base chemistry. Chemistry in aqueous and nonaqueous solutions. Hydrogen bonding. General properties of the elements in the periodic table. (Laboratory work is obligatory.) *Credit units: 4 ECTS Credit Units: 7. Aut (M. Kantcheva)*

CHEM 342 Inorganic Chemistry II
Bonding, stereochemistry and spectra of coordination compounds. Electronic, magnetic and optical properties of solids. (Laboratory work is obligatory.) *Credit units: 4 ECTS Credit Units: 7, Prerequisite: CHEM 341.*

CHEM 422 Introduction to Statistical Thermodynamics
Review of Classical Thermodynamics: fundamental equation, maximum entropy principle, Legendre transforms and thermodynamic potentials. Basic notions of probability theory. Ensemble theory: microcanonical, canonical and grandcanonical ensembles. Partition functions. Fluctuations, equivalence of ensembles. Classical phase-space approach. Quantum statistics: Fermi-Dirac and Bose-Einstein distributions. Classical limit of quantum statistics. Applications to ideal gases, chemical equilibrium, models for adsorption and elasticity. *Credit units: 3 ECTS Credit Units: 6. Aut (Z. C. Kuruoğlu)*

CHEM 424 Physical Chemistry III
Photochemistry, spectroscopy and introductory statistical thermodynamics. *Credit units: 3 ECTS Credit Units: 6.*

CHEM 450 Applied Quantum Chemistry
Quantum mechanical calculations of various properties of molecules using semi-empirical as well as ab-initio methods. *Credit units: 3 ECTS Credit Units: 6. Aut (U. Salzner)*

CHEM 451 Principles of Quantum Chemistry
Properties of many-electron wavefunctions, Born-Oppenheimer approximation, Hartree-Fock equations, Self-Consistent-Field procedure, Molecular Orbitals, Role of Symmetry in Electronic Structure Theories, Semi-empirical methods, Electron correlation problem, review of advanced methods like CI, MCSCF, MBPT and CC approaches. *Credit units: 3 ECTS Credit Units: 6.*

CHEM 452 Group Theory in Chemistry
Chemical applications (structure, spectroscopy and reactivity) of group theory. *Credit units: 3 ECTS Credit Units: 6.*

CHEM 460 Environmental Chemistry
Chemical problems related to environment. Energy balance of earth, ozone in the upper atmosphere, green-house effect, micrometeorology. SO_2 and CO_2 cycles, photochemical smog, aerosols, trace elements in the environment, particle size distribution. *Credit units: 3 ECTS Credit Units: 6.*

CHEM 461 Biochemistry
Basic discussion of the structure and properties of biomolecules with special emphasis on proteins, enzymatic catalysis, membrane assembly and functions, bioenergetics. *Credit units: 3 ECTS Credit Units: 6.*

CHEM 465 Nuclear Chemistry
The atomic nucleus. Nuclear masses and stability. Radioactive decay processes, alpha, beta and gamma decay. Structure of nuclei, nuclear models, nuclear forces, fission, fusion. Nuclear processes in geology and astrophysics. *Credit units: 3 ECTS Credit Units: 6. Aut (H. N. Erten)*

CHEM 470 Polymer Chemistry
Polymer chains and characterization. Statistics and kinetics of polymerization reactions. Structure and properties of bulk polymers. Materials and synthetic polymers. Rubber elasticity and entropy. *Credit units: 3 ECTS Credit Units: 6.*

CHEM 472 Industrial Chemistry
Industrial chemicals and their manufacturing processes with special emphasis on their economic aspects. *Credit units: 3 ECTS Credit Units: 6.*

CHEM 480 Photochemistry
Photophysical and photochemical processes of polyatomic molecules, excited states, energy transfer, lifetime measurements of excited states, determination of mechanism of photochemical reactions. *Credit units: 3 ECTS Credit Units: 6.*

CHEM 483 Spectroscopy
Spectroscopic methods of chemical analysis. Optical, magnetic resonance, Laser and electron spectroscopic methods. Spectroscopic characterization of compounds and mixtures by combination techniques. *Credit units: 3 ECTS Credit Units: 6.*

CHEM 490 Structure and Reactivity of Organic Compounds
Biomolecules, heterocyclic amines, sulfur compounds, neighboring group participation in S_n reactions, polymers, carbenes, 2-D NMR, mass spectrometry, lithium enolates, transition metal organometallic compounds, and pericyclic reactions. *Credit units: 3 ECTS Credit Units: 6.*

CHEM 491 Senior Project I
A project on a specific topic in an area of chemistry to be carried out by the student under the supervision of a faculty member. *Credit units: 3 ECTS Credit Units: 6. Aut (Ö. Dağ)*

CHEM 492 Senior Project II
A project on a specific topic in an area of chemistry to be carried out by the student under the supervision of a faculty member. *Credit units: 3 ECTS Credit Units: 6.*

GRADUATE COURSES

CHEM 501 Seminars in Chemistry I
Current topics from literature will be presented and evaluated. *Credit units: 2 ECTS Credit Units: 4.*

CHEM 502 Seminars in Chemistry II
Current topics from literature will be presented and evaluated. *Credit units: 2 ECTS Credit Units: 4.*

CHEM 503 Chemical Kinetics
Experimental and theoretical aspects of reactive and inelastic molecular processes, collision theory. Homogeneous reactions in gas and liquid phases. Surface reactions and solid state reactions. Theory of kinetic processes. Molecular beams. Lasers. *Credit units: 3 ECTS Credit Units: 6.*

CHEM 504 Group Theory and its Chemical Applications
Group theory, molecular symmetry, ligand field theory. Applications: symmetry aspects of MO theory, spectroscopy of transition metal complexes, metal-ligand bonding, molecular vibrations and symmetry. *Credit units: 3 ECTS Credit Units: 6.*

CHEM 505 Nuclear and Radiochemistry
The atomic nucleus. Nuclear masses and nuclear stability. Radioactive decay processes: alpha, beta, and gamma decay. Structure of nuclei, nuclear models, nuclear forces, nuclear reactions, fission, fusion. Nuclear processes in geology and astrophysics. *Credit units: 3 ECTS Credit Units: 6. Aut (H. N. Erten)*

CHEM 507 Statistical Thermodynamics
Basic methods of statistical mechanics and their application to thermodynamic systems. Ensembles. Statistical formulation of thermodynamic functions. Ideal monoatomic gas. Energy and chemical potential calculation in dense media. *Credit units: 3 ECTS Credit Units: 6. Aut (Z. C. Kuruoğlu)*

CHEM 511 Quantum Chemistry I
Classical mechanics, linear vector spaces and linear operators. Harmonic oscillator, H-atom, angular momentum. WKB method, perturbation theory. Variation method. Introduction to scattering theory. *Credit units: 3 ECTS Credit Units: 6.*

CHEM 513 Environmental Radiochemistry
Radiochemical problems related with the environment. Analysis of current environmental issues using radioisotope techniques. Energy resources and utilization. Air and water pollution. Radiochronological techniques. *Credit units: 3 ECTS Credit Units: 6.*

CHEM 515 Molecular Spectroscopy
Atomic spectra, rotational, vibrational and electronic spectra of molecules. Structural parameters. Molecular models. Group theory. Selection rules. *Credit units: 3 ECTS Credit Units: 6.*

CHEM 521 Surface Chemistry I
The central idea of this course is to describe the present state of modern surface science within a context dictated by chemistry. The course offers understanding of the surface phenomena at molecular-level and their relation to the various surface processes. It is focused on the properties of the solid-gas and solid-liquid interfaces and could be interest to students of chemical, physical and engineering science. *Credit units: 3 ECTS Credit Units: 6.*

CHEM 523 Concepts in Materials Science
Fundamental concepts in materials science will be covered. These topics include plastic deformation of crystalline solids and dislocations theory, defects in solids, diffusion phenomena, interfaces and kinetics of phase transformations. Nucieation and growth phenomena will also be covered. Several metallic, ceramic and polymeric systems will be investigated as case study examples. *Credit units: 3 ECTS Credit Units: 6.*

CHEM 531 Advanced Organic Chemistry I
The important classes of organic reactions and methods by which chemists obtain information about chemical processes. The primary focus of the course is on reaction mechanisms. The experimental evidence upon which mechanistic ideas are built will be emphasized. This course will also emphasize heterolytic reactions. *Credit units: 3 ECTS Credit Units: 6. Aut (E. U. Akkaya)*

CHEM 532 Advanced Organic Chemistry II
Physical Organic Chemistry: MO theory, population analysis, frontier orbital theory, pericyclic reactions, transition states, reactive intermediates, understanding reaction mechanisms. *Credit units: 3 ECTS Credit Units: 6.*

CHEM 537 Supramolecular Chemistry
The course introduces general principles of molecular recognition, complex formation and host design, with emphasis on thermodynamics of multi-site host-guest complexation and nature of supramolecular interactions. Structure, properties, and synthesis of major categories of cation-, anion-, and neutral molecule-binding hosts are discussed, and crystal structures of enzyme-inhibitor complexes are analyzed from the point of view of the basic concepts of host-guest chemistry. *Credit units: 3 ECTS Credit Units: 6.*

CHEM 541 Advanced Inorganic Chemistry I
Electronic spectra of complexes, reaction mechanism of d-block complexes, d- and f-block organometallic compounds, inorganic chains, rings, cages and clusters, catalysis and characterization of catalytic materials. *Credit units: 3 ECTS Credit Units: 6. Aut (M. Kantcheva)*

CHEM 542 Advanced Inorganic Chemistry II
Solid state synthesis, electronic and optical properties of solids. Solid state characterization methods. *Credit units: 3 ECTS Credit Units: 6.*

CHEM 551 Special Topics in Physical Chemistry I
Credit units: 3 ECTS Credit Units: 6. Aut (E. Özensoy)

CHEM 552 Special Topics in Physical Chemistry II
Credit units: 3 ECTS Credit Units: 6.

CHEM 554 Special Topics in Physical Chemistry IV
Credit units: 3 ECTS Credit Units: 6.

CHEM 555 Applied Quantum Chemistry
The hydrogen molecule: valence bond theory, the nature of the chemical bond; Hartree-Fock theory for molecules, basis sets, Koopmans' theorem, population analysis; electron correlation, density functional theory, perturbation theory, configuration interaction, multireference methods, applications. *Credit units: 3 ECTS Credit Units: 6. Aut (U. Salzner)*

CHEM 561 Special Topics in Inorganic Chemistry I
Credit units: 3 ECTS Credit Units: 6.

CHEM 562 Special Topics in Inorganic Chemistry II
Credit units: 3 ECTS Credit Units: 6.

CHEM 571 Special Topics in Organic Chemistry I
Credit units: 3 ECTS Credit Units: 6.

CHEM 572 Special Topics in Organic Chemistry II
Credit units: 3 ECTS Credit Units: 6.

CHEM 573 Polymer Chemistry I
Basic concepts of polymer science. Condensation, free radical, ionic, and coordination polymerizations. Synthesis, molecular structure, properties and uses of some common commercial polymers. *Credit units: 3 ECTS Credit Units: 6.*

CHEM 574 Polymer Chemistry II
Measurement of molecular weight, thermal and mechanical analysis, morphology, crystallinity, rheology, polymer structure-property-performance relationship. *Credit units: 3 ECTS Credit Units: 6.*

CHEM 580 Advanced Photochemistry
Introduction to photochemistry, light-matter interactions, basic and advanced experimental techniques, radiative and nonradiative processes, light induced chemistry, electron and proton transfer, organic photochemistry, inorganic photochemistry, photoelectrochemistry, supramolecular photochemistry, femtochemistry, laser-tissue interactions, photodynamic therapy, fluorescence imaging. *Credit units: 3 ECTS Credit Units: 6.*

CHEM 581 Special Topics in Analytical Chemistry I
Credit units: 3 ECTS Credit Units: 6.

CHEM 582 Special Topics in Analytical Chemistry II
Credit units: 3 ECTS Credit Units: 6.

CHEM 584 Surface Coatings
Introduction to polymer chemistry; Synthesis and applications of alkyd, polyester, amino, phenolic, polyurethane, epoxy, silicone and acrylic resins; Synthesis and applications of emulsion polymers, water dispersible, reducible and soluble polymers, solvents; pigments and additives. *Credit units: 3 ECTS Credit Units: 6.*

CHEM 590 Biomolecules and Other Advanced Topics
Biomolecules, heterocyclic amines, sulfur compounds, neighboring group participation in S_n reactions, polymers, carbenes, 2-D NMR, mass spectrometry, lithium enolates, transition metal organometallic compounds, and pericyclic reactions. *Credit units: 3 ECTS Credit Units: 6.*

CHEM 591 Graduate Seminar I
This is a graduate (MS) seminar course. The instructor and students meet once a week for presentations and discussions. Topics of presentations are chosen by the mutual consent of the instructor and the students. *Credit units: None ECTS Credit Units: None. Aut (Ö. Dağ)*

CHEM 592 Graduate Seminar II
This is a graduate (MS) seminar course. The instructor and students meet once a week for presentations and discussions. Topics of presentations are chosen by the mutual consent of the instructor and the students. *Credit units: None ECTS Credit Units: None.*

CHEM 599 Master's Thesis
Credit units: None ECTS Credit Units: 24. Aut (Ö. Dağ)

CHEM 691 Advanced Seminar I
This is a graduate (PhD) seminar course. The instructor and students meet once a week for presentations and discussions. Topics of presentations are chosen by the mutual consent of the instructor and the students. *Credit units: None ECTS Credit Units: None.*

CHEM 692 Advanced Seminar II
This is a graduate (PhD) seminar course. The instructor and students meet once a week for presentations and discussions. Topics of presentations are chosen by the mutual consent of the instructor and the students. *Credit units: None ECTS Credit Units: None.*

CHEM 699 Ph.D. Dissertation
Credit units: None ECTS Credit Units: 24. Aut (Ö. Dağ)

DEPARTMENT OF MATHEMATICS

M. Kocatepe (Chair), L. J. Barker, G. Davenport, A. Degtiarev, A. Gheondea, A. Gontcharov, A. M. Güloğlu, M. Gürses, D. Güvenç, H. T. Kaptanoğlu, S. Karadağ, A. Kerimov, A. Klyachko, Y. Kurtulmaz, U. Muğan, I. V. Ostrovskii, Ü. Özger, A. Pamir, S. Sertöz, M. Sezer, O. Tekman, B. Ünal, Ö. Ünlü, E. Yalçın, H. Yeşilyurt, N. Zheltukhina.

The Department of Mathematics offers undergraduate and graduate courses that lead to B.S., M.S. and Ph.D. degrees in Mathematics as well as undergraduate and graduate courses to all departments of the university.

The department emphasizes both pure and applied mathematics. Research in the department covers algebra, algebraic topology, algebraic geometry, functional analysis, algebraic number theory, analysis of nonlinear systems and general relativity.

UNDERGRADUATE PROGRAM

The undergraduate program in Mathematics aims to prepare students for an advanced degree in mathematics to which end it admits a small number of highly qualified and motivated students each year. The program is designed to give the students a good background in all areas of mathematics. It consists of four series of courses in analysis, algebra, geometry and differential equations.

UNDERGRADUATE CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
ENG 101	English and Composition I	3 / 6
GE 100	Orientation	1 / 1
MATH 113	Single Variable Calculus	4 / 7
MATH 123	Abstract Mathematics I	4 / 7
PHYS 101	General Physics I	4 / 6
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
ENG 102	English and Composition II	3 / 6
MATH 114	Multi Variable Calculus	4 / 7
MATH 124	Abstract Mathematics II	4 / 7
PHYS 102	General Physics II	4 / 6
TURK 102	Turkish II	2 / 1

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
CS 111	Introduction to Computing in Engineering and Science	3 / 5
HISTR 201	History of Turkish Republic I	2 / 1
MATH 213	Advanced Calculus I	3 / 6
MATH 223	Linear Algebra I	3 / 6
MATH 240	Differential Equations	3 / 6
MBG 105	Principles of Biology	3 / 5

Spring Semester		Credits / ECTS Credits
CS 112	Introduction to Object-Oriented Programming	4 / 6
HISTR 202	History of Turkish Republic II	2 / 1
MATH 202	Complex Analysis	3 / 6
MATH 214	Advanced Calculus II	3 / 6
MATH 224	Linear Algebra II	3 / 6
MATH 253	Introduction to Number Theory	3 / 6

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
HUM 121	The Mediterranean World to 1600	3 / 6
MATH 302	Complex Analysis II	3 / 6

MATH 313	Real Analysis I	3 / 6
MATH 323	Algebra I	3 / 6
MATH 345	Differential Geometry I	3 / 6

Spring Semester Credits / ECTS Credits

HUM 122	The Mediterranean World and Beyond, 1600 to the Present	3 / 6
MATH 314	Real Analysis II	3 / 6
MATH 324	Algebra II	3 / 6
MATH 346	Differential Geometry II	3 / 6
	Restricted Elective	3 / 6
	Technical Elective	3 / 6

FOURTH YEAR

Autumn Semester Credits / ECTS Credits

MATH 443	Partial Differential Equations	3 / 6
MATH 453	Algebraic Number Theory	3 / 6
MATH 491	Senior Project I	3 / 6
	Restricted Elective	3 / 6
	Non-technical Elective	3 / 6

Spring Semester Credits / ECTS Credits

MATH 414	Functional Analysis	3 / 6
MATH 431	Introduction to Algebraic Geometry	3 / 6
MATH 492	Senior Project II	3 / 6
	Restricted Elective	3 / 6
	Non-technical Elective	3 / 6

RESTRICTED ELECTIVE COURSES

ECON 415	Mathematics for Economists I	3 / 6
ECON 439	Game Theory I	3 / 6
ECON 440	Game Theory II	3 / 6
MATH 230	Probability and Statistics for Engineers	3 / 6
MATH 250	Introduction to Probability	3 / 6
MATH 260	Introduction to Statistics	3 / 6
MATH 262	Statistical Methodology	3 / 6
MATH 300	A Concise History of Mathematics	3 / 6
MATH 310	Topology	3 / 6
MATH 315	Fourier Analysis	3 / 6
MATH 316	Orthogonal Functions	3 / 6
MATH 318	Fourier Transform and Wavelets	3 / 6
MATH 325	Representation Theory	3 / 6
MATH 333	Exterior Calculus	3 / 6
MATH 336	Polynomial Algebra	3 / 6
MATH 337	Introduction to Soliton Theory	3 / 6
MATH 415	Analysis of Differentiable Functions	3 / 6
MATH 417	Introduction to Number Theory	3 / 6
MATH 418	Diophantine Approximations	3 / 6
MATH 420	Introduction to Cryptography	3 / 6

Technical Elective Course denotes any 300 or higher level mathematics, science or engineering course or with the consent of the advisor.

GRADUATE PROGRAMS

The aim of the program is to develop students into mathematicians who can pursue original and creative research. The program emphasizes research in pure and applied mathematics. At present, research in the graduate program is focused on algebraic number theory, algebraic geometry, algebraic topology, functional analysis, non-linear differential equations and general relativity.

Master of Science in Mathematics

Admission: Applicants to the program should have a B.S. degree in Mathematics (or in science or engineering, but with sufficient preparation in mathematics) and must be proficient in English. Evaluation of applicants is based on their ALES scores, past academic record and the interview at Bilkent University. The evaluation of the applicants who cannot take the ALES exam will be based on their GRE scores. (Also refer to the "Graduate Admissions" section in the introduction of this catalog for the general graduate admission requirements.)

Degree Requirements: Those admitted to the M.S. program have to complete course work of a minimum 24 credit hours, four courses of which are must courses. They should have minimum cumulative grade point average of 3.00, write and defend a thesis. The normal duration of M.S. study is 4 semesters. However, this duration may be extended for up to two more semesters subject to the approval of the Graduate Institute.

CURRICULUM

Autumn Semester		Credits / ECTS Credits
MATH 501	Real Analysis I	3 / 6
MATH 503	Complex Analysis I	3 / 6
MATH 523	Algebra I	3 / 6
MATH 543	Methods of Applied Mathematics I	3 / 6
Spring Semester		Credits / ECTS Credits
	Restricted Elective(1)	3 / 6
	Mathematical Elective(1)	3 / 6

Doctor of Philosophy in Mathematics

Admission: Applicants must have an M.S. or B.S. degree in Mathematics (or in relevant areas of science or engineering) and must be proficient in English. Evaluation of applicants is based on their ALES scores, past academic record and the interview at Bilkent University. The evaluation of the applicants who cannot take the ALES exam will be based on their GRE scores. (Also refer to the "Graduate Admissions" section in the introduction of this catalog for the general graduate admission requirements.)

Degree Requirements: Twenty-four credit units of course work beyond the M.S. level or forty-eight credits of course work beyond the B.S. level is required four courses of which are must courses. The Ph.D. candidate is expected to have minimum cumulative grade point average of 3.00, a qualifying examination and thesis proposal. Preparing and defending a dissertation based on original research is the essence of the program. The normal duration of Ph.D. study is 8 semesters for students with M.S. degree and ten semesters for students with B.S. degree. However, subject to the approval of the Graduate Institute, these durations may be extended for up to two more semesters.

CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
MATH 611	Algebraic Topology I	3 / 6
	Mathematical Elective(2)	6 / 12
Spring Semester		Credits / ECTS Credits
	Restricted Elective(3)	9 / 18

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
	Mathematical Elective(1)	3 / 6
Spring Semester		Credits / ECTS Credits
	Mathematical Elective(1)	3 / 6

RESTRICTED ELECTIVES

MATH 502	Real Analysis II	3 / 6
MATH 504	Complex Analysis II	3 / 6
MATH 524	Algebra II	3 / 6
MATH 544	Methods of Applied Mathematics II	3 / 6

MATH Electives : All math courses with codes 500's and 600's.

COURSE DESCRIPTIONS

UNDERGRADUATE COURSES

MATH 101 Calculus I
Limit, continuity. Derivatives: Differentiation rules, Newton's method for finding roots, curve sketching, maxima and minima, Mean value theorem, Taylor's formula, l'Hôpital's rule. Integration: Indefinite and definite integrals, finding areas, volumes, and arc lengths, surface areas of revolution. Transcendental functions, hyperbolic functions. Integration techniques, improper integrals. *Credit units: 4 ECTS Credit Units: 7. Aut (O. Tekman)*

MATH 102 Calculus II
Sequences and series of numbers, power series, Taylor series. Quadratic curves, polar coordinates. Analytic geometry $\mathbf{R}^3$, in vector-valued functions, TNB frame. Functions of several variables, partial derivatives, free and constrained extrema. Multiple integrals and applications. Line integral, Green's theorem. Surface integral, divergence theorem, Stokes' theorem. *Credit units: 4 ECTS Credit Units: 7, Prerequisite: MATH 101 or MATH 113. Aut (H. Yeşilyurt)*

MATH 103 Introductory Mathematics
Real numbers, integral and fractional exponents. Polynominals, factoring polynomials, rational expressions. Linear equations, quadratic equations and quadratic formula. Functions and graphs, graphing polynominals. Inverse functions. Parabola, circle, ellipse, hyperbola. Exponential, functions, logarithmic functions, exponential growth and decay. Elementary plane geometry, trigonometric functions of acute angles, trigonometric functions of arbitrary angles graphs of trigonometric functions. *Credit units: 3 ECTS Credit Units: 6. Aut (B. Ünal)*

MATH 105 Introduction to Calculus I
Cartesian plane, graphs of equations, lines, functions. Limits, continuity. Derivative, differentiation rules, chain rule, velocity and marginals. Sign of the first and second derivatives, curve sketching, extrema and optimization problems. Indefinite integral, definite integral, fundamental theorem of calculus, area between two curves, volumes of solids or revolution. Exponential and logarithmic functions, exponential growth and decay. *Credit units: 4 ECTS Credit Units: 7. Aut (G. Davenport, S. Karadağ)*

MATH 106 Introduction to Calculus II
Techniques of integration; substitution, integration by parts, partial fractions. Trapezoidal and Simpson's rules. Improper integrals. Random variables and probability, expected value, standard deviation, median. Differential equations; separable and first-order linear equations. Functions of several variables, partial derivatives. Free extrema and method of Lagrange multipliers, method of least squares. Double integrals. Sequences and series of numbers, p-series and ratio test. Power series and Taylor's theorem. Newton's method. *Credit units: 4 ECTS Credit Units: 7, Prerequisite: MATH 105. Aut (Ü. Özger)*

MATH 107 Elements of Business Mathematics
Study of linear equations, quadratic equations. Applications of equations. Polynominal, rational, exponential, logarithmic functions with emphasis on graphing techniques. Geometric series, compound interest, present value, annuities. Limits, derivatives, partial derivatives. Application of differentiation to business problem. *Credit units: 3 ECTS Credit Units: 6.*

MATH 108 Elementary Business Statistics
Organization and description of data. Applications using EXCEL. Basic probability topics. Discrete random variables and their probability distributions. Expected value, variance and standard deviation. The binomial distribution of the mean. Central Limit Theorem and its applications. Correlation, simple linear regression. *Credit units: 3 ECTS Credit Units: 6.*

MATH 109 Statistics for Mass Media
Statistical methods and their applications in social sciences and mass communication. Introduction to distributions, variances and deviations. Sampling concepts and introduction to sampling sizing. *Credit units: 3 ECTS Credit Units: 6.*

MATH 110 Discrete Mathematics
Sets and propositions: Finite and infinite sets, mathematical induction, propositions. Permutations, combinations, and discrete probability. Relations and functions: binary, equivalence relations, partitions, partial ordering,

functions. Graphs: weighted graphs, paths and circuits, shortest paths. Eulerian and Hamiltonian paths. Trees. Abstract algebra: groups, cosets, Lagrange's theorem, Boolean algebra. *Credit units: 3 ECTS Credit Units: 6. Aut (L. J. Barker)*

MATH 111 Intermediate Calculus I
Real numbers, coordinates. Lines, functions, graphs, trigonometric functions. Limits and continuity. Derivatives and applications of derivatives. Integration, Riemann sums and definite integrals. Area, Mean Value theorem for integrals. Fundamental theorem of calculus. Basic integration methods, integration by parts, partial fractions, trigonometric substitutions. Improper integrals. *Credit units: 4 ECTS Credit Units: 7. Aut (M. Kocatepe, A. Pamir, Ö. Ünlü)*

MATH 112 Intermediate Calculus II
Applications of integrals. Areas between curves. Finding volumes by slicing and cylindrical shells. Lengths of curves, areas of surface of revolutions. Transcendental functions. L'Hopital's rule. Inverse trigonometric functions. Sequences and infinite series. Tests for positive series. Alternating series. Power series, Taylor series. Error estimates. Applications of power series. Vectors in the plane and space. Dot and cross products. Lines and planes in space. Cylindrical and spherical coordinates. *Credit units: 4 ECTS Credit Units: 7, Prerequisite: MATH 111. Aut (M. Sezer)*

MATH 113 Single Variable Calculus
Real numbers as a complete ordered field. Mathematical induction. Integral calculus: measurable sets in the plane, Riemann integrable functions and Riemann integral, integration of polynomials. Applications of integration: area, volume. Limit and continuity: boundedness of continuous functions on closed and bounded intervals, intermediate value theorem, uniform continuity. Differential calculus: differentiation rules, finding extrema, mean value theorem, curve sketching. Fundamental theorem of calculus, integration by substitution and integration by parts. Transcendental functions, integration by partial fractions. Taylor polynomials, Taylor's theorem with remainder, l'Hôpital's rule. *Credit units: 4 ECTS Credit Units: 7. Aut (H. T. Kaptanoğlu)*

MATH 114 Multi Variable Calculus
Sequences and series of real numbers: monotone sequence property, tests for convergence of series. Uniform convergence of sequences and series of functions, Weierstrass M-test, Taylor series. Vector algebra in $\mathbf{R}^n$. Calculus of vector functions, curves, arc length, curvature. Functions from $\mathbf{R}^n$ to $\mathbf{R}^m$, scalar and vector fields, limits and continuity, directional and partial derivatives, gradient of a scalar field, free and constrained extrema. Line integrals, independence of path. Multiple integrals, Green's theorem. Surface integrals, Stokes' theorem, divergence theorem. *Credit units: 4 ECTS Credit Units: 7, Prerequisite: MATH 101 or MATH 113.*

MATH 116 Intermediate Calculus III
Functions of several variables. Limit, continuity. Partial derivatives, differentiability, Linearization. Chain rule. Directional derivative, gradient, tangent plane. Free extrema, saddle points. Constrained extrema. Taylor's formula. Double integrals, areas, volumes. Substitution, double integrals in polar form. Triple integrals in rectangular coordinates, volume. Triple integrals in cylindrical and spherical coordinates. Line integrals. Path independence, Green's theorem in the plane. Surface area, surface integrals. Stokes' theorem, divergence theorem. *Credit units: 4 ECTS Credit Units: 7, Prerequisite: MATH 112.*

MATH 119 Statistics for Lawyers
This course introduces students of law the basic ideas of probability and statistics. Topics covered include data evaluation and analysis, conditional probabilities, distributions, Bayesian methods, sampling, confidence intervals, hypothesis testing and elementary regression analysis. *Credit units: 3 ECTS Credit Units: 3. Aut (Staff) Spr (Staff)*

MATH 123 Abstract Mathematics I
Propositions. Sets. Relations. Equivalence relations and equivalence classes. Functions. Natural numbers and Peano axioms. Principle of Mathematical induction. Integers. Rational numbers. Cantor's construction of real numbers. Least upper bound property. *Credit units: 4 ECTS Credit Units: 7. Aut (Ö. Ünlü)*

MATH 124 Abstract Mathematics II
Cardinality, countable and uncountable sets. Cantor set. Axiom of choice, infinite products. Partial orderings, Zorn's lemma. Well ordered sets. Groups, normal subgroups and factor groups. Rings and fields. Ideals and quotient rings. Ordered fields and Dedekind's construction of real numbers. *Credit units: 4 ECTS Credit Units: 7, Prerequisite: MATH 123.*

MATH 132 Discrete and Combinatorial Mathematics
Fundamental principles of counting including rules of sums and product, permutations and combinations. Fundamentals of logic and integers including mathematical induction, recursive definitions, prime numbers, greatest common divisor, cartesian products and relations, pigeonhole principle, partial orders, equivalence relations and partitions. The principle of inclusion and exclusion. Sums and recurrence relations: first and second order linear recurrence relations, finite and infinite calculus, infinite sums. Integer functions including floor and ceiling applications and recurrences, and the modulo operation. Generating functions including the method of generating functions for solving recurrences and exponential generating functions. Introduction to graph theory including

graph isomorphism, Euler tours, Hamiltonian paths and cycles, planar graphs, and graph coloring. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MATH 101 or MATH 111 or MATH 113. Aut (A. Klyachko)*

MATH 202 Complex Analysis
Theory of holomorphic functions of a single variable, complex integration and residue theory, maximum modulus principle. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MATH 102 or MATH 114.*

MATH 206 Complex Calculus and Transform Techniques
Functions of a complex variable, limit, continuity, derivatives. Analytic functions, Cauchy-Riemann conditions. Elementary functions. Complex integration. Series. Residues and poles. The z-transform, solution of difference equations by the z-transform. The Laplace transform, solution of linear differential equations by Laplace transform. Mapping by elementary functions. Conformal mappings and some applications. *Credit units: 3 ECTS Credit Units: 6.*

MATH 211 Discrete Mathematics and Modern Algebra
Fundamental principles of counting including rules of sum and product, and permutations and combinations. Fundamentals of logic and integers including mathematical induction, recursive definitions, prime numbers, greatest common divisor, and the fundamental theorem functions including cartesian products and relations, the pigeonhole principle, partial orders, equivalence relations and partitions. Rings and modular arithmetic. Boolean algebra and switching functions. Groups, coding theory, and Polya's method of enumeration. *Credit units: 3 ECTS Credit Units: 6.*

MATH 213 Advanced Calculus I
Differentiation of functions of several real variables and related topics. Applications to geometry. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MATH 114 and MATH 123. Aut (S. Sertöz)*

MATH 214 Advanced Calculus II
Introduction to point set topology, continuity, Taylor series and integrals of functions of several real variables. Convergence of series of functions. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MATH 213.*

MATH 215 Mathematical Analysis
The real number system. The complex field. Finite, countable, uncountable sets. Metric spaces. Compact sets, connected sets. Sequences, cauchy sequences. Series of numbers, summation by parts. Continuity, uniform continuity. Continuity and compactness, continuity and connectedness. Sequences and series of functions, uniform convergence. Uniform convergence and continuity/integration/differentiation. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MATH 102 or MATH 106 or MATH 116.*

MATH 220 Linear Algebra
Introduction to matrices. Fields and vector spaces, linear transformations, change of basis. Linear equations, existence and classification of solutions, Gaussian elimination and LU decomposition. Characteristic equation of a matrix: eigenvalues, eigenvectors and the Jordan form. Numerical techniques for computing eigenvalues and eigenvectors. Inner product spaces, quadratic forms. *Credit units: 3 ECTS Credit Units: 6. Aut (A. Degtiarev)*

MATH 223 Linear Algebra I
Vector spaces, linear transformations. Eigenspaces (generalized eigenpaces), determinants, canonical forms, Jordan forms. *Credit units: 3 ECTS Credit Units: 6. Aut (A. Klyachko)*

MATH 224 Linear Algebra II
Inner product spaces, bilinear forms, quadratic forms, adjoint operators, multilinear forms, tensor and exterior products. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MATH 223.*

MATH 225 Linear Algebra and Differential Equations
Matrices. Linear equations, Gaussian elimination. First and second order linear differential equations. Vector spaces, basis. Linear transformations. Rank and inverse. Determinants. Eigenvalues and eigenvectors. Function of a matrix. System of first order linear differential equations, n-th order linear differential equations. Normed and inner product spaces, orthogonal bases, projections, singular-value decompositions. *Credit units: 4 ECTS Credit Units: 7, Prerequisite: MATH 102 or MATH 112. Aut (Y. Kurtulmaz, U. Muğan)*

MATH 227 Introduction to Linear Algebra
Introduction to matrices, basic definitions and properties. Linear equations; inverse and rank of a matrix; existence and classification of solutions; Gaussian elimination. Characteristic equation of a matrix; eigenvalues, eigenvectors. Numerical techniques. Applications. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MATH 106. Aut (Ö. Oral)*

MATH 230 Probability and Statistics for Engineers
Basic concepts of probability, Discrete and continuous random variables, their probability distributions, expected value and variance. Discrete probability distribution functions (Binomial, geometric, negative binomial, Poisson distributions). Continuous probability distributions (uniform, normal, exponential, gamma and X^2 distributions). Joint Distributions, Conditional Distributions. Independent Random Variables. Correlation. The sampling

distribution of sample mean, Central Limit Theorem and it is applications. Estimation. Confidence Intervals, Hypothesis Testing. *Credit units: 3 ECTS Credit Units: 6. Aut (D. Güvenç)*

MATH 240 Differential Equations
First and second order differential equations, existence and uniqueness of solutions. Linear homogeneous differential equations. Linear nonhomogeneous equations: the methods of undetermined coefficients and variation of parameters, reduction of order. Series solution of second order equations. Systems of first order differential equations. Solution by Laplace transforms. Numerical solution techniques. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MATH 102 or MATH 112 or MATH 114. Aut (U. Muğan)*

MATH 241 Engineering Mathematics I
Introduction to complex algebra. Systems of linear equations, Gaussian elimination. Vector spaces and their extension to complex case, linear dependence/independence, bases. Matrix algebra, determinant, inverse, factorization. Eigenvalue problem, diagonalization, quadratic forms. Linear approximation, curve fitting. Linear constant coefficient difference equations and the z-transform. Linear constant coefficient differential equations and the Laplace transform. System of linear differential equations. *Credit units: 4 ECTS Credit Units: 7, Prerequisite: MATH 102 or MATH 112. Aut (O. Arıkan, V. B. Ertürk)*

MATH 242 Engineering Mathematics II
Differential equations of first order, separable equations. Linear differential equations of higher order, homogeneous and nonhomogeneous equations. Numerical solutions of differential equations. Runge-Kutta method, boundary-value problems. Differential calculus of functions of several variables, Taylor series approximation. Jacobians, maxima and minima of a function, Method of Lagrange multipliers. Functions of a complex variable, differential complex calculus. Complex integration, Cauchy's theorem. Complex series, Taylor and Laurent series. Residue theorem. *Credit units: 4 ECTS Credit Units: 6, Prerequisite: MATH 241. Aut (A. B. Özgüler)*

MATH 250 Introduction to Probability
Basic concepts of probability, expectation, and variance, covariance, distribution functions, bivariate marginal and conditional distributions. The Binomial and related distributions, the Poisson Process, the Exponential and Gamma distributions, the Normal distribution, the distributions of sample statistics, the Law of Large Numbers, and the Central Limit Theorem. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MATH 102 or MATH 114 or MATH 112 (with MATH 116 corequisite). Aut (N. Akar, Ü. Gürler, A. Kerimov)*

MATH 253 Introduction to Number Theory
Divisibility, congruences, quadratic reciprocity, arithmetical functions, irrational numbers, simple continued fractions, Diophantine equations. *Credit units: 3 ECTS Credit Units: 6.*

MATH 255 Probability and Statistics
Basic concepts of probability, expectation and variance distribution functions Bayes' formula marginal and conditional distributions the distributions of sample statistics law of large numbers central limit theorem introduction to hypothesis testing. *Credit units: 3 ECTS Credit Units: 6.*

MATH 260 Introduction to Statistics
Sampling and descriptive statistics, review of basic discrete and continuous distributions, introduction to estimation theory, methods of maximum likelihood and moments, interval estimation, test of hypotheses, two population problems, simple linear regression and correlation, topics from analysis of variance and design of experiments. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MATH 250.*

MATH 262 Statistical Methodology
Organization and description of data. Basic concepts of probability. Binomial, Poisson distributions. The normal distribution. X^2, t and F distributions. Simple and multiple regression. Analysis of categorical data. Some nonparametric tests. Biological and medical science applications using a statistical software such as MINITAB or SAS. *Credit units: 3 ECTS Credit Units: 6.*

MATH 264 Statistics for Social Sciences
Introduction to statistics with special emphasis on the utilization of statistical methods in social sciences: Organization of data, measures of center and variability. Basic probability concepts. Discrete and continuous random variables and their distributions. Inferences about the mean. Applications using statistical computer programs. *Credit units: 3 ECTS Credit Units: 6. Aut (A. Gontcharov, N. Zheltukhina)*

MATH 291 Summer Project I
A project on a specific topic in an area of mathematics to be carried out by the students under the supervision of a faculty member. *Credit units: None ECTS Credit Units: None.*

MATH 300 A Concise History of Mathematics
The emergence and development of mathematical ideas and techniques during the last few millennia starting with the early Egyptian papyri and ending with the twentieth century mathematics. Tracing the philosophical and cultural setting of mathematics through some concrete problems which include the unit fractions, perfect

numbers, Diophantine equations, ruler and compass constructions, polynomial roots, limits, infinity and some unsolved problems of elementary mathematics. *Credit units: 3 ECTS Credit Units: 6.*

MATH 302 Complex Analysis II
Infinite products. The Gamma function. Functional relations. Stirling's formula. Hypergeometric functions. Elliptic functions. Weirstrass' elliptic function. Jakobi's elliptic function. Elliptic modular functions. The modular group. Fuchsian groups. Picard's theorem. The Riemann-Zeta function. Dirichlet series. Analytical continuation and the functional equation. The prime number theorem. . *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MATH 202. Aut (N. Zheltukhina)*

MATH 310 Topology
Topological spaces, connected and compact spaces, continuous functions, product spaces, the Tychonoff theorem, separation axioms, separation by continuous functions, complete metric spaces, applications. Fundamental group and covering spaces: homotopy, fundamental group, covering spaces. *Credit units: 3 ECTS Credit Units: 6.*

MATH 313 Real Analysis I
The real number system, least upper bound property. Sets and functions, cardinality. Sequences in metric spaces, completeness, Baire's theorem. Continuity. Completion of a metric space. Compactness and connectedness. Contraction mapping theorem and its applications. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MATH 213. Aut (H. T. Kaptanoğlu)*

MATH 314 Real Analysis II
Lebesgue outer measure, measurable sets and Lebesgue integral and convergence theorems in differentiation and integration, functions of bounded variation, absolute continuity. L^p spaces. General measure and integration theory. Radon-Nikodym theorem. Product measures, Fubini's theorem. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MATH 313.*

MATH 315 Fourier Analysis
Credit units: 3 ECTS Credit Units: 6.

MATH 316 Orthogonal Functions
Linear spaces. Finite-dimensional linear spaces. Infinite-dimensional linear spaces. Inner products. Orthogonal functions and vectors. Orthogonal sequences. Differential operators. Integral operators. Convolution. Fourier series. Sine and cosine series. The Gibbs phenomenon. Local convergence of Fourier series. Divergent series. Generalized functions. Legendre polynomials. *Credit units: 3 ECTS Credit Units: 6.*

MATH 318 Fourier Transform and Wavelets
Inner product spaces. Fourier series, signal analysis, partial differential equations, computation of Fourier series, convergence theorems for Fourier series. Fourier transform. Properties of Fourier transform, linear filters, the sampling theorem, discrete signals, Z-transform and transfer functions. Haar wavelet analysis, why wavelets? Haar wavelets, Haar decomposition and reconstruction algorithms. Multiresolution analysis. The Daubechies wavelets. *Credit units: 3 ECTS Credit Units: 6.*

MATH 319 Interpolation and Approximation
Chebyshev polynominals. Polynominal interpolation. Divided differences. Lebesgue constants. Hermite interpolation and Birkhoff interpolation. Bernstein polynominals. Uniform approximation of functions. Characterization of the best approximation. Uniqueness of the best approximation, haar systems. Fekete points, Leja sequence and approximation of the Green function. Polynomial inequalities. Some extremal problems. Degree of approximation. Jackson and Bernstein theorems. Interpolation and approximation by splines. *Credit units: 3 ECTS Credit Units: 6.*

MATH 323 Algebra I
Groups, subgroups, normal subgroups and quotient groups. Homomorphisms and automorphisms. Cayley's theorem, permutation groups, symmetry. Sylow's theorems and classification of finite groups of small order using Sylow's theorems. Structure of finite abelian groups. Classical linear groups. *Credit units: 3 ECTS Credit Units: 6. Aut (L. J. Barker)*

MATH 324 Algebra II
Rings and ideals. Euclidean rings. Modules. Fields, extension fields, construction with straightedge and compass. Elements of Galois theory. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MATH 323.*

MATH 325 Representation Theory
Module theory, semisimple rings and modules, Artin-Wedderburn theorem. Characters, orthonormality properties of character tables. Induction, restriction and inflation of characters. Calculating character tables. Burnsides' solubility theorem, Frobenius' normal complement theorem. *Credit units: 3 ECTS Credit Units: 6.*

MATH 333 Exterior Calculus
Exterior powers of a vector space, exterior product, inner product, the Hodge star operator. Exterior calculus on Euclidean space: Tangent space, differential forms, operations on differential forms, exterior derivative, pullback

of a differential form. Submanifolds: Immersion and submersions, parametrizations. Surface theory: Moving frames, the structure equations, orthonormal frame of a surface, the fundamental forms. Integration on manifolds: Volume forms and orientation and orientation of boundaries, Stoke's theorem. Connections on vector bundles: Connections via vector-valued forms, curvature of a connection, metric connection. *Credit units: 3 ECTS Credit Units: 6.*

MATH 336 Polynomial Algebra
The theory of Groebner basis and related concepts. Use of mathematical software, Maple, Macaulay. Integer programming, combinatorics of magic squares and error correcting codes. *Credit units: 3 ECTS Credit Units: 6.*

MATH 337 Introduction to Soliton Theory
The Korteweg-de Vries equation, properties of the KdV solutions, integrability of the KdV equation, initial value problem for the KdV equation, inverse scattering theory, the Lax method, multi-soliton solittions, geometrical approach to integrable models, the Toda lattice, Zakharov-shabat formulation. *Credit units: 3 ECTS Credit Units: 6.*

MATH 340 Mathematical Foundations of Statistical Mechanics
System of Statistical Mechanics, Statistical Ensembles. Random fields, Product measures, finite and infinite volume Gibbs Distributions. Markov property. Probabilistic methods: Borel-Cantelly lemma and Kolmogorov type 0-1 laws. Phase transitions. ferromagnetical and antiferromagnetical Ising model. Pierls inequality. Correlation functions and Griffith inequalities. Thermodynamic limit. Transfer matrix. Cluster expansions. *Credit units: 3 ECTS Credit Units: 6.*

MATH 345 Differential Geometry I
Euclidean spaces and differential forms, frames, calculus on surfaces. Shape operators. Gaussian and mean curvatures. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MATH 214. Aut (A. Degtiarev)*

MATH 346 Differential Geometry II
Intrinsic geometry of surfaces. Riemannian geometry. Geodesics. Gauss-Bonnet theorem. Global structure of surfaces. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MATH 345.*

MATH 354 Algebraic Number Theory
Algebraic numbers, quadratic and cyclotomic fields, factorization, ideals, geometric methods, Dirichlet's units theorem, binary quadratic forms, Fermat's last theorem. *Credit units: 3 ECTS Credit Units: 6.*

MATH 391 Summer Project II
A project on a specific topic in an area of mathematics to be carried out by the students under the supervision of a faculty member. *Credit units: None ECTS Credit Units: None.*

MATH 414 Functional Analysis
Metric linear spaces. Normed spaces. Compactness in Banach spaces. Linear operators. Dual spaces. reflexivity. Hilbert spaces. Orthogonal sequences in Hilbert spaces. Operators in Hilbert spaces. Hahn-Banach theorem. Category. Uniform Boundedness Principle. Open mapping and Closed Graph Theorems. Weak and weak* convergence. Banach-Alaoğlu Theorem. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MATH 313.*

MATH 415 Analysis of Differentiable Functions
Credit units: 3 ECTS Credit Units: 6.

MATH 417 Introduction to Number Theory
Congruences and residues; continued fractions; approximation of irrationals; quadratic fields, some Diophantine equations; arithmetical functions; the series of primes. *Credit units: 3 ECTS Credit Units: 6.*

MATH 418 Diophantine Approximations
Dirichlet's theorem. Approximation of real numbers by rationals. Algebraic numbers and Liouville's theorem. Some inequalities. Discriminants and resultants. Thue's theorem. Generalizations of Thue's theorem. Roth's theorem. Algebraic units. Linear combinations of logarithms. Approximation of algebraic numbers by rationals. Thue's equation. The effective Dirichlet unit theorem. *Credit units: 3 ECTS Credit Units: 6.*

MATH 431 Introduction to Algebraic Geometry
Plane curves, conics and cubics. Affine varieties, Hilbert basis theorem, Zarisky topology, Hibert's null stellennsatz. Coordinate rings, morphisms. Projective varieties, briational morphism. Smoothness, dimension and the tangent space. The 27 lines on a cubic surface. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MATH 324 and MATH 345.*

MATH 443 Partial Differential Equations
Pfafian systems, linear and nonlinear PDE's of first order. Second order PDE, characteristic curves and characteristic equations. Laplace equation, wave equation, heat equation. Method of integral transforms, Fourier series, Green's function. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MATH 240. Aut (M. Gürses)*

MATH 445 Analysis on Manifolds
The algebra and topology of Rn review of differentation and integration inverse and implicit function theorems change of variables tensors and differential forms integration on chains integration on manifolds and stokes' theorem. *Credit units: 3 ECTS Credit Units: 6. Aut (B. Ünal)*

MATH 453 Algebraic Number Theory
Principal ideal domains, unique factorization domains. residue classes. Algebraic integers. Integral basis. Discriminant. Quadratic and cyclotomic extensions. Norm and trace. Ideals. Bounds for the discriminant. Units. Dirichlet's problem. Ramification of prime ideals. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MATH 253 or MATH 324. Aut (H. Yeşilyurt)*

MATH 491 Senior Project I
A project on a specific topic in an area of mathematics to be carried out by the students under the supervision of a faculty member. *Credit units: 3 ECTS Credit Units: 6. Aut (M. Sezer)*

MATH 492 Senior Project II
A project on a specific topic in an area of mathematics to be carried out by the students under the supervision of a faculty member. *Credit units: 3 ECTS Credit Units: 6. Aut (M. Sezer)*

GRADUATE COURSES

MATH 501 Real Analysis I
Algebras of sets. The Cantor-Bernstein theorem. Borel Sets. Measurable sets, Lebesgue measure. Measurable functions. Luzin's and Egerov's theorems. The Riemann and the Lebesgue integrals. Convergence in measure. Differentiation and integration. The L^p spaces. The Minkowski and Hölder inequalities. Convergence and completeness. General measure and integration theory. The Radon-Nikodym theorem. *Credit units: 3 ECTS Credit Units: 6. Aut (A. Gontcharov)*

MATH 502 Real Analysis II
Topological vector spaces. Metrizability. Locally convex spaces. Boundedness and normability. Barreled spaces. Banach-Steinhaus theorem. Dual pairs and polar topologies. Topologies on spaces of linear mappings. Inductive and projective limits. Distributions. Elements of spectral theory. *Credit units: 3 ECTS Credit Units: 6.*

MATH 503 Complex Analysis I
Analytic functions. Properties of real and imaginary parts. Elementary analytic functions. Elementary multivalued functions and their branches. Cauchy's theorem. Caughy's integral formula. Infinite differentiability of analytic functions. Morera's theorem. Sequences of analytic functions. Normal families. The maximum modulus principle. The Phragmén-Lindelöf theorem. Power series expansion of an analytic function. Unicity theorem for analytic functions. Singular points on the circumference of a disc of convergence. Laurent series expansion. Classification of isolated singularities. Behavior of an analytic function in a neighborhood of a singularity. Theory of integral residues. Applications of residues. The argument principle. Rouche's theorem. Main theorem of algebra. Entire and meromorphic functions. Weierstrass factorization theorems. Mittag-Leffler representation theorems. *Credit units: 3 ECTS Credit Units: 6. Aut (S. Sertöz)*

MATH 504 Complex Analysis II
Conformal representation and its connection with analyticity. Bilinear transformations and their properties. Applications to the non-Euclidean geometry. Conformal representations given by elementary functions. The Riemann-Caratheodory existence theorem. Schwartz's lemma and the unicity of conformal representation. Harmonic functions. Poisson and Schwartz formulas. Properties of harmonic functions. The Dirichlet problem. Analytic continuation. The monodromy theorem. Reflection principle and conformal representations of polygones. Gamma-function, its factorization and integral representations. Stirling's formula. The Roemann Zeta-function, its functional equation. The prime number theorem. *Credit units: 3 ECTS Credit Units: 6.*

MATH 520 Applied Linear Algebra
Systems of equations, Gauss-Jordan Pivoting. Vector spaces. Elementary theory of linear transformations. Inner product spaces. Least squares, projections. Eigenvalues and eigenvectors, diagonalization. Polynomial of a matrix, minimal polynomial, Jordan form. LU, QR, and LDL factorization. Rank 1 updates. Numerical aspects. *Credit units: 3 ECTS Credit Units: 6.*

MATH 523 Algebra I
Monoids, groups, Sylow theorems, categories, functors, rings, homomorphisms, commutative rings, localization, modules, direct sums of modules, free modules, annihilators, dual spaces, homology sequences of complexes, Euler characteristic, Jorden-Holder theorem, polynomial rings, Noetherian rings, field extensions, Galois theory, extensions of rings, representations of finite groups. *Credit units: 3 ECTS Credit Units: 6. Aut (E. Yalçın)*

MATH 524 Algebra II
Tensor algebra, modules of finite length, semi local rings, Jacobian radical, Azuyama diagrams, perfect rings, duality theorem, Quasi-Frobenius rings, semi-primitive rings, nil radical, decomposition theorems. *Credit units: 3 ECTS Credit Units: 6.*

MATH 525 Group Representations
Representation as linear action. Existence of invariant metric. Maschke theorem. Schur's lemma. Multiplicity of irreducible component in regular representation. Structure of group algebra. Characters and presentations of abelian groups, duality. Characters of nonabelian groups. Central idempotent and the first orthogonality relation. Completeness of the set of characters and the second orthogonality relation. Induced representations and characters. Mackey criterion of irreducibility. Representations of symmetric group. Representations of supersolvable groups. Real representations and Schur's index. Other applications of induced representations. Degrees of irreducible representations. Compact groups, Haar measure. Linear representations of compact groups. Unitary trick. Representations of general linear and unitary groups. *Credit units: 3 ECTS Credit Units: 6.*

MATH 526 Young Tableaux and Representations of the Symmetric Group
Partitions and conjugacy classes of the symmetric group. Young diagrams. Schur's subgroups and their induced representations. Intertwining numbers. Construction and intrinsic characterization of irreducible representations. Young tableaux. Specht modules and invariant forms. Hook formula for dimension of irreducible representations. Munagan-Nakayama rule for characters. Schur's duality and irreducible representations of GL (n). *Credit units: 3 ECTS Credit Units: 6.*

MATH 528 Invariant Theory
Noetherian rings and modules. Krull dimension. Linear representations and algebra of invariants. Noether's bound for a number of generators. Linearly reductive algebraic groups, finite generation of invariants. Hilbert-Serre theorem. Poincare series. Minimal resolution. Hilbert syzygy theorem. Molien's theorem. Reflecting Hyperplanes. Groups generated by pseudoreflections. Polinomiality of invariant ring. The Shephard-Todd theorem. Geometric invariant theory. Spectrum of the ring of invariants. Stability. Examples. *Credit units: 3 ECTS Credit Units: 6.*

MATH 530 Global Class Field Theory
Hilbert's ramification groups. Artin symbol. Hilbert class fields. ray class groups. L-series. Frobenius density theorem. First inequality. Class fields. Norm index. Herbrand quotient. 2nd inequality. Existence theorem. Artin's reciprocity law. Chebotarev's density theorem. Norm residues and local class field theory. Idéle groups. *Credit units: 3 ECTS Credit Units: 6.*

MATH 533 Differential Geometry
Credit units: 3 ECTS Credit Units: None.

MATH 534 Differential Geometry II
Differentiable manifolds, multilinear algebra, Exterior Differential Calculus, Connections, Riemannian Geometry, Lie groups and Moving frames, Complex manifolds, Finsler Geometry. *Credit units: 3 ECTS Credit Units: 6.*

MATH 543 Methods of Applied Mathematics I
Functions spaces, orthogonal polynomials and Fourier analysis, generalized functions. Ordinary differential equations, Green's function, Sturm-Liouville problem, hypergeometric functions. Perturbation methods, regular perturbations, singular perturbations, boundary layer analysis, the WKB approximation. *Credit units: 3 ECTS Credit Units: 6. Aut (M. Gürses)*

MATH 544 Methods of Applied Mathematics II
Calculus of variations, necessary conditions for extrema, isoperimetric problems. Partial differential equations. Cauchy Kowalevsky theorem, linear, quasi-linear, half-linear equations. Initial and boundary value problem for the wave and heat equations, Riemann method. Laplace equation, minimum and maximum principles. Integral transforms. Stability and bifurcation. Inverse scattering transform. *Credit units: 3 ECTS Credit Units: 6.*

MATH 550 Probability and Statistics
Mathematical foundations of Probability theory. Random walk. Consequence of probability measures. Sequences and sums of independent random variables. Markov chains. Percolation theory. *Credit units: 3 ECTS Credit Units: 6.*

MATH 551 Topics in Number Theory
Local and global class field theory. p-adic analysis. Iwasawa theory. Modular forms. L-functions. Galois representations. Galois cohomology. *Credit units: 3 ECTS Credit Units: 6.*

MATH 553 Ergodic Theory
Borel spaces. Borel automorphism. Poincare recurrence lemma. Ergodic theorem for permutations. Almost periodic functions. Birkhoff and Von neumann ergodic theorems. Return times. Applications to the number theory. Ergodic theorem for Markow chains. Ergodicity. Mixing. Irrational rotation. Diadic adding machine. Bernoulli, Markov, Kolmogorov shifts. Entropy. *Credit units: 3 ECTS Credit Units: 7.5.*

MATH 556 Codes on Algebraic Curves
Finite fields, Hamming space, linear code, spectrum and duality, parameters of a code, bounds on codes. Algebraic curves, Riemann-Roch theorem, Hurwitz genus formula, curves over finite fields, rational points, zeta

function of a curve. Elliptic and modular curves, reduction of modular curves. Geometric Goppa codes, codes on Hermitian curves, codes on fiber products, asymptotically good codes on modular curves. *Credit units: 3 ECTS Credit Units: 6.*

MATH 581 Topics in Nonlinear Partial Differential Equations I
Credit units: 3 ECTS Credit Units: 6, Prerequisite: Consent of the Advisor.

MATH 583 Topics in Mathematical Physics I
Credit units: 3 ECTS Credit Units: 6, Prerequisite: Consent of the Instructor.

MATH 584 Topics in Mathematical Physics II
Credit units: 3 ECTS Credit Units: 6, Prerequisite: Consent of the Instructor.

MATH 585 Topics in Ordinary Differential Equations I
Credit units: 3 ECTS Credit Units: 6, Prerequisite: Consent of the Instructor.

MATH 597 Graduate Seminars in Mathematics I
Each graduate student who enrolls must present at least one one-hour talk about his/her research topic. Attendance to the seminars is mandatory. *Credit units: None ECTS Credit Units: None. Aut (E. Yalçın)*

MATH 598 Graduate Seminars in Mathematics II
Each graduate student who enrolls must present at least one one-hour talk about his/her research topic. Attendance to the seminars is mandatory. *Credit units: None ECTS Credit Units: None. Aut (E. Yalçın)*

MATH 599 Master's Thesis
Credit units: None ECTS Credit Units: 24. Aut (M. Kocatepe)

MATH 603 Value Distribution Theory
The Nevanlinna characteristics of growth and value distribution of a meromorphic function The first Fundamental Theorem of Nevanlinna. Picard's, Valiron's and Nevanlinna's exceptional values. Characterization of sets of exceptional values. Deficiencies. Stability of deficiencies. The theory of meromorphic curves. *Credit units: 3 ECTS Credit Units: 6.*

MATH 604 Entire Functions
The scale of growth of entire functions. Order and type. The Poisson-Jensen formula. Jensen formula and its applications. The Hadamard factorization theorem. Borel theorems on canonical products. The Lindelöf theorem on functions of integer order. The Phragmén-Lindelöf principle. The indicator function. Trigonometric convexity. Proximate orders and generalized indicatorfunction. Entire functions of exponential type. The Borel transform andthe Pólya theorem. Paley-Wiener theorem. Entire functions of completely regular growth. Interpolation by entire functions. Applications of entire functions to quasianalyticity theory, functional analysis and probability theory. *Credit units: 3 ECTS Credit Units: 6.*

MATH 605 Topics in Functional Analysis I
Credit units: 3 ECTS Credit Units: 6, Prerequisite: Consent of the Instructor.

MATH 611 Algebraic Topology I
Categories and functors, homotopy of paths, homotopy of maps, fundamental groups, higher homotopy groups, homology of complexes, chain homotopy, standard simplices, the singular complex, singular homology, excision theorem, Mayer-Vietoris sequences, applications of homology. *Credit units: 3 ECTS Credit Units: 6.*

MATH 618 Topics in Algebraic Topology II
Credit units: 3 ECTS Credit Units: 6.

MATH 624 Compact Lie Groups
Compact Lie groups. Classical examples. One parametric subgroups. Maximal tori. Invariant differential operators and Lie algebras. Relation between Lie groups and algebras. Killing invariant form. Universal enveloping algebra. Cartan subalgebras. Roots systems. Weyl group. Dynkin diagrams and classification of roots systems. Exceptional Lie groups and algebras. *Credit units: 3 ECTS Credit Units: 6.*

MATH 625 Homological Algebra
The course starts with standard material on homological algebra and continues with a special interest topic with instructor's consent such as special applications and calculations in algebraic topology, algebraic geometry or cohomology of groups. The standard part includes material on modules, categories, extensions of modules, derived functors and spectral sequences. *Credit units: 3 ECTS Credit Units: 6.*

MATH 626 Cohomology of Groups
Group extensions. Basic homological algebra. Definition and properties of group cohomology. Serre's theorem. Mislin's theorem. Quillen's stratification theorem. Even's norm map and Steenrod operations. HLS - spectral sequence. Group actions on cell complexes *Credit units: 3 ECTS Credit Units: None.*

MATH 633 Algebraic Geometry I
Transcendental theory; Complex algebraic varieties, line bundles and divisors, Riemann surfaces as algebraic curves, Hurwitz's theorem, Riemann-Roch theorem, uniformization, surfaces, Kodaira dimension, main classification theory of surfaces via birational theory, Chern classes, fixed point theorems, residues, spectral sequences. *Credit units: 3 ECTS Credit Units: 6.*

MATH 650 Topics in Probability Theory
Credit units: 3 ECTS Credit Units: 6, Prerequisite: Consent of the Instructor.

MATH 654 Analytic Number Theory
Integer points, trigonometric sums, infinite products, entire functions, the gamma function, the Riemann zeta-function, zeros of the zeta-function, the prime number theorem, Drichlet L-functions, primes in arithmetic progressions, the circle method, the Goldbach conjecture, Waring's problem. *Credit units: 3 ECTS Credit Units: 6. Aut (A. M. Güloğlu)*

MATH 699 Ph.D. Dissertation
Credit units: None ECTS Credit Units: 24. Aut (M. Kocatepe)

DEPARTMENT OF MOLECULAR BIOLOGY AND GENETICS

T. Özçelik (Chair), K. C. Akçalı, R. Çetin-Atalay, A. Güre, İ. Gürsel, Ö. Konu, M. Öztürk, U. H. Tazebay, T. Yağcı, M. C. Yakıcıer, I. Yuluğ.

The Department of Molecular Biology and Genetics provides undergraduate and graduate courses in basic and applied areas of molecular biology and genetics. The undergraduate program offers B.S. degree in Molecular Biology and Genetics and the graduate program leads to M.S. and Ph.D. degrees in Molecular Biology and Genetics. The department is equipped with modern facilities for gene analysis, cell biology, protein chemistry, recombinant DNA technology and animal experiments. The education is research oriented. The undergraduate program concentrates initially on basic knowledge in life sciences and related fields, followed by a specialized training in molecular biology and genetics. Research laboratories of the department are used for graduate student training and for the senior projects for undergraduate students. The main research activities of the department are on molecular genetics, molecular biology, molecular cell biology, molecular virology, molecular immunology, structure-function relationship of proteins and new biotechnologies.

UNDERGRADUATE PROGRAM

The undergraduate program aims to equip students with basic knowledge in life sciences with special emphasis on molecular biology and genetics. The education program in the first two years concentrates on basic knowledge in biology, genetics and microbiology in addition to physics, chemistry and mathematics. The last two years are dedicated to a specialized training in molecular biology, molecular cell biology and biotechnology. Theoretical courses are completed with laboratory courses with hands-on experiments.

UNDERGRADUATE CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
CHEM 101	Principles of Chemistry I	4 / 6
ENG 101	English and Composition I	3 / 6
GE 100	Orientation	1 / 1
MATH 101*	Calculus I	4 / 7
MBG 101	Biology I	4 / 7
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
CHEM 102	Principles of Chemistry II	4 / 6
ENG 102	English and Composition II	3 / 6
MATH 102*	Calculus II	4 / 7
MBG 102	Biology II	4 / 7
TURK 102	Turkish II	2 / 1

* Depending on the result of the calculus placement exam given at the beginning of the first year, students may take MATH 111 - MATH 112 - MATH 116 in place of MATH 101 - MATH 102.

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
CHEM 233	Principles of Organic Chemistry I	3 / 6
CS 111	Introduction to Computing in Engineering and Science	3 / 5
HISTR 201	History of Turkish Republic I	2 / 1
MBG 210	Genetics	4 / 7
PHYS 101	General Physics I	4 / 6

Spring Semester		Credits / ECTS Credits
CS 112	Introduction to Object-Oriented Programming	4 / 6
HISTR 202	History of Turkish Republic II	2 / 1
MATH 262	Statistical Methodology	3 / 6
MBG 223	Molecular Genetics	4 / 7
PHYS 102	General Physics II	4 / 6

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
HUM 121	The Mediterranean World to 1600	3 / 6
MBG 301	Molecular Biology of the Cell I	3 / 6
MBG 311	Biochemistry I	4 / 6
MBG 324	Molecular Biology of the Gene	4 / 6
MBG 326	Introduction to Bioinformatics	3 / 6

Spring Semester		Credits / ECTS Credits
HUM 122	The Mediterranean World and Beyond, 1600 to the Present	3 / 6
MBG 302	Molecular Biology of the Cell II	4 / 6
MBG 312	Biochemistry II	3 / 6
MBG 338	Microbiology	4 / 6
	Non-technical Elective (1)	3 / 6

Summer Semester Credits / ECTS Credits

FOURTH YEAR

Autumn Semester		Credits / ECTS Credits
MBG 391	Summer Practice	- / -
MBG 416	Science and Ethics	3 / 6
MBG 491	Senior Project I	3 / 6
	Restricted Elective (1)	3 / 6
	Technical Elective (2)	6 / 12

Spring Semester		Credits / ECTS Credits
MBG 418	Genomics	4 / 6
MBG 492	Senior Project II	3 / 6
	Restricted Elective (1)	3 / 6
	Technical Elective (1)	3 / 6
	Non-technical Elective (1)	3 / 6

RESTRICTED ELECTIVES

MBG 415	Genetic Engineering and Biotechnology	3 / 6
MBG 470	Immunology	3 / 6
MBG 471	Membrane Biology	3 / 6
MBG 480	Cell Cycle and Apoptosis	3 / 6
MBG 481	Protein Chemistry	3 / 6
MBG 482	Computational Approaches to Biology	3 / 6
MBG 483	Developmental Biology	3 / 6
MBG 485	DNA Damage and Repair Mechanisms	3 / 6
MBG 487	Special Techniques in Molecular Genetics	3 / 6
MBG 488	Introduction to Human Genetics	3 / 6
MBG 489	Genetics and Biology of Cancer	3 / 6

GRADUATE PROGRAMS

The graduate programs are organized to provide an excellent training in basic and applied research areas of molecular biology and genetics. The main research activities of the department are on molecular genetics (genetic predisposition to cancer, tumor suppressor genes, gene-disease associations), molecular biology (regulation of transcription, differential expression), molecular cell biology (cell cycle, apoptosis, signal transduction), molecular virology (hepatitis B and hepatitis C viruses), structure-function relationship of proteins and new biotechnologies (recombinant proteins, monoclonal antibodies).

Master of Science in Molecular Biology and Genetics

Admission: Applicants are required to have a B.S. degree in molecular biology and genetics, biology, or a related field. Students with a B.S. degree in chemistry, chemical engineering, physics

or a related field may also apply. However, such students may be requested to take several undergraduate courses in molecular biology and genetics to acquire necessary background in the field. All applicants must be fluent in written and oral English. Evaluation of applicants is based on ALES scores, past academic record, reference letters and their performance in the entrance examination given at Bilkent University at the end of Spring Semester each year. Applicants from foreign countries who cannot take ALES and entrance exam will be evaluated based on past academic record, reference letters and GRE scores. (Also refer to the "Graduate Admissions" section in the introduction of this catalog for the general graduate admission requirements.)

Degree Requirements: In addition to at least 24 credit units of course work, the M.S. degree candidate must prepare and successfully defend a thesis. The normal duration of M.S. study is 4 semesters. However, this duration may be extended for up to two more semesters subject to the approval of the Graduate Institute.

Doctor of Philosophy in Molecular Biology and Genetics

Admission: Applicants are required to have a M.S. degree in molecular biology and genetics, biology or a related field. Students with degrees such as M.D. or veterinary M.D. may also apply to the program. All applicants must be fluent in written and oral English. Evaluation of applicants is based on ALES scores, past academic record, reference letters and their performance in the entrance examination given at Bilkent University at the end of Spring Semester each year. Applicants from foreign countries who cannot take ALES and entrance exam will be evaluated based on past academic record, reference letters and GRE scores. (Also refer to the "Graduate Admissions" section in the introduction of this catalog for the general graduate admission requirements.)

Degree Requirements: Twenty-four credit units of course work beyond the M.S. level or forty-eight credit units of course work beyond the B.S. level is required. The Ph.D. candidate is expected to pass an English examination (KPDS for Turkish citizens, TOEFL for foreign students), a qualifying examination and thesis proposal. Preparing and defending a dissertation based on original research is the essence of the program. The normal duration of Ph.D. study is 8 semesters for students with M.S. degree and 10 semesters for students with B.S. degree. However, subject to the approval of the Graduate Institute, these durations may be extended for up to two more semesters.

COURSE DESCRIPTIONS

UNDERGRADUATE COURSES

MBG 101 Biology I
Molecules of the life, central dogma (DNA, RNA, protein), organization of the cell, embryogenesis and genetic diseases. *Credit units: 4 ECTS Credit Units: 7. Aut (A. Güre)*

MBG 102 Biology II
Introduction to cell division and differentiation introduction to the molecular biology methods, recombinant DNA technology, biotechnology. (Laboratory work is obligatory) *Credit units: 4 ECTS Credit Units: 7, Prerequisite: MBG 101.*

MBG 105 Principles of Biology
This course is for students from the Physics, Chemistry and Mathematics Departments. Molecules of life, organization of the cell, chromosomes and cell division, patterns of inheritance, evolution, recombinant DNA technology, genetic diseases. *Credit units: 3 ECTS Credit Units: 5. Aut (İ. Gürsel, T. Yağcı)*

MBG 110 Introduction to Modern Biology
This course is for students from Faculty of Engineering. Molecules of life, organization of the cell, chromosomes and cell division, genetics, molecular genetics, recombinant DNA technology, genetic diseases, evolution, animal development, biotechnology. *Credit units: 3 ECTS Credit Units: 6. Aut (T. Özçelik, M. C. Yakıcıer)*

MBG 209 Principles of Genetics
Transmission genetics, gene and chromosomal mutations, linkage and mapping, molecular genetic applications, population and quantitative genetics, molecular evolution, model organism genomics and bioinformatics. *Credit units: 3 ECTS Credit Units: None. Aut (Ö. Konu)*

MBG 210 Genetics
Mendelian genetics, chromosome theory of inheritance, linkage, genetic mapping in eukaryotes and prokaryotes, chromosomal mutations, gene mutations, molecular genetics, population genetics, quantitative genetics, molecular evolution. *Credit units: 4 ECTS Credit Units: 7. Aut (Ö. Konu)*

MBG 222 Fundamentals of Molecular Genetics
Molecular biology of gene regulation, fundamentals of DNA repair and recombination, detailed analysis of transposition and retroposition in eukaryotes, molecular mechanisms of eukaryotic and prokaryotic protein synthesis. *Credit units: 3 ECTS Credit Units: 6.*

MBG 223 Molecular Genetics
Mechanism of protein synthesis, usage of the genetic code, protein localization, the structure of genetic material, regulation of transcription, recombination, repair, and transposition in bacteria, an introduction to gene rearrangements. (Laboratory work is obligatory) *Credit units: 4 ECTS Credit Units: 7.*

MBG 231 Techniques Used in Molecular and Cellular Biology
Basic technics in molecular biology and genetics, animal models for gene function analysis, PCR based technologies, cloning technics, high-throughput genome end gene expression analysis methods, cell biology techniques. *Credit units: 2 ECTS Credit Units: None.*

MBG 301 Molecular Biology of the Cell I
Cell signaling, cell cycle regulation, cell functions, adhesion and extracellular matrix, techniques used in cell biology; transfections, immunoblots, immunoprecipitation, immunofluorescence. *Credit units: 3 ECTS Credit Units: 6. Aut (A. Güre)*

MBG 302 Molecular Biology of the Cell II
Germ cells and fertilization, early embryonic development, stem cells, generation and maintenance of differentiated cells, immune cells, cancer cells, specialized techniques in cell biology, light and fluorescent microscopy, flow cytometry, techniques used for cell proliferation and apoptosis studies. (Laboratory work is obligatory) MBG 301, consent of the instructor. *Credit units: 4 ECTS Credit Units: 6.*

MBG 309 Principles of Biochemistry
This course is for students from the Chemistry Department. The molecules of the life (DNA, RNA, and Proteins), their building blocks and chemical bonds protein structures and functions enzyme kinetics, motor proteins and protein analysis techniques. *Credit units: 3 ECTS Credit Units: 6. Aut (R. Çetin-Atalay)*

MBG 311 Biochemistry I
Introductory biochemistry, bioenergetics, protein structure, protein purification and characterization, enzymatic activity, kinetics, allostery, vitamins and coenzymes. *Credit units: 4 ECTS Credit Units: 6. Aut (R. Çetin-Atalay)*

MBG 312 Biochemistry II
Introduction to intermediary metabolism, polysaccharides, energy storage, lipids and membrane structure nucleic acid structure and nucleotide metabolism. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: consent of the instructor.*

MBG 316 Physiology
Homeostatic and biological control mechanisms in major body systems, including skeletal system, muscle system, nervous system, circulatory system, respiratory system, digestive system, excretory system, reproductive system and immune system. *Credit units: 3 ECTS Credit Units: 6.*

MBG 324 Molecular Biology of the Gene
Molecular biology of eukaryotes including genome organization and chromosome structure, gene structure, protein structure and synthesis, regulation of gene expression. RNA splicing and processing, catalytic RNA. (Laboratory work is obligatory) *Credit units: 4 ECTS Credit Units: 6. Aut (I. Yuluğ)*

MBG 326 Introduction to Bioinformatics
Computer use in molecular biology networks, access to online databases, structure comparison, structure prediction. Homology based protein 3-D structure modeling. *Credit units: 3 ECTS Credit Units: 6. Aut (Ö. Konu)*

MBG 338 Microbiology
Structure, growth and physiology of microorganisms, classification of bacteria, diverse activities of bacteria, viruses, microbial pathogenicity, exploitation of microorganisms by man. *Credit units: 4 ECTS Credit Units: 6.*

MBG 391 Summer Practice
A project on a special topic in an area of biology to be carried out by the student under the supervision of a faculty member, at the department or another institution. *Credit units: None ECTS Credit Units: None. Aut (I. Yuluğ)*

MBG 415 Genetic Engineering and Biotechnology
Use of higher eukaryotes (plants and animals) in biotechnology, transgenic animals as models of human disease, production of bioactive macromolecules in transgenic animals, production, purification and industrial use of recombinant proteins. *Credit units: 3 ECTS Credit Units: 6.*

MBG 416 Science and Ethics
Scientific concepts, history of science, the birth of modern science, science and society, ethics of science. *Credit units: 3 ECTS Credit Units: 6. Aut (U. H. Tazebay)*

MBG 418 Genomics
Structural organisations of human, D. melanogaster, C. elegans, A. thaliana, and yeast genomes. Gene orthologs, repetitive sequences, evolutionary aspects, functional genomics approaches and methodologies. *Credit units: 4 ECTS Credit Units: 6.*

MBG 451 Concepts in Biology I
This course is for students from Faculty of Education. Molecules of life, central dogma (DNA, RNA, protein) organization of the cell, embryogenesis, genetic diseases, evolution. *Credit units: 3 ECTS Credit Units: 6.*

MBG 452 Practical Biology
This course is for students from faculty of Education. Practical techniques for the biology laboratory, biological experiments, and problem solving in biology. The course involves one hour of discussion and four hours of laboratory work per week. The students carry out practical projects. *Credit units: 3 ECTS Credit Units: 6. Aut (G. McDonald)*

MBG 470 Immunology
Adaptive and innate immunity, humoral and cell mediated immunity, the lymphoid system, antibody structure and function, antigen-antibody interactions, the antibody response, immunological tolerance, immunity to diseases, complements and hypersensitivity, cytokines, major histocompatibility complex. *Credit units: 3 ECTS Credit Units: 6. Aut (T. Yağcı)*

MBG 471 Membrane Biology
Membrane composition and structure in living organisms, mechanisms of membrane transport, structure-function relationships in transporter proteins, post-translational and transcriptional regulation of transporters in bacteria, in lower eukaryotes, and in man. *Credit units: 3 ECTS Credit Units: 6.*

MBG 472 Introduction to Stem Cells
Basic biology of embryonic, adult and cancer stem cells. Molecular mechanisms of self renewal, differentiation and plasticity. Reproductive and therapeutic cloning. Epigenetic changes associated with stem cells. Use of stem cells in cell based therapies and its ethical considerations. *Credit units: 3 ECTS Credit Units: 6. Aut (K. C. Akçalı)*

MBG 473 Biomolecules, Biomaterials and Bioprocesses
Utilization of biological macromolecules as a biomaterial, principles applied to harness these biological complex molecules in biology, medicine and pharmaceutical biotechnology discussion of the selected cutting edge research papers. *Credit units: 3 ECTS Credit Units: 6. Aut (İ. Gürsel)*

MBG 474 Introduction to Computational Biology
Introduction to computational Biology: Methods and exercises in phylogenetics, microarray data analysis, systems biology. *Credit units: 3 ECTS Credit Units: 6.*

MBG 480 Cell Cycle and Apoptosis
Mechanisms and molecules regulating cell cycle and apoptotic cell death, roles of cell proliferation and apoptosis in the development of multicellular organisms, aberrations of cell cycle and apoptosis regulation in cancer development and degenerative diseases. *Credit units: 3 ECTS Credit Units: 6.*

MBG 481 Protein Chemistry
Introduction to protein structure and the principles of protein structure with examples of key proteins. Specific examples of proteins to show how they fulfill a wide range of biological functions. In silico approaches to determining and predicting protein structure. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: MBG 311, consent of the instructor.*

MBG 482 Computational Approaches to Biology
Introduction to computational biology, sequence alignments, Dynamic Programming, Distance matrices, protein domain families, phylogenetics, secondary structure predictions, protein folding and structure prediction. *Credit units: 3 ECTS Credit Units: 6.*

MBG 483 Developmental Biology
Embryonic development of Drosophila, zebrafish, chick, xenopus and mouse. Manipulating gene expression during development. Analyzing gene function during development. Analyzing cell fate and tissue interactions in embryos. *Credit units: 3 ECTS Credit Units: 6.*

MBG 485 DNA Damage and Repair Mechanisms
Homologous recombination and role of double strand breaks, base excision repair pathway, mismatch repair, nucleotide excision repair and links with transcription, DNA double strand break repair and V(D)J recombination, cellular responses to DNA damage. *Credit units: 3 ECTS Credit Units: 6.*

MBG 487 Special Techniques in Molecular Genetics
Principles of specific methods used in the molecular genetics site-directed mutagenesis, phage display technology, cDNA selection, exon trapping, library making and screening. Discussions of selected research papers. (No lab session.) *Credit units: 3 ECTS Credit Units: 6.*

MBG 488 Introduction to Human Genetics
Principles of human genetics, patterns of single gene inheritance, human molecular genetics, the human gene map, cytogenetics, the molecular and biochemical basis of genetic disease, genetic counseling, prenatal diagnosis. *Credit units: 3 ECTS Credit Units: 6.*

MBG 489 Genetics and Biology of Cancer
Genetic changes in cancer, phenotype of cancer cells, oncogenes, tumor suppressor genes, hereditary cancers, cell cycle, apoptosis, senescence, DNA repair and cancer, multicellular interactions in cancer. *Credit units: 3 ECTS Credit Units: 6.*

MBG 491 Senior Project I
A project on a specific topic in an area of molecular biology or genetics to be carried out by the student under the supervision of a faculty member. *Credit units: 3 ECTS Credit Units: 6. Aut (R. Çetin-Atalay, T. Yağcı)*

MBG 492 Senior Project II
A project on a specific topic in an area of molecular biology or genetics to be carried out by the student under the supervision of a faculty member. *Credit units: 3 ECTS Credit Units: 6.*

GRADUATE COURSES

MBG 502 Advanced Cellular Biology
Cell structure and function, the cytoskeleton, intracellular compartments, vesicular trafficking, the cell-division cycle, cell junctions, cell adhesion, extracellular matrix and development. *Credit units: 3 ECTS Credit Units: 6.*

MBG 503 Advanced Molecular Biology
Chromosomal DNA and its packaging, higher-order organization of chromosomes, replication, recombination, control of gene expression, signaling pathways, cell cycle. Obligatory for master students. *Credit units: 3 ECTS Credit Units: 6. Aut (I. Yuluğ)*

MBG 505 Advanced Molecular Genetics
Organization of the genome, Mendelian and non-Mendelian inheritance, mitochondiral genome, mutigene families and repetitive DNA, polymorphism and polymorphic markers, genetic mapping, physical mapping, models of studying gene structure and function. (Obligatory for master students) *Credit units: 3 ECTS Credit Units: 6. Aut (U. H. Tazebay)*

MBG 509 Special Topics in Molecular Biology I
Current topics in molecular biology, comprehensive reading, critical evaluations of scientific references, seminar presentations and class participation. *Credit units: 3 ECTS Credit Units: 6. Aut (M. C. Yakıcıer)*

MBG 510 Special Topics in Molecular Biology II
Current topics in molecular biology, comprehensive reading, critical evaluations of scientific references, seminar presentations and class participation. *Credit units: 3 ECTS Credit Units: 6.*

MBG 511 Basic Protocols in Molecular Biology
Basic techniques widely used in molecular biology and genetics will be discussed (Obligatory for master's degree students). *Credit units: 3 ECTS Credit Units: 6.*

MBG 513 Bioinformatics
Commonly used databases in molecular biology, genetics and related fields, homology search for genes and proteins, primer design, molecular operations, restriction mapping, structure prediction. *Credit units: 3 ECTS Credit Units: 6.*

MBG 514 Stem Cell Biology
The basic features of stem cell biology including concepts like self renewal, biological niches and differentiation. Derivation, manipulation, and differentiation of embryonic, adult, cancer stem cells in both mice and humans. Reproductive and therapeutic cloning. Existing as well as potential clinical applications and ethic considerations of stem cell therapy. *Credit units: 3 ECTS Credit Units: 3.*

MBG 515 Principles of Protein Structure
Principles of protein structure, with examples of key proteins in their biological context. Discussions of selected research papers. *Credit units: 3 ECTS Credit Units: 3.*

MBG 517 Computational Biology
Sequence analysis, comparative genomics and phylogenetics, expression analysis, and systems biology. *Credit units: 3 ECTS Credit Units: None.*

MBG 522 Recent Developments in Cellular Biology
Recent developments in cellular structure and function, intracellular trafficking, cytoskeleton, cell adhesion, extracellular matrix and development. Discussion on the related selected articles from leading journals. *Credit units: 3 ECTS Credit Units: 6.*

MBG 523 Recent Developments in Molecular Biology
Latest developments and emerging issues in molecular biology including nucleosome and chromatin structure, RNA polymerase II Holoenzyme and its roles, transcription and regulation, chromatin modifying and remodeling complexes, tissue specific gene expression, DNA replication, repair and recombination, cell cycle and regulation. Discussion on the selected articles. *Credit units: 3 ECTS Credit Units: 6.*

MBG 524 Seminars in Molecular Biology
Recent advances in the field of Molecular Biology will be discussed. Newly emerging concepts in Molecular Biology will be introduced to and discussed with students. Class discussions on recent articles published in high impact journals in the field. *Credit units: None ECTS Credit Units: None.*

MBG 599 Master's Thesis
Credit units: None ECTS Credit Units: 24. Aut (Staff)

MBG 601 Human Genetics
This course is offered every two years alternating with MBG 603 and MBG 615. Molecular genetics of human diseases, genetic basis of cancer, DNA repair and deficiencies will be among the topics to be discussed. *Credit units: 3 ECTS Credit Units: 6.*

MBG 602 Molecular and Cellular Immunology
Basic elements of the immune system, molecular biology of antigen recognition, B and T lymphocytes, cellular and genetic basis of immunity, regulation and development of immune system, immune system deficiencies in humans, vaccination and adaptive immunetherapy. *Credit units: 3 ECTS Credit Units: 6. Aut (T. Yağcı)*

MBG 603 Molecular Bases of Cancer
Cancer as a multi gene disease, oncogenes, tumor suppressor genes, mutator genes, gene therapy of cancer, germ-line and somatic mutations and cancer, genes involved in abnormal proliferation and metastatic behavior of cancer cells, immune response to cancer, familial cancers, virus-induced cancers. *Credit units: 3 ECTS Credit Units: 6. Aut (M. Öztürk)*

MBG 607 Gene Therapy
Current topics in human somatic cell gene therapy, viral and nonviral gene transfer techniques, gene therapy applications in hereditary and acquired diseases, ethical issues in genetic modification of humans. *Credit units: 3 ECTS Credit Units: 6.*

MBG 608 Principles of Gene Expression
Mechanisms of transcription, chromatin modifying and remodeling complexes, regulation of tissue specific gene expression, consequences of gene expression deregulation. *Credit units: 3 ECTS Credit Units: 6.*

MBG 612 Special Topics in Genetics I
Current topics in molecular genetics, comprehensive reading, critical evaluation of scientific literatures seminar presentations and class participation. *Credit units: 3 ECTS Credit Units: 6. Aut (M. C. Yakıcıer)*

MBG 613 Special Topics in Genetics II
Current topics in molecular genetics, comprehensive reading, critical evaluation of scientific literatures seminar presentations and class participation. *Credit units: 3 ECTS Credit Units: 6.*

MBG 614 Advanced Protocols in Molecular Biology
Techniques widely used in molecular biology and genetics. (Obligatory for master's degree students who did not take MBG 511). *Credit units: 3 ECTS Credit Units: 6.*

MBG 615 Recent Advances in Molecular Biology
Latest developments and emerging issues on molecular biology including cancer, cell-cell interactions, extra-cellular matrix, signal transduction, chromatin formation. Discussions on recent techniques with active student participation. *Credit units: 3 ECTS Credit Units: 6.*

MBG 616 Experimental Molecular Biology and Genetics I
An introduction to basic molecular biology and genetics techniques. The student spends a half semester with one of the research groups and participates in some aspects of the research being pursued by the faculty member. *Credit units: 3 ECTS Credit Units: 6. Aut (T. Özçelik)*

MBG 617 Experimental Molecular Biology and Genetics II
An introduction to advanced molecular biology and genetics techniques. The student spends a half semester with one of the research groups and participates in some aspects of the research being pursued by the faculty member. *Credit units: 3 ECTS Credit Units: 6.*

MBG 618 Advanced Developmental Biology
The concepts of development in a variety of organisms. Molecular mechanisms of embryonic development in model organisms. Early development, developmental abnormalities. The correlation between the expression and function of gene and cell fate and tissue interactions. Discussion of classic and current research articles. *Credit units: 3 ECTS Credit Units: 6. Aut (K. C. Akçalı)*

MBG 619 Advanced Membrane Biology
Molecular structures of biological membranes, translocation and topogenesis of proteins in cell membrane with particular emphasis on translocation of solute transporters, structure-function relationships in membrane transporters, regulatory mechanisms controlling transporter expression and function in prokaryotes and in eukaryotes. *Credit units: 3 ECTS Credit Units: 6.*

MBG 620 Cell Proliferation and Death
Molecular mechanisms that govern cell proliferation and programmed cell death, role of both processes in the development and homeostasis of multicellular organisms, aberrations of cell proliferation and apoptosis in diseases including cancer and degenerative diseases. *Credit units: 3 ECTS Credit Units: 6.*

MBG 622 Recent Developments in Immunology
Signaling pathways involved in the ontogenesis of immune effector cells; Activation of T and B lymphocytes; Regulation of adaptive immunity by the innate immune system; Immune evasion of virally infected and tumoral cells; Immunity in diseases; Therapeutic approaches based on the manipulation of immune system. Discussions through the articles published in the leading journals of the field. *Credit units: 3 ECTS Credit Units: None.*

MBG 623 Seminars in Molecular Genetics I
The course will be based on class presentations and discussions of novel concepts in Molecular Genetics. Articles selected by the staff will be introduced and discussed with the students in the form of paper presentations and seminars. Students will be encourage to carry out a critical analysis of novel as well as milestone “classical” articles in the field of Molecular Genetics. *Credit units: None ECTS Credit Units: None.*

MBG 624 Seminars in molecular Genetics II
The course will be based on class presentations and discussions of novel concepts in Molecular Genetics. Articles selected by the staff will be introduced and discussed with the students in the form of paper presentations and seminars. Students will be encourage to carry out a critical analysis of novel as well as milestone “classical” articles in the field of Molecular Genetics. *Credit units: None ECTS Credit Units: None.*

MBG 699 Ph.D. Dissertation
Credit units: None ECTS Credit Units: 24. Aut (Staff)

DEPARTMENT OF PHYSICS

A. Erçelebi (Chair), M. Aydın, A. Aydınlı, C. Bulutay, S. Çıracı, H. V. Demir, O. Gülseren, T. Hakioğlu, F. Ö. İlday, C. Kocabaş, M. Ö. Oktel, E. Özbay, B. Tanatar, C. Yalabık.

The Department of Physics offers courses that lead to B.S., M.S., and Ph.D. degrees.

The department recently established a new compound semiconductor research and technology laboratory consisting of Class 100 and Class 10 000 clean rooms housing a mask aligner, SEM, PECVD, RIE, UHV evaporator, magnetron sputterer, RTP, I-V, C-V and microwave measurement setups. Experimental research areas include STM, PL and Raman Spectroscopy and III-V micro and optoelectronic device technologies. Theoretical research areas include the study of scanning tunneling and force microscopy, surface physics, mesoscopic physics, superlattices, high temperature superconductivity, statistical mechanics, and quantum optics.

UNDERGRADUATE PROGRAM

The undergraduate program is structured with the assumption that the student will continue his or her education towards an M.S. and a Ph.D. degree in Physics. The Department therefore admits a small number of highly qualified students every year. The program enables the student to attain a basic background in all areas of physics and at the same time provides a solid background in the area of condensed matter physics. A number of elective courses are offered for students whose interests may develop in other areas.

UNDERGRADUATE CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
CHEM 101	Principles of Chemistry I	4 / 6
ENG 101	English and Composition I	3 / 6
GE 100	Orientation	1 / 1
MATH 113	Single Variable Calculus	4 / 7
PHYS 111	Mechanics	5 / 7
PHYS 120	Orientation for Physics Majors	1 / 2
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
CHEM 102	Principles of Chemistry II	4 / 6
ENG 102	English and Composition II	3 / 6
MATH 114	Multi Variable Calculus	4 / 7
PHYS 112	Electricity and Magnetism	5 / 7
PHYS 122	Orientation for Physics Majors II	1 / 3
TURK 102	Turkish II	2 / 1

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
HISTR 201	History of Turkish Republic I	2 / 1
MATH 220	Linear Algebra	3 / 6
MATH 240	Differential Equations	3 / 6
MBG 105	Principles of Biology	3 / 5
PHYS 205	Classical Mechanics I	3 / 6

Spring Semester		Credits / ECTS Credits
CS 111	Introduction to Computing in Engineering and Science	3 / 5
HISTR 202	History of Turkish Republic II	2 / 1
PHYS 206	Classical Mechanics II	3 / 6
PHYS 226	Quantum Physics	3 / 6
PHYS 244	Mathematical Methods of Physics I	3 / 6

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
HUM 121	The Mediterranean World to 1600	3 / 6
PHYS 245	Mathematical Methods of Physics II	3 / 6
PHYS 315	Electromagnetic Theory I	3 / 6
PHYS 325	Quantum Mechanics I	3 / 7
PHYS 371	Numerical Methods in Physics	3 / 6

Spring Semester		Credits / ECTS Credits
HUM 122	The Mediterranean World and Beyond, 1600 to the Present	3 / 6
PHYS 316	Electromagnetic Theory II	3 / 6
PHYS 326	Quantum Mechanics II	3 / 6
PHYS 334	Statistical Physics	3 / 6
PHYS 374	Experimental Methods of Physics	4 / 6

FOURTH YEAR

Autumn Semester		Credits / ECTS Credits
PHYS 415	Optics	4 / 6
PHYS 445	Condensed Matter Physics I	3 / 6
PHYS 491	Senior Project I	3 / 6
	Technical Elective (2)	3 / 6
	Nontechnical Elective	3 / 6

Spring Semester		Credits / ECTS Credits
PHYS 446	Condensed Matter Physics II	3 / 6
PHYS 453	Nuclear and Particle Physics	3 / 6
	Technical Elective (2)	3 / 6
	Nontechnical Elective	3 / 6

RESTRICTED ELECTIVES

PHYS 438	Atomic and Molecular Physics	3 / 6
PHYS 440	Introduction to Quantum Transport Phenomena in Solids	3 / 6
PHYS 442	Introduction to Nonlinear and Quantum Optics	3 / 6
PHYS 447	Optical Properties of Solids	3 / 6
PHYS 448	Magnetic Properties of Solids	3 / 6
PHYS 449	Group Theory	3 / 6
PHYS 451	Introduction to Many Body Theory	3 / 6
PHYS 452	Elementary Excitations in Solids	3 / 6
PHYS 475	Semiconductor Device Physics	3 / 6
PHYS 476	Quantum Electronics	3 / 6
PHYS 480	Field Theory	3 / 6
PHYS 481	Theory of Relativity	3 / 6
PHYS 482	Elementary Particles	3 / 6

TECHNICAL ELECTIVES

Any 300 or higher level CHEM, CS, EE, IE, MATH, or PHYS course or with the consent of the advisor.

GRADUATE PROGRAM

The graduate program aims to develop students into scientists who can pursue original and creative research activities. This program is an important part of the research activity which aims to produce significant scientific output on an international level. The graduate program emphasizes research in various fields of condensed matter physics, in relation to the rapidly developing high technology fields. Presently, research is in progress in the theoretical and experimental study of tunneling, physics of electrons in lower dimensionalities, high temperature superconductivity, statistical mechanics, properties of new materials, fabrication and theoretical analysis of new devices.

Master of Science in Physics

Admission: Applicants are required to have a B.S. degree in Physics or in related fields of science and engineering. Evaluation of applicants is based on their ALES scores, past academic record, reference letters and the interview at Bilkent University. Applicants who cannot take the ALES examination will be evaluated based on GRE scores. Satisfactory knowledge of English is required. (Also refer to the "Graduate Admissions" section in the introduction of this catalog for the general graduate admission requirements.)

Degree Requirements: In addition to at least 24 credit units of course work, the M.S. degree candidate must prepare and successfully defend a thesis. The normal duration of M.S. study is 4 semesters. However, this duration may be extended for up to two more semesters subject to the approval of the Graduate Institute.

Doctor of Philosophy in Physics

Admission: Applicants must have an M.S. degree in Physics (or in a relevant field of science or engineering), and must take the graduate program entrance examination at Bilkent, given during Spring semester of each year. Applicants who cannot take the entrance examination at Bilkent, will be evaluated based on GRE scores. Satisfactory knowledge of English is required. (Also refer to the "Graduate Admissions" section in the introduction of this catalog for the general graduate admission requirements.)

Degree Requirements: Twenty-four credit units of course work beyond the M.S. level or forty-eight credits of course work beyond the B.S. level is required. The Ph.D. candidate is expected to pass an English examination, a qualifying examination and thesis proposal. Preparing and defending a dissertation based on original research is the essence of the program. The normal duration of Ph.D. study is 8 semesters for students with M.S. degree and ten semesters for students with B.S. degree. However, subject to the approval of the Graduate Institute, these durations may be extended for up to two more semesters.

COURSE DESCRIPTIONS

UNDERGRADUATE COURSES

PHYS 101 General Physics I
Standards and units; vectors and coordinate systems; kinematics; dynamics; work, energy and power; conservation of energy; dynamics of system of particles; collisions; rotational kinematics and dynamics; equilibrium of rigid bodies; oscillations. *Credit units: 4 ECTS Credit Units: 6. Aut (A. Aydınlı, C. Bulutay, T. Hakioğlu, C. Kocabaş, E. Özbay)*

PHYS 102 General Physics II
Charge and matter; electric field and Gauss' law; DC circuits; magnetic field; Ampere's law; Faraday's law; inductance; magnetic properties of matter; Maxwell's equations. *Credit units: 4 ECTS Credit Units: 6, Prerequisite: MATH 101 or MATH 111 or MATH 113 or PHYS 101. Aut (M. Aydın)*

PHYS 105 Engineering Physics I
Vectors and coordinate systems; kinematics; dynamics; work, energy and power; conservation of energy; dynamics of system of particles; collisions; rotational kinematics and dynamics; equilibrium of rigid bodies oscillations; wave phenomena; gravitation; fluid mechanics; fundamental concepts in thermodynamics. *Credit units: 4 ECTS Credit Units: 8. Aut (S. Çıracı)*

PHYS 106 Engineering Physics II
Charge and matter; electric field and Gauss' law; DC circuits; magnetic field; Ampere's law; Faraday's law; inductance; magnetic properties of matter; Maxwell's equations; electromagnetic waves; geometric optics; interference; diffraction; introductory topics in modern physics. *Credit units: 4 ECTS Credit Units: 8.*

PHYS 107 Basic Physics I
The course aims to present the basic concepts and laws of mechanics at the level where the relevant mathematics does not require a priori knowledge of calculus. The topics studied include: vectors; translational and rotational

kinematics and dynamics of particies and systems; work and energy; collions; harmonic oscillations. *Credit units: 4 ECTS Credit Units: 6. Aut (M. Aydın)*

PHYS 108 Basic Physics II
The course aims to present the basic concepts and laws of electricity and magnetism at the level where the relevant mathematics does not require a priori knowledge of calculus. The topics studied include: charge and matter; Coulomb's law; electric field and potential; DC circuits; magnetic field; Ampere's and Faraday's laws. *Credit units: 4 ECTS Credit Units: 6.*

PHYS 111 Mechanics
Vectors and coordinate systems; kinematics, dynamics; work and energy; dynamics of system of particles; conservation of energy and momentum, collisions; rotational kinematics and dynamics; equilibrium of rigid bodies; oscillations; gravitation; waves; fluid mechanics; thermodynamics. *Credit units: 5 ECTS Credit Units: 7. Aut (S. Çıracı)*

PHYS 112 Electricity and Magnetism
Charge and matter; electric field and Gauss' law; DC circuits; magnetic field; Ampere's law; Faraday's law; inductance; magnetic properties of matter; Maxwell's equations; electromagnetic waves; optics. *Credit units: 5 ECTS Credit Units: 7, Prerequisite: MATH 113.*

PHYS 117 Basic Physics I
The course aims to present the basic concepts and laws of mechanics at the level where the relevant mathematics does not require a priori knowledge of calculus. The topics studied include: vectors; translational and rotational kinematics and dynamics of particies and systems; work and energy; collions; harmonic oscillations. *Credit units: 3 ECTS Credit Units: 4.*

PHYS 118 Basic Physics II
The course aims to present the basic concepts and laws of electricity and magnetism at the level where the relevant mathematics does not require a priori knowledge of calculus. The topics studied include: charge and matter; Coulomb's law; electric field and potential; DC circuits; magnetic field; Ampere's and Faraday's laws. *Credit units: 3 ECTS Credit Units: 4.*

PHYS 120 Orientation for Physics Majors
Introduction to the different aspects of the "physics department" for first year physics majors. Students will be introduced to the department and its members. Faculty members and students meet once a week for discussions and presentations to introduce a variety of subjects areas. Students are expected to become familiar with their prospective academic life as a physicist. *Credit units: 1 ECTS Credit Units: 2. Aut (A. Erçelebi)*

PHYS 122 Orientation for Physics Majors II
Introduction to various aspects of the "Physics Department" for first year physics majors. Faculty members and students meet once a week for discussion and presentations students are expected to become familiar with their prospective academic life as a Physicist. *Credit units: 1 ECTS Credit Units: 3.*

PHYS 200 Physics for Poets
This course aims to present basic ideas of modern science to non-science majors with very little background in mathematics and physics. Scientific objectivity, science of mechanics, Newton's laws, electricity and magnetism, waves, special and general relativity, cosmology, atoms, particles and waves, uncertainty principle, quantum theory, fundamental constituents of matter, forces of nature. *Credit units: 3 ECTS Credit Units: 5.*

PHYS 205 Classical Mechanics I
Elements of Newtonian mechanics; motion of particle; motion of system of particles; motion of rigid body; gravitation; central force problems; special theory of relativity. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

PHYS 206 Classical Mechanics II
Principles of least action; Lagrange's equations of motion; Hamilton's equations of motion; theory of small vibrations. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: PHYS 205.*

PHYS 226 Quantum Physics
Old quantum theory; elementary introduction to quantum physics; Schrödinger equation, uncertainty principle, correspondence principle; one dimensional problems; angular momentum; hydrogen atom. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 230 Quantum Mechanics Laboratory
Field emission microscope; emission and absorption spectra; Balmer series of hydrogen; Zeeman effect; optical pumping; Frank-Hertz experiment; determination of Planck's constant; measurement of e/m; radioactive decay; scanning-tunneling microscopy. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 243 Methods of Mathematical Physics
Vector analysis, Fourier analysis; Sturm-Liouville theory; orthogonal polynomials, special functions, complex analysis. *Credit units: 4 ECTS Credit Units: 6, Prerequisite: MATH 114.*

PHYS 244 Mathematical Methods of Physics I
Vector analysis, Curvilinear coordinates, Algebra of series, Series of functions, Functions of a complex variable, Calculus of residues, Complex integration, Partial differential equations, Sturm-Liouville theory, Green's functions. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 245 Mathematical Methods of Physics II
Special functions of mathematical physics, Hypergeometric functions, Integral transforms, Integral equations, Variational theory. *Credit units: 3 ECTS Credit Units: 6. Aut (A. Erçelebi)*

PHYS 315 Electromagnetic Theory I
Electrostatics; Coulomb's and Gauss' laws, the scalar potential. Solutions to the Laplace equation in rectangular, spherical and cylindrical coordinate systems with various boundary conditions. Poisson's equation; energy in the electric field; electrostatics of materials; capacitance. Magnetostatics: Biot-Savart and Ampere's laws, the field vector potential; energy in the magnetic field; magnetostatics of materials; Faraday's law; inductance. *Credit units: 3 ECTS Credit Units: 6. Aut (C. Bulutay)*

PHYS 316 Electromagnetic Theory II
Maxwell's equations; electromagnetic waves; reflections from boundaries; propagation in waveguides; radiation from accelerating charges; Lorentz transformations of electric and magnetic fields. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: PHYS 315 or consent of the instructor.*

PHYS 325 Quantum Mechanics I
Wave packets and uncertainty; the postulates of quantum mechanics; eigenfunctions and eigenvalues; simple problems in one dimension; general structure of wave mechanics; operator methods in quantum mechanics; harmonic oscillator; path integral formulation of quantum mechanics; systems of many degrees of freedom; symmetry; rotational invariance and angular momentum; hydrogen atom. *Credit units: 3 ECTS Credit Units: 7. Aut (M. Ö. Oktel)*

PHYS 326 Quantum Mechanics II
Spin; addition of angular momenta; approximation methods in quantum mechanics; atoms and molecules; scattering theory; quantum theory of electromagnetic radiation. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: PHYS 325.*

PHYS 327 Quantum Mechanics
Wave function, time-independent Schrödinger equation, Formalism, Quantum Mechanics in three dimensions, identical particles, spin. *Credit units: 3 ECTS Credit Units: None, Prerequisite: MATH 220.*

PHYS 334 Statistical Physics
The laws of thermodynamics; applications of thermodynamics; basic probability concepts; elementary kinetic theory; classical microcanonical, canonical and grand canonical ensembles; classical ideal gas; equipartition of energy; quantum mechanical ensembles; ideal Fermi and Bose systems; black body radiation, phonons, the electron gas; magnetism; introductory nonequilibrium statistical physics. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 371 Numerical Methods in Physics
Solutions to linear systems of equations; roots of polynomials and other nonlinear functions; statistical applications; determinants, eigenvalues, and eigenvectors, solutions to differential equations; applications of FFT; utilization of scientific software packages. (Emphasis will be placed on physical applications.) *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

PHYS 372 Methods in Computational Physics
Advanced topics in numerical to scientific problems. This course will emphasize student project work. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 374 Experimental Methods of Physics
Laboratory safety, principles of experimentation, statistical analysis of data such as error calculation, propagation of error, least squares fitting, instrumentation techniques such as vacuum physics and technology, temperature measurements, cryogenics and selected experiments in modern physics such as Franck-Hertz experiment, x-ray diffraction, electron diffraction, superconductivity, electron spin resonance, gamma absorption. *Credit units: 4 ECTS Credit Units: 6.*

PHYS 415 Optics
Free and forced oscillations; traveling waves; principle of superposition; modulations; pulses and wave packets; electromagnetic waves; reflection, refraction, interference, diffraction and polarization; interferometry; holography. *Credit units: 4 ECTS Credit Units: 6. Aut (F. Ö. İlday)*

PHYS 420 Nanoscience and Nanotechnology I
General survey of nanoscience and nanotechnology, Atomic scale characterization and processes: Scanning probe microscopies: STM/AFM and atomic manipulation, Nanofabrication, Carbon Nanotubes, Nanowires, Transport in nanostructures, Nanoelectronics, Nanomagnetism, Spintronics. *Credit units: 3 ECTS Credit Units: None. Aut (O. Gülseren)*

PHYS 421 Nanoscience and Nanotechnology II
Electronic structure of nanostructures, carbon nanotubes, nanowires, Transport in nanostructures, landauer-Büttiker formalism, nanoelectronics molecular electronics, nanodevices, nanomagnetism, spintronics. *Credit units: 3 ECTS Credit Units: None.*

PHYS 438 Atomic and Molecular Physics
Transition properties and the selection rules for atoms; many electron atoms; Born-Oppenheimer approximation; molecular structure; electronic, vibrational, and rotational energies of molecules; general methods for calculations; spectroscopic methods. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 440 Introduction to Quantum Transport Phenomena in Solids
Equilibrium and non-equilibrium states in ultrasmall systems; fluctuation dissipation theorem; Kubo formula for linear response; electron-phonon interaction; electron conduction in a magnetic field; quantum localization and metal-insulator transition; Aharonov-Bohm effect; mesoscopic space and charge quantization effects; macroscopic quantum phenomena; Coulomb blockade of tunneling. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 442 Introduction to Nonlinear and Quantum Optics
Classical electromagnetic field; classical nonlinear optics; continuous waves approach in field interaction theory; elements of laser theory; optical bistability; saturation and modulation spectroscopy; time-dependent phenomena in lasers; coherent transients; quantized electromagnetic field; essentially quantum effects; system-reservoir interactions; quantum theory of laser. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 445 Condensed Matter Physics I
Crystal diffraction; crystal binding; phonons and lattice vibrations; thermal, acoustic and optical properties; free electron model; energy bands, electron-phonon interactions; semiconductors; transport properties. *Credit units: 3 ECTS Credit Units: 6. Aut (M. Ö. Oktel)*

PHYS 446 Condensed Matter Physics II
Dielectric properties; diamagnetism and paramagnetism; ferromagnetism and anti-ferromagnetism; magnetic resonance; electron-phonon interactions; super-conductivity; optical properties. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 447 Optical Properties of Solids
Macroscopic theory; fundamental theory with emphasis on the relationship between electronic structure and optical properties of solids. Representative semiconductors, insulators and metals; impurities and defects in solids; surface and interface states; optical properties of quantum well structures; photoemission; luminescence. *Credit units: 3 ECTS Credit Units: 6. Spr (C. Bulutay)*

PHYS 448 Magnetic Properties of Solids
Theory of magnetism; diamagnetic and paramagnetic behavior of solids; ferromagnetic, antiferromagnetic, and ferromagnetic solids; magnetic properties under the alternating field. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 449 Group Theory
Abstract group theory; theory of group representations; physical applications of group theory; full rotation groups and angular momentum; applications in molecular and solid state physics. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 451 Introduction to Many Body Theory
Interacting systems; Green's function of the single particle, Schrödinger equation; second quantization; quasiparticles; many-body Green's functions; self-energy and perturbation series; diagrammatic methods; temperature-dependent Green's function. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: PHYS 326 or consent of the instructor..*

PHYS 452 Elementary Excitations in Solids
Interacting electron gas; Plasmons; electron-hole interaction and excitons; phonons; spin waves and magnons; interaction processes; transport phenomena; virtual phonons and superconductivity; interaction with photons; thermal properties. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 453 Nuclear and Particle Physics
Introduction to subatomic particles; properties of nuclei and nucleons; spin and magnetic moments; nuclear reactions; radioactivity; alpha and beta decays; nucleon interactions and nucleon scattering at low energies; nuclear models; elementary particles. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 457 Special Topics in Theoretical Physics
Classical Statistical Mechanics, Quantum Statistics, Fermi gas, Electronic specific heat, The Richardson effect, Photoelectric effect, White dwarf starts, Transport problem, Pauli paramagnetism Landau diamagnetism, De Haas-Van Alphen effect, Quantum Hall effect, Base gas, Phinins, photons, Base-Einstein condensation. Interacting electron gas, Interacting Base gas. A few exactly soluble models, Mean-field approximation. Diffusion and Brownian motion, Fokker Fokker-Planck equation, Fluctuation-dissipation theorem. *Credit units: 3 ECTS Credit Units: None. Aut (B. Tanatar)*

PHYS 465 Semiconductor Device Physics
Review of semiconductor technology. Crystal growth and doping. Oxidation. Diffusion. Ion Implantation. Epitaxy. Review of MBE and MOCVD technology. Deposited films. Lithographic processes. Lateral device geometries and layout. Device and Circuit Fabrication. Characterization. Ohmics and Schottky Barrier Formation. p-n junction. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 467 Optoelectronic Innovative Designs
Credit units: 3 ECTS Credit Units: 6.

PHYS 473 Methods of Experimental Physics
Principles of experimentation; data collection and statistical analysis; chi-square test; least square fitting; laboratory safety, pressurized gases, vacuum physics and technology, cryogenics, temperature measurement, elements of optical systems, gratings, optical spectroscopy, mass electron, photon and neutron spectroscopies, low level electronic measurements. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 475 Semiconductor Device Physics
Semiconductor theory and semiconductor properties; equilibrium and nonequilibrium statistics, Boltzmann transport equations and transport properties, p-n junction diodes; metal-semi-conductor junctions; MOS capacitors; bipolar transistors; field-effect transistors; heterostructures. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 476 Quantum Electronics
Propagation of optical beams; optical resonators; interaction of radiation with matter; laser oscillations; specific laser systems; Q-switching and mode-locking; laser amplifiers; noise and modulation in lasers; non-linear optics. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 477 Ultrafast and Non Linear Optics
General introduction to the field of ultrafast optics and nonlinear optics. Nonlinear and dispersive pulse propagation, optical solutions, laser dynamics, mode-locking, ultrafast lasers, commonly used nonlinear optical processes. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 480 Field Theory
Classical field theory; canonical quantization; quantization of scalar, spinor and vector fields; interacting fields and perturbation theory; symmetries; Feynman graphs. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 481 Theory of Relativity
The concepts of space and time in classical mechanics; relativity principle of Galilee; special relativity; Lorentz transformations; introductory concepts in general relativity; experimental evidence for special and general relativity. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 482 Elementary Particles
Properties of elementary particles: spin, parity, hypercharge, etc.; interactions of elementary particles; group theory of subnuclear world, quark theory; experimental status of elementary particles. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: PHYS 326 or consent of the instructor.*

PHYS 491 Senior Project I
A project on a specific topic in an area of physics to be carried out by the student under the supervision of a faculty member. *Credit units: 3 ECTS Credit Units: 6. Aut (T. Hakioğlu)*

PHYS 492 Senior Project II
A project on a specific topic in an area of physics to be carried out by the student under the supervision of a faculty member. *Credit units: 3 ECTS Credit Units: 6.*

GRADUATE COURSES

PHYS 515 Advanced Optics
Photon and wave pictures of electromagnetic radiation. Huygen's principle, interference and interferometry, far-field and near-field diffraction, coherence, polarization, ray optics and optical resonators with ABCD matrix formalism. Selected modern topics such as fiber optics, optical communications, lasers, electro-optic modulation and nonlinear optics are discussed. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 520 Nanoscience and Nanotechnology I
General survey of nanoscience and nanotechnology, Atomic scale characterization and processes: Scanning probe microscopies: STM/AFM and atomic manipulation, Nanofabrication, Carbon Nanotubes, Nanowires, Transport in nanostructures, Nanoelectronics, Nanomagnetism, Spintronics. *Credit units: 3 ECTS Credit Units: None. Aut (O. Gülseren)*

PHYS 521 Nanoscience and Nanotechnology II
Electronic structure of nanostructures: carbon nanotubes, nanowires, transport in nanostructures: Landauer-Buttiker formalism, nanoelectronics, molecular electronics, nanodevices, nanomagnetism, spintronics. *Credit units: 3 ECTS Credit Units: None.*

PHYS 531 Quantum Communications and Information Processing I
Quantization of electromagnetic field. Quantum states of light; coherence; squeezing quantum noise. Quantum information and entropy. Classical and quantum measurement of photons; Mandel's formula; teleportation. Entanglement in atomic systems; Bell's inequalities; Zeilinger protocol. Entanglement and quantum cryptography. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 532 Quantum Communications and Information Processing II
Entropy and mutual information. Asymptotic equipartition. Shannon's theorems on classical source and channel coding. Von Neuman entropy. Quantum source coding. Accessible information: Holevo bound. Quantum channel coding theorem. Teleportation, superdense coding. Entanglement assisted communication. Quantum error correction. Quantum computation; Shor's algorithm. Quantum cryptography. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 538 Light-Matter Interactions
One- and multi-electron atoms; atoms in classical static and AC fields; diatomic molecules; molecules in external fields; quantization of electromagnetic field; mode expansion of quantized light; coupling of two-level systems with light; electromagnetically-induced transparency; coherent control of matter with light. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 541 Electromagnetic Theory I
Electrostatics. Magnetostatics. Boundary-value problems. Time varying fields and Maxwell's equations. Plane electromagnetic waves. Wave guides and resonant cavities. Simple radiating systems and diffraction. *Credit units: 3 ECTS Credit Units: 6. Aut (B. Tanatar)*

PHYS 542 Electromagnetic Theory II
Magnetohydrodnamics and plasma physics. Special theory of relativity. Relativistic particle kinematics and dynamics. Collisions. Radiation by moving charges. Bremsstrahlung. Radiative Beta-process. Multipole fields. Radiation damping. Self-fields of particles. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 543 Advanced Quantum Mechanics I
Basic principles of wave mechanics and Schrİodinger Equation. Eigenvalues and eigenfunctions. Angular momentum. Matrix formulation of quantum mechanics. Symmetry in quantum mechanics. *Credit units: 3 ECTS Credit Units: 6. Aut (C. Yalabık)*

PHYS 544 Advanced Quantum Mechanics II
Approximation methods, many particle systems, scattering theory, second quantization. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 545 Solid State Theory I
Crystals. Group theory. One-electron approximation. Energy-band theory. Pseudopotential theory. Total energy and force calculations. Dynamics of electrons. Electron transport theory. Localization of electron states. Impurity states. Surfaces. Green's functions for defect states. *Credit units: 3 ECTS Credit Units: 6. Aut (O. Gülseren)*

PHYS 546 Solid State Theory II
Lattice vibrations and phonons. Electron-phonon interactions. Collective excitations. Optical properties. Magnetic properties of solids. Superconductivity. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 547 Advances in Condensed Matter Physics I
Quantum theory of tunneling. Scanning tunneling microscopy. Scanning tunneling spectroscopy. Development of a formal theory for scanning tunneling electron microscopy. Tunneling in semiconductor superstructures. Applications in surface physics. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 550 Physics of Semiconductor Devices
Review of Semiconductor Physics. Electron Theory of solids. Semiconductors under equilibrium and non-equilibrium conditions. Impurity levels, excess carriers, radiative and nonradiative recombinations. Band line-up and heterojunction energy band diagrams. P-N heterojunction. Graded heterojunctions. Electrical properties of heterojunctions. New electronic and optoelectronic devices based on semiconductor superlattices. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 551 Analytical Mechanics
Constraints. Principle of least action and Lagrange equations. Symmetry and conservation laws. Hamilton equations of motion. Canonical transformations. Hamilton-Jacobi theory. Small oscillations. Mechanics of continuous media. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 552 Statistical Mechanics
Distribution functions; the concept of entropy, the H-function; classical statistical mechanics; ensembles, partition functions. The equipartition theorem. Quantum statistical mechanics: partition function, Fermi-Dirac and Bose-Einstein distributions. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 553 Methods of Mathematical Physics I
Sturm-Liouville theory. Special functions: Gamma functions; Bessel functions; Legendre polynomials; integral transforms; integral equations; calculus of variations. *Credit units: 3 ECTS Credit Units: 6. Aut (T. Hakioğlu)*

PHYS 557 Special Topics in Mathematical Physics I
Selected/advanced topics of current interest relevant to condensed matter physics will be discussed. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 559 Group Theory
Abstract group theory; theory of group representations; physical applications of group theory, full rotation groups and angular momentum; applications in molecular and solid state physics; permutation symmetry applications to many particle systems. *Credit units: 3 ECTS Credit Units: None.*

PHYS 561 Special Topics in Condensed Matter Physics I
Credit units: 3 ECTS Credit Units: 6. Aut (B. Tanatar)

PHYS 562 Special Topics in Condensed Matter Physics II
Credit units: 3 ECTS Credit Units: 6.

PHYS 565 Special Topics in Condensed Matter Physics III
Credit units: 3 ECTS Credit Units: 6.

PHYS 567 Advanced Optoelectronic Innovative Designs
Credit units: 3 ECTS Credit Units: None.

PHYS 571 Special Topics in Applied Physics I
Nonlinear Optics: Linear and nonlinear polarization, Maxwell's contitutive and wave equations, harmonic and anharmonic oscillator, second harmonic generation, optical parametric oscillation, spontaneous and stimulated raman scattering, two photon absorption, coherent anti stokes raman scattering, degenerate four wave mixing, brillouin scattering, absorption. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 572 Special Topics in Applied Physics II
Physics of Advanced Electronic Devices: The use and advantages of GaAs and related materials for high speed and optoelectronic integrated circuits. The use of heterojunctions, quantumwells and structures of small dimensions. The fundamentals for creating new devices based upon quantum size effects, tunneling and ballistic electron transport. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 573 Special Topics in Applied Physics III
Review of electronic band structure of semiconductors, vibrational properties, Electron-phonon interaction, optical constants and Kramers-Kroning relationships, Lattice and carrier absorption and reflection, recombination, excitonic recombination band-to-band and free-to-bound recombination, donor acceptor pair recombination, modulation spectroscopies, effects of quantum confinement on electronic and vibrational properties, phonons in superlatices, folded acoustic modes, confined optical modes. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 574 Special Topics in Applied Physics IV: Optoelectronics and Integrated Optics
Optoelectronics and Integrated Optics wave equation, total internal reflection, phase shift upon reflection, planer slab waveguides, dispersion in waveguides, graded index waveguides and dispersion step index circular waveguides and optical fibers, nonlinear effects in waveguides, rectangular waveguides, numerical methods, coupled mode theory and applications gratings in waveguies, planar lightwave circuits; NxN star coupler, arrayed waveguide grating, A/D multiplexer. *Credit units: 3 ECTS Credit Units: 6. Aut (A. Aydınlı)*

PHYS 577 Ultrafast and Non Linear Optics
General introduction to the field of ultrafast optics and nonlinear optics. Nonlinear and dispersive pulse propagation, optical solutions, laser dynamics, mode-locking, ultrafast lasers, commonly used nonlinear optical processes. *Credit units: 3 ECTS Credit Units: None.*

PHYS 578 Nonlinear Dynamics and Chaos
Introduction to nonlinear dynamics, with applications to physics, optics, engineering, biology, and chemistry. Emphasizes analytical methods, numerical techniques, and geometric thinking. Topics to be discussed include one-dimensional systems, bifurcations, synchronization, nonlinear oscillators, discrete maps, period doubling, fractals, strange attractors and chaos. *Credit units: 3 ECTS Credit Units: None. Aut (F. Ö. İlday)*

PHYS 580 Experimental Methods in Applied Physics
Introduction to experimental methods. Spectroscopy of semiconductors, photoluminescence, Raman scattering. Schottky diode fabrication, current and voltage measurements. Computer based instrument control, and data acquisition. Atomic physics, dye lasers, lasers optogalvanic spectroscopy. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 588 Theoretical and Experimental Foundations of Nanophotonics
Nanoscale processes and devices and their applications for manipulating light on the nanoscale. Maxwell's equations, light-matter interaction, dispersion, EM properties of nanostructures, basic concepts of photonic crystals, integrated photonic circuits, Photonic crystal fibers, superprism effects, optical properties of metallic nanos-

tructures, subwavelength phenomena, manipulating light with plasmonic nanostructures, plasmonic excitations, plasmonic nanosensors, materials, Negative refractive index and super-resolution. *Credit units: 3 ECTS Credit Units: None.*

PHYS 591 Graduate Seminar I
This is a graduate (MS and PhD) seminar course. The instructor and students meet once a week for presentations and discussions. Topics of presentations are chosen by the mutual consent of the instructor and the students. *Credit units: 1 ECTS Credit Units: None. Aut (F. Ö. İlday)*

PHYS 592 Graduate Seminar II
This is a graduate (MS and PhD) seminar course. The instructor and students meet once a week for presentations and discussions. Topics of presentations are chosen by the mutual consent of the instructor and the students. *Credit units: 1 ECTS Credit Units: None.*

PHYS 599 Master's Thesis
Credit units: None ECTS Credit Units: 24. Aut (A. Erçelebi)

PHYS 612 Quantum and Nonlinear Optics
Quantization of the electromagnetic field; coherent and squeezed states; atom-field interaction; coherent trapping; electromagnetically-induced transparency; quantum theory of laser; cavity quantum electrodynamics; review of nonlinear optical effects; quantum theory of nonlinear optical susceptibility; low-light-level nonlinear optics. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 652 Advanced Statistical Mechanics
Random variables and their transformations, the langevin and fokker-planck equations, boltzmann transport equation, the h-function, and its solutions the wigner function the master equation, detailed balance. The ising model, solution to the 1-D model. The 2-D ising model-high and low temperature series, mean field theory. Introduction to phase transitions and critical phenomena-the critical exponents. The monte-carlo method, simulated annealing and molecular dynamics. The renormalization group theory and its application to the ising model. Other model systems with more complicated phase diagrams-multicriticality. Dynamic criticality-self ordered criticality. *Credit units: 3 ECTS Credit Units: None.*

PHYS 661 Special Topics in Solid State Physics
Current topics in Solid State Physics, comprehensive reading, critical evaluation of scientific literature by means of class participation, written reports and seminar presentations. *Credit units: 3 ECTS Credit Units: 6.*

PHYS 673 Nuclear and Particle Physics
Introduction to subatomic particles, nuclear models, elementary particles, symmetries, strong and weak interaction physics, and experimental techniques in nuclear and particle physics, accelerators. *Credit units: 3 ECTS Credit Units: None.*

PHYS 699 Ph.D. Dissertation
Credit units: None ECTS Credit Units: 24. Aut (A. Erçelebi)

GRADUATE PROGRAM IN MATERIALS SCIENCE AND NANOTECHNOLOGY

S. Çıracı (Director).

Current research in nanoscience and nanotechnology requires an advanced knowledge in material science and involves design and fabrication of novel and functional nanostructures. The graduate program in Material Science and Nanotechnology is an interdisciplinary study and aims to develop researchers who can pursue outstanding and creative research in the diverse fields of nanoscience and nanotechnology, such as nanobiotechnology and nanomedicine; atomic scale imaging; nanoelectronics; nanophotonics and spintronics; advanced materials design and manufacturing of nanofibers; nanotribology and hydrogen energy economy, etc. The graduate programs provides an in depth understanding of materials in nanometer scale and present an excellent training starting from the quantum theory of matter and quantum statistical thermodynamics. The graduate courses to be taken by the students have to focus to his/her thesis work. To this end the student together with his/her thesis advisor(s) and program supervisor determine the graduate courses which suite best to his/her thesis work.

Master of Science in Materials Science and Nanotechnology

Admission: Applicants are required to have a B.S. degree in various fields of science (physics, mathematics, chemistry, molecular biology and genetics, etc) and engineering (electrical and electronics, mechanical, material science and metallurgy, etc.) and medicine. Evaluation of applicants is based on their ALES scores, past academic record, reference letters and the interview at Bilkent University. Applicants who cannot take the ALES examination will be evaluated based on GRE scores. Satisfactory knowledge of English is required. (Also refer to the "Graduate Admissions" section in the introduction of this catalog for the general graduate admission requirements)

Degree Requirements: In addition to at least 24 credit units of course work, the M.S. degree candidate must prepare and successfully defend a thesis. The normal duration of M.S. study is 4 semesters. However, this duration may be extended for up to two more semesters subject to the approval of the graduate Institute.

Doctor of Philosophy in Materials Science and Nanotechnology

Admission: Applicants must have a M.S. in various fields of science (physics, mathematics, chemistry, molecular biology and genetics, etc) and engineering (electrical and electronics, mechanical, material science and metallurgy etc.) and medicine and must take the graduate program entrance examination at Bilkent, given during spring semester of each year. Applicants who cannot take the ALES examination will be evaluated based on GRE scores. Satisfactory knowledge of English is required. (Also refer to the "Graduate Admissions" section in the introduction of this catalog for the general graduate admission requirements)

Degree Requirements: Twenty-four credit units of course work beyond the M.S. level or forty-eight credits of course work beyond the B.S. level is required. The Ph.D. candidate is expected to pass an English examination, a qualifying examination, and thesis proposal. Preparing and defending a dissertation based on original research is the essence of the program. The normal duration of Ph.D. study is 8 semesters for students with M.S. degree and ten semesters for students with B.S. degree. However, subject to the approval of the Graduate Institute, these durations may be extended for up to two more semesters.

Ph.D. students are required to take at least 6 courses (3 above MS level) from our core curriculum. M.S. and Ph.D. students shall complete their course requirement from elective courses.

CORE COURSES

MSN 500	Concepts in Materials Science	3 / 6
MSN 501	Elements of Materials Science and Technology	3 / 6
MSN 502	Nanoscale Materials and Nanotechnology	3 / 6

MSN 503	Applied Quantum Mechanics I	3 / 6
MSN 504	Phase Transformations and Diffusion in Materials	3 / 6
MSN 505	Fundamentals of Thin Film Materials	3 / 6
MSN 506	Experimental Methods in Applied Physics	3 / 6
MSN 507	Electrical, Optical and Magnetic Properties of Solids	3 / 6
MSN 508	Applied Quantum Mechanics II	3 / 6
MSN 509	Statistical Thermodynamics	3 / 6
MSN 510	Imaging Techniques in Materials Science and Nanotechnology	3 / 6
MSN 511	Surface Science and Spectroscopy	3 / 6
MSN 512	Biomedical Materials	3 / 6
MSN 521	Biotechnology	3 / 6
MSN 532	Selected Topics in Materials Science and Nanotechnology	3 / 6
MSN 551	Introduction to Micro and Nanofabrication	3 / 6
MSN 598	Seminar I	- / -
MSN 599	Master's Thesis	- / 24
MSN 698	Seminar II	- / -
MSN 699	Ph.D. Thesis	- / 24

Elective courses to be taken by the M.S. and Ph. D. students will be determined by their advisor.

ELECTIVE COURSES

CHEM 537	Supramolecular Chemistry	3 / 6
CHEM 573	Polymer Chemistry I	3 / 6
CHEM 574	Polymer Chemistry II	3 / 6
CHEM 580	Advanced Photochemistry	3 / 6
CHEM 584	Surface Coatings	3 / 6
EEE 528	Optics	3 / 7.5
EEE 529	Photonics	3 / 7.5
EEE 580	Advanced Optoelectronics: Innovative Design	3 / 7.5
MATH 543	Methods of Applied Mathematics I	3 / 6
MBG 513	Bioinformatics	3 / 6
PHYS 541	Electromagnetic Theory I	3 / 6
PHYS 542	Electromagnetic Theory II	3 / 6
PHYS 550	Physics of Semiconductor Devices	3 / 6

COURSE DESCRIPTIONS

MSN 500 Concepts in Materials Science

Fundamental concepts in materials science will be covered. Some of these topics are plastic deformation of crystalline solids and dislocations theory, defects in solids, diffusion phenomena, interfaces and kinetics of phase transformations. Also will be covered are nucleation and growth in solids. Case study examples will be undertaken using examples from various metallic, ceramic or polymeric systems. *Credit units: 3 ECTS Credit Units: 6.*

MSN 501 Elements of Materials Science and Technology

Selected topics of materials science and engineering; selected characteristics of materials; atomic structure and chemical bonding; crystals and elements of point group and space group symmetries; metals, insulators, semiconductors; atomic disorder and imperfections (vacancies, impurities, dislocations); noncrystalline: amorphous and glassy structures; single phase metals; molecular phases; ceramic materials; strength of materials and theory of elasticity; lattice vibrations and phonons; free electron theory. *Credit units: 3 ECTS Credit Units: 6. Aut (M. Ö. Oktel)*

MSN 502 Nanoscale Materials and Nanotechnology

General survey of nanoscience and nanotechnology, mechanical and electronic properties of nanostructures; atomic scale characterization and processes; scanning tunneling probe microscopic and atomic manipulation; selected nanostructures; usage and energy transfer though nanostructures, nanophotonics, nanoelectronics, nanomagnetism, and spintronics. *Credit units: 3 ECTS Credit Units: 6.*

MSN 503 Applied Quantum Mechanics I

Wave packets and uncertainty; the postulates of quantum mechanics; eigenfunctions and eigenvalues; simple problems in one dimensions; general structure of wave mechanics; operator methods in quantum mechanics; harmonic oscillator and phonons; systems of many degrees of freedom; symmetry; rotational invariance and

angular momentum; hydrogen atom; single electron approximation; Hartree method; perturbation theory, variational method. *Credit units: 3 ECTS Credit Units: 6. Aut (M. Ö. Oktel)*

MSN 504 Phase Transformations and Diffusion in Materials
Surfaces and interfaces; thermodynamics of phase transformations; nucleation; growth of precipitates; coarsening, and spinodal decomposition; defects and diffusion in solids; interdiffusion; short circuit diffusion; defects and transport in ionic solids. *Credit units: 3 ECTS Credit Units: 6.*

MSN 505 Fundamentals of Thin Film Materials
Fundamental information on the deposition properties; reaction and evaluation of thin films; vapor-phase film deposition techniques; adsorption; nucleation mechanisms; selective deposition; surface energies; stress in thin films; structure-zone diagrams; epitaxy and composition; electrical, optical, mechanical, and magnetic properties of thin film devices. *Credit units: 3 ECTS Credit Units: 6.*

MSN 506 Experimental Methods in Applied Physics
Introduction to experimental methods; spectroscopy of semiconductors, photoluminescense, Raman scattering. Schottky diode fabrication, current and voltage measurements; computer-based instrument control and data acquisition; atomic physics, dye lasers, and optogalvanic spectroscopy. *Credit units: 3 ECTS Credit Units: 6.*

MSN 507 Electrical, Optical and Magnetic Properties of Solids
Band theory and total energy calculations; electronic structure of metals and semiconductors; dielectric and optical properties of solids; paramagnetism ferromagnetism; magnetic resonance; electron-phonon interactions; superconductivity; atomic and electronic structure of surfaces; heterostructures. *Credit units: 3 ECTS Credit Units: 6.*

MSN 508 Applied Quantum Mechanics II
Spin; Pauli exclusion principle, addition of angular momentum in quantum mechanics, Hartree-Fock-Slater method; local density approximation; many electron atoms and molecules; time-dependent perturbation theory; scattering theory, ballistic electron transport and quantum conductance, quantum theory of electromagnetic transitions. Selected problems in Material Science and Nanotechnology *Credit units: 3 ECTS Credit Units: 6.*

MSN 509 Statistical Thermodynamics
Basic methods of statistical mechanics and their application to thermodynamic systems; ensembles; statistical formulation of thermodynamic functions; ideal monatomic gas; energy and chemical potential calculation in dense media. *Credit units: 3 ECTS Credit Units: 6.*

MSN 510 Imaging Techniques in Materials Science and Nanotechnology
Introduction to advanced imaging techniques including Atomic Force Microscopy (AFM), Scanning Tunneling Microscopy (STM), Transmission Electron Microscopy (TEM), Scanning Electron Microscopy (SEM). *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

MSN 511 Surface Science and Spectroscopy
Spectroscopic methods of chemical analysis; optical, magnetic resonance, laser and electron spectroscopic methods; spectroscopic characterization of compounds and mixtures by combination techniques. *Credit units: 3 ECTS Credit Units: 6.*

MSN 512 Biomedical Materials
Types of biomedical materials and the material selection criteria. Chemical and physical properties of metals, and polymers for use in biomedical applications. Material - Biological entity interaction; biocompatibility, biodegradation. Special biomedical products, biomaterials, tissue engineering, applications and issues; heart valves, artificial bones, implants, blood vessel grafts. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

MSN 513 Micro and Nanostructured Sensors
Introductory and fundamental concepts in sensors and transducers. Optical sensors including plasmonic sensors, fiber and waveguide based sensing Coupling of physical and chemical effects to optical domain. Electronic sensors including thin films, semiconductor device based sensors and novel electronic sensors using nanostructures. Magnetic and Thermal sensors. Sensing based on mechanical effects, including acoustic sensors, microbalance, MEMS and NEMS structures and SAW resonators. Basic thermodynamics for biochemical sensors: Adsorption, absorption, diffusion and premeation. Chemical sensing, including gas and ionselective sensors. Biochemical sensing based on affinity and biocatalysis. Aspects of functionalization. Luminescence based sensing using labels. Integration of multiple component systems microfluidics. Overview of fabrication technologies. *Credit units: 3 ECTS Credit Units: None.*

MSN 521 Biotechnology
Current developments in biotechnology. Drug discovery and development processes. Novel drugs, new platforms of drug discovery. Use of living organisms for environmental management. Bioreactors. Genetically engineered organisms to produce commercial products. Genetically modified crops. Techniques of the biotechnology industry, recombinant DNA technology, mammalian cell culture and protein purification and expression. *Credit units: 3 ECTS Credit Units: 6.*

MSN 532 Selected Topics in Materials Science and Nanotechnology
Phase-change materials and applications. Aerogels and applications. Hyrogen storage in nanoscale materials. Carbon nanotubes and electronic applications. Nanoscale materials (Quantum dots) in biology. Nanoscale imaging. Virus-based toolkits for nanodevices. Amorphous glasses and applications. Nanoelectromechanical systems (NEMS). Nanofibers and applications. Tools for manuscript preparation: Literature survey, Latex, Xfig, Matlab, Origin. How to write a scientific manuscript? *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

MSN 541 Nanobiotechnology
Nanotechnology is the study of materials at nanoscale - generally with a size of 100nm or less. Nanobiotechnology is the application of nanotechnology in solution of problems of life sciences, which includes biology and medicine. The aim of this course is to help equip graduate level students from various disciplines with basic knowledge on nanotechnology and its applications. The course will cover basic imaging techniques, biosensors, targeted drug delivery methods, biofilms, etc. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

MSN 551 Introduction to Micro and Nanofabrication
This course intends to introduce conventional methods in macro and nanofabrication. The topics will include basics of film deposition techniques, optical and electron beam lithography, wet and dry etching methods, implantation and diffusion. Topics will be covered with detail when necessary and practical tips will be included for processes when available. There will be sections on applications of microfabrication to specialized topics such as CMOS fabrication and micro and nanoelectromechanical systems. Certain non-conventional methods of micro and nanostructure fabrication will be surveyed briefly. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

MSN 590 Seminars in Materials Science and Nanotechnology : Technology Development
Credit units: None ECTS Credit Units: None.

MSN 598 Seminar I
Credit units: None ECTS Credit Units: None. Aut (Staff)

MSN 599 Master's Thesis
Credit units: None ECTS Credit Units: 24. Aut (S. Çıracı)

MSN 698 Seminar II
Credit units: None ECTS Credit Units: None. Aut (Staff)

MSN 699 Ph.D. Thesis
Credit units: None ECTS Credit Units: 24. Aut (S. Çıracı)

SCHOOL OF APPLIED LANGUAGES

Tanju İnal, Ph.D., Director

The School of Applied Languages - the first of its kind in Turkey, offers four year degree programs in Banking and Finance, Accounting, and Translation and Interpretation. The Banking and Finance, and Accounting degree programs offer the opportunity to study a combination of two languages (English and French) and financial studies. The aim is to give a firm background in financial markets and organizations and to develop advanced communication skills in English and French, which are appropriate for business, banking and accounting.

ACADEMIC STAFF

Fahrettin Arslan, Instructor
Ph.D., Hacettepe University, French Language and Literature, 1968.

Aylin Bayrakçeken, Assistant Professor
Ph.D., English Language and Literature, Hacettepe University, 1996.

Barbara Blackwell Gülen, Instructor
M.S., English Language Teaching, Middle East Technical University, 1987.

İsmail Boztaş, Instructor
Ph.D., Linguistics, Hacettepe University, 1987.

Cenk Cangır, Instructor
B.A., French Language and Literature, Hacettepe University, 1989.

Alican Demir, Instructor
B.A., French Language and Literature, Ankara University, 1994.

Nazmi Demir, Assistant Professor
Ph.D., Agricultural Economics, University of California, Davis, 1970. Microeconomics, macroeconomics, statistics, business management.

Akın Erkoç, Instructor
B.A., French Language and Literature, Hacettepe University, 1981.

Ebru Güven Solakoğlu, Assistant Professor
Ph.D., Economics, North Carolina State University, 2001.

Orhan Güvenen, Professor
Ph.D., Economics, University of Paris, Sorbonne, 1975. Economies and strategic research.

Tanju İnal, Professor
Ph.D., French Literature, University of Poitiers, 1968. Contemporary French literature, critical approach, translation.

Meral Karagülle, Instructor
M.A., American Literature, Hacettepe University, 1969.

Ayşin Karanfilli, Instructor
M.A., Social Studies, University of Paris VIII, Saint-Denis, 1997.

Mümtaz Kaya, Instructor
Ph.D., French Language and Literature, Hacettepe University, 1998.

Erin Maloney, Instructor
M.P.P., Public Policy, Vanderbilt University, 1991.

Süleyman Tuluğ Ok, Assistant Professor
Ph.D., Business Administration, Marmara University, 1999. Financial management, financial accounting.

Şirin Okyayuz Yener, Instructor
Ph.D., Department of Linguistics, Hacettepe University, 2001.

Vincent Orenga, Instructor
B.A., French Language and Literature, University of Marseille, 1973. CAPES specialized in teacher training. International Pedagogic Center, Paris, 1975.

Christine Özcan, Instructor
B.A., Economics, University of Aix-en Provence, 1973.

Güçlü Özkök, Instructor
M.A., French Language and Literature, Hacettepe University, 1995.

Sabit Özönder, Instructor
B.A., Italian Language and Literature, İstanbul University, 1966. B.A., French Language and Literature, İstanbul University, 1970.

Valery Paternotte, Instructor
Ph.D., Environmental Management,Universite Libre de Bruxelles, 2002.

Elizabeth Saatçi, Instructor
M.A., Economics, University of Lyon, 1979.

Mehmet Nihat Solakoğlu, Assistant Professor
Ph.D., Economics, North Carolina State University, 2000.

Hamit Sunel, Instructor
Ph.D., Education, Hacettepe University, 1968.

Yasemin Tanbi, Instructor
B.A., French-Turkish Translation and Interpretation, Hacettepe University, 2001.

Mine Tüzüner, Instructor
B.A., English Language and Literature, Ankara University, 1966.

PART-TIME ACADEMIC STAFF

Ayşe Akıncı Candoğan, B.A., Translation and Interpreting, Hacettepe University, 2000.
Ekrem Aksoy, Ph.D., Hacettepe University, French Language and Literature, 1989.
Onur Aytar, M.S., Computer Science, Northeastearn University, Boston, M.A. USA, 2003.
Şenol Babuşcu, Ph.D., Management, Hacettepe University, 1997.
Beyazıt Balcı, M.A., Money and Finance, Northeastern University, 1987.
Ahmet Başpınar, M.A., Management and Finance, Boston University, USA, 2003.
Yiğit Bener, Faculty of Medicine (ULB-Belgique), 1982.
Kutlay Bensan, Professional Interpreter Boğaziçi University , Bachelor of Arts Department of Translation and Interpretation 1992.
Gülsün Bilgehan, B.A., Political Science, Institut d'Etudes Politiques de Paris, 1979.
Mehpare Çelik, B.A., Civil Engineering, Ankara University, 1972.
Eser Çetinsöz-Erdoğan, B.A., Computer Aided Accounting, Bilkent University, 1999.
Sedat Çilingir, M.A., Electronics Engineering, University of Manchester, 1971.
Ender Dedeağaç, B.A., Faculty of Law, Ankara University, 1969.
Ragıp Duran, Faculty of Law, University of Aix-Marseille, 1978.
Mustafa Egeli, M.S., Financial Management, National University, San Diego, 1995.
Abidin Emre, Ph.D., French Language and Literature, Hacettepe University, 1983.
Lamiha Gün, Ph.D., Sorbone University Paris 1 Pontheon, 2008.
Adalet Hazar, Ph.D., Finance and Accounting, Gazi University, 2004.
Uran Işık, Business Administration Program Faculty of Economic and Administrative Sciences, Middle East Technical University, 2007.
Ebru Kanık, M.A., English Translation and Interpreting, Hacettepe University, 1998.
Seher Meltem Kumbaroğlu, M.Phil in Political Studies School of Oriental and African Studies, University of London, 2000.
Can Öztürk, M.A., Business Administration, University of Massachusettes Dortmouth, USA, 2004.
Erdoğan Topuz, Ph.D., Applied Management and Decision Sciences, Walden University, 1999.
Sedat Yetim, Ph.D., Economics, Hacettepe University, 2000.

ACCOUNTING INFORMATION SYSTEMS

O. Güvenen (Chair), M. Karagülle, M. Kaya, S. T. Ok, C. Özcan.

Part-time: O. Aytar, B. Balcı, A. Başpınar, C. Öztürk.

UNDERGRADUATE PROGRAM

This program blends topics from accounting, international auditing and information systems to develop the knowledge, skills and abilities needed in the accounting profession. The program also seeks to develop advanced communication skills in English and French, which are appropriate for accounting and business. The first year is a foundation course in accounting, application of information technology and languages. Starting in the second year, courses begin to focus more explicitly on the application and integration of information technology into the accounting process while financial and managerial accounting principles are introduced and developed. Communication skills in English and French are further developed with a greater emphasis on business and finance related work in language study.

Accounting Information System Component

The Accounting Information System component of the program provides an understanding of computer and information technology concepts and places strong emphasis on acquiring subject-specific knowledge in international auditing, accounting, finance, and the business environment. Furthermore, the program incorporates a one-month training period in the third and fourth year of study during which students work for firms or within an accounting department of a business.

Language Component

The language courses develop general oral and written language skills as well as more specialized skills such as report writing, negotiating, interpersonal communication, analyzing and synthesizing within the wider context of business. In language work most of the practical sessions may be function-based and devoted to a given skill (oral work, writing proposals) whereas others are topic based and focus more on Business Communications involving case studies that culminate in oral presentations and business reports. Communication skills in both English and French are developed through the use of real-life cases and involve students in team-based projects.

CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
ACC 161	Economics I	3 / 6
ACC 173	Computer Applications I	3 / 6
ACC 175	Mathematics I	3 / 6
GE 100	Orientation	1 / 1
SFL 101	French I	3 / 6
SFL 105	English for Business I	3 / 6
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
ACC 162	Economics II	3 / 6
ACC 170	Computer Applications II	3 / 6
ACC 178	Mathematics II	3 / 6
SFL 102	French II	3 / 6
SFL 104	English for Business II	3 / 6
TURK 102	Turkish II	2 / 1

Summer Semester		Credits / ECTS Credits
SFL 103	French III	3 / 6

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
ACC 253	Accounting I	3 / 6
ACC 271	Data Structures and Object Oriented Programming I	3 / 6
ACC 275	Applications in Probability and Statistics I	3 / 6
HISTR 201	History of Turkish Republic I	2 / 1
SFL 201	French IV	3 / 6
SFL 207	Interpersonal Communication in Business Settings	3 / 6

Spring Semester		Credits / ECTS Credits
ACC 258	Accounting II	3 / 6
ACC 272	Data Structures and Object Oriented Programming II	3 / 6
ACC 276	Applications in Probability and Statistics II	3 / 6
HISTR 202	History of Turkish Republic II	2 / 1
SFL 202	French V	3 / 6
SFL 208	Written Business Communication	3 / 6

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
ACC 323	Business Law	3 / 6
ACC 383	Ethics, Responsibility and Citizenship	3 / 6
ACC 391	Summer Practice	- / -
SFL 307	English in Business Communication	3 / 6
SFL 335	French in Financial Communication I	3 / 6
	Restricted Elective (1)	3 / 6

Spring Semester		Credits / ECTS Credits
ACC 326	Law of Contracts	3 / 6
ACC 360	Cost Accounting and Computerized Accounting Applications	3 / 6
ACC 374	Information Systems Security and Information Distortion (in French)	3 / 6
SFL 308	English in Organizational Communication	3 / 6
SFL 336	French in Financial Communication II	3 / 6

FOURTH YEAR

Autumn Semester		Credits / ECTS Credits
ACC 425	Commercial Law	3 / 6
ACC 463	International Financial Reporting Standards (IFRS)	3 / 6
ACC 473	Management Information Systems (in French)	3 / 6
ACC 491	Summer Practice	- / -
SFL 405	Intercultural Business Communication	3 / 6
SFL 431	French in Corporate Communication	3 / 6

Spring Semester		Credits / ECTS Credits
ACC 454	International Auditing	3 / 6
ACC 464	Taxation and Turkish Tax Law	3 / 6
ACC 476	Control and Audit of Accounting Information Systems	3 / 6
SFL 406	Integrated Marketing Communications (IMC)	3 / 6
SFL 432	Organizational Communication in French	3 / 6
SFL 490	Common European Framework of Reference Level B1	- / -

ELECTIVES

EDEB 405	Written Expression	3 / 6
HUM 291	Selected Topics in the Humanities	3 / 6
PHIL 101	Introduction to Logic	3 / 6
TURK 104	Oral and Written Practice of Turkish	3 / 2

One elective course should be taken from the elective courses list offered by the Faculty of Humanities and Letters departments.

COURSE DESCRIPTIONS

ACC 161 Economics I
Supply and demand analysis, the pricing system, theory of consumer behavior, theory of production, market structures; perfect competition, monopoly, other forms of imperfect competition, distribution of income; factor mobility, factor pricing. *Credit units: 3 ECTS Credit Units: 6. Aut (E. Güven Solakoğlu)*

ACC 162 Economics II
National income and expenditure: national income, its measurements, flow of money income between households, firms and governments. Nature of money and monetary institutions, role of money in macroeconomics, inflation. Employment and unemployment, economic growth. Public finance: budget, monetary and fiscal policy, international trade. *Credit units: 3 ECTS Credit Units: 6.*

ACC 170 Computer Applications II
Students use and analyse complex formula and functions with spread sheets, use of basic financial functions and tools and particularly use of data analysis of excel, use of solver and other optimizing functions, database operations, generation of graphs, basic operations for creating and editing documents. *Credit units: 3 ECTS Credit Units: 6.*

ACC 173 Computer Applications I
Beginning usage of operating system software (Windows and Linux) and application of software (word processing, spreadsheet, presentation, the basics of internet and web page building. *Credit units: 3 ECTS Credit Units: 6. Aut (O. Aytar)*

ACC 175 Mathematics I
Applications of calculus, equations, derivatives, integrals and logarithms to financial data, linear functions and applications of functions in business and economics. Introduction to matrix and vector operations. *Credit units: 3 ECTS Credit Units: 6. Aut (S. T. Ok)*

ACC 178 Mathematics II
Computerized empirical analysis of financial mathematics applied to real world financial, accounting and banking data. Interest rates, compounding, annuities, present and future values, amortization of mortgage loans and sinking funds for bonds. Maximizing profit and utility and minimizing cost. Use of matrices for index numbers and for solving multi-equation systems. *Credit units: 3 ECTS Credit Units: 6.*

ACC 253 Accounting I
An introductory accounting course which covers the concepts and issues of financial accounting such as general accounting principles, the accounting cycle which starts with the analysis and recording of economic events and ends with the preparation of balance sheets and income statements for service and merchandize firms. Development of accounting principles and procedures related to assets, liabilities and ovner's equity. *Credit units: 3 ECTS Credit Units: 6. Aut (S. T. Ok)*

ACC 258 Accounting II
Introduction to management accounting for internal reporting and decision making. Topics include cost behavior, cost determination, profit planning and control measures. Statement of Cash Flows and financial statement analysis are also covered. *Credit units: 3 ECTS Credit Units: 6.*

ACC 271 Data Structures and Object Oriented Programming I
Fundamental programming in a high level language and introduction to programming principals. Topics include program structure and organization, object-oriented programming (classes, objects, types), data structures (lists, stacks, queues, hash tables), basic user interfaces. Java is the principal programming language. *Credit units: 3 ECTS Credit Units: 6. Aut (O. Aytar)*

ACC 272 Data Structures and Object Oriented Programming II
Introduction to systems development providing a foundation for systems implementation cycle, systems analysis and object oriented program design techniques and project management. *Credit units: 3 ECTS Credit Units: 6.*

ACC 275 Applications in Probability and Statistics I
Introduction to probability, the central limit theorem, data collection, descriptive statistics of central tendency and dispersion, the normal distribution, summarizing and interpreting financial data, histograms, examining relationships between economic and financial variables using graphical techniques, simple correlation, sampling and point and interval estimates of parameters. *Credit units: 3 ECTS Credit Units: 6. Aut (M. N. Solakoğlu)*

ACC 276 Applications in Probability and Statistics II
Parametric and non-parametric tests of hypothesis, simple and multiple regressions based on excel and other statistical package programs, index numbers, time series and panel data all applied to financial and banking data. *Credit units: 3 ECTS Credit Units: 6.*

ACC 323 Business Law
Introductory course on the legal environment of business. The course covers such subjects as merchants their rights and obligations; agency relationships, legal forms of business organizations, negotiable instruments. *Credit units: 3 ECTS Credit Units: 6. Aut (A. E. Gürbüz Usluel)*

ACC 326 Law of Contracts
Students will be acquainted with the role of contract law in business and economic activity. The course aims to teach students the principles that underlie the common law of contract and explain to students the effect of legislative intervention on the common law principles of contract law. Students will learn both the common law rules and legislation affecting contract law, as well as the ability to avoid contractual disputes and/or solve them. *Credit units: 3 ECTS Credit Units: 6.*

ACC 360 Cost Accounting and Computerized Accounting Applications
This course covers accounting for product costing and managerial planning and control. Topics include activity based costing, analysis of cost behavior, cost volume profit analysis, budgeting and budget variance analysis, process and job order costing and variable and absorption costing. Special emphasis will be given to adjusting and closing entries with popular accounting software packages (Likom, Logo, SAP). *Credit units: 3 ECTS Credit Units: 6.*

ACC 374 Information Systems Security and Information Distortion (in French)
Information Systems privacy and security in the context of software, hardware, networks and databases. The very important impact of information systems security and information distortion to research, socio-economic systems with specific reference to accounting information systems, banking and finance and decision making systems. *Credit units: 3 ECTS Credit Units: 6.*

ACC 383 Ethics, Responsibility and Citizenship
The aim of this course is to introduce ethical issues in relation to business and corporations. Emphasis will be given to the notion of corporate citizenship and its contribution to the framing of business ethics and to concepts of corporate social responsibility (CSR). *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

ACC 391 Summer Practice
One-month training period. (see www.bilkent.edu.tr/∼sal) *Credit units: None ECTS Credit Units: None. Aut (Staff)*

ACC 425 Commercial Law
This course offers an introductory study of law of commercial enterprises, partnerships and corporations, negotiable instruments law and insurance law. *Credit units: 3 ECTS Credit Units: 6. Aut (Staff)*

ACC 454 International Auditing
The primary objective of the course is to distinguish between accounting and auditing through familiarizing the students with the basic auditing concepts. Topics such as types of audits and auditors, audit reports for financial statements, professional ethics, evidence accumulation and verification procedures, internal control and auditing engagements are discussed. *Credit units: 3 ECTS Credit Units: 6.*

ACC 463 International Financial Reporting Standards (IFRS)
This course is an introductory course on international financial reporting. It focuses on the main aspects of international account and financial reporting standards by comparing with Turkish Accounting System. Topics covered include preparation of financial statements, inventory, cash flow statements, accounting policies plant, property and equipment, revenue, investment property, intangible assets, operating segments, impairment of assets, provisions, contingent liabilities and assets, foreign exchange rates, inflation and some financial instruments. *Credit units: 3 ECTS Credit Units: 6. Aut (C. Öztürk)*

ACC 464 Taxation and Turkish Tax Law
This course comprises the principles of tax law, taxation process, income tax, corporation tax, value added tax, real estate tax, inheritance tax, tax penalties, conflicts of taxation and some other taxes in the Turkish system. *Credit units: 3 ECTS Credit Units: 6.*

ACC 473 Management Information Systems (in French)
Management and information technologies and communications (ITC), knowledge-based economy and knowledge society, business plan and business model, business models for electronic markets, electronic commerce, systems development and documentation techniques, data bases, impact of ITC on public and corporate governance, information and decision-making. *Credit units: 3 ECTS Credit Units: 6. Aut (O. Güvenen)*

ACC 476 Control and Audit of Accounting Information Systems
This course provides knowledge of computer security and auditing. Basic cryptographical algorithms, protocols and applications will be studied. An overview of computer security and controls in information systems will be given. *Credit units: 3 ECTS Credit Units: 6.*

ACC 491 Summer Practice
One-month training period. (see www.bilkent.edu.tr/∼sal) *Credit units: None ECTS Credit Units: None. Aut (Staff)*

BANKING AND FINANCE

N. Demir (Chair), A. Bayrakçeken, E. Güven Solakoğlu, E. Maloney, V. Orenga, V. Paternotte, E. Saatçi, M. N. Solakoğlu, M. Tüzüner.

Part-time: Ş. Babuşcu, E. Çetinsöz-Erdoğan, S. Çilingir, E. Dedeağaç, M. Egeli, L. Gün, A. Hazar, U. Işık, S. Yetim.

UNDERGRADUATE PROGRAM

This program is designed to provide a solid understanding of banking and financial studies and to develop advanced communication skills in English and French which are necessary for banking and finance. The first year is a foundation course in both banking/finance and languages. Starting in the second year, courses become more specialized, allowing in-depth study of specific finance topics with a greater focus on business and finance related work in language study.

Banking/Finance Component

The banking and finance component of the program is carried out in English and French as a second foreign language. It seeks to develop competence in financial markets and organizations. This is complemented by the use of computer assisted applications related to banking and finance. Additionally, a two-month training period is incorporated into the summer programs which aims to familiarize students with the working environment in financial institutions and other business organizations.

Language Component

The language courses develop general oral and written language skills as well as more specialized skills such as translating, report writing, negotiating, analyzing and synthesizing within the wider context of business. In the language work most of the practical sessions may be function-based and devoted to a given skill (oral work, translation into Turkish). Other language work is topic-based and focuses more on business communications involving case studies that culminate in oral presentations and business reports.

CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
BF 161	Economics I	3 / 6
BF 173	Computer Applications I	3 / 6
BF 175	Mathematics I	3 / 6
GE 100	Orientation	1 / 1
SFL 101	French I	3 / 6
SFL 105	English for Business I	3 / 6
TURK 101	Turkish I	2 / 1
Spring Semester		Credits / ECTS Credits
BF 162	Economics II	3 / 6
BF 174	Computer Applications II	3 / 6
BF 178	Mathematics II	3 / 6
SFL 102	French II	3 / 6
SFL 104	English for Business II	3 / 6
TURK 102	Turkish II	2 / 1
Summer Semester		Credits / ECTS Credits
SFL 103	French III	3 / 6

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
BF 251	Accounting I	3 / 6
BF 271	Applications in Probability and Statistics I	3 / 6
HISTR 201	History of Turkish Republic I	2 / 1
SFL 201	French IV	3 / 6
SFL 207	Interpersonal Communication in Business Settings	3 / 6
	Restricted Elective (1)	3 / 3

Spring Semester		Credits / ECTS Credits
BF 252	Accounting II	3 / 6
BF 264	Elements of Money and Banking I	3 / 6
BF 276	Applications in Probability and Statistics II	3 / 6
HISTR 202	History of Turkish Republic II	2 / 1
SFL 202	French V	3 / 6
SFL 208	Written Business Communication	3 / 6

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
BF 365	Elements of Money and Banking II	3 / 6
BF 383	Ethics, Responsibility and Citizenship	3 / 6
BF 385	Commercial Law	3 / 6
BF 391	Summer Practice	- / -
SFL 307	English in Business Communication	3 / 6
SFL 335	French in Financial Communication I	3 / 6
	Restricted Elective (1)	3 / 3

Spring Semester		Credits / ECTS Credits
BF 362	Banking Operations	3 / 6
BF 372	Computerized Financial Applications	3 / 6
BF 384	Introduction to Financial Econometrics	3 / 6
SFL 308	English in Organizational Communication	3 / 6
SFL 336	French in Financial Communication II	3 / 6

FOURTH YEAR

Autumn Semester		Credits / ECTS Credits
BF 469	Banking Law	3 / 6
BF 473	Computerized Brokerage and Dealer Operations	3 / 6
BF 491	Summer Practice	- / -
SFL 405	Intercultural Business Communication	3 / 6
SFL 431	French in Corporate Communication	3 / 6
	Restricted Elective (1)	3 / 3

Spring Semester		Credits / ECTS Credits
BF 484	Law of Contracts	3 / 6
BF 488	Computerized Insurance Services and Operations	3 / 6
SFL 406	Integrated Marketing Communications (IMC)	3 / 6
SFL 432	Organizational Communication in French	3 / 6
SFL 490	Common European Framework of Reference Level B1	- / -
	Restricted Elective (1)	3 / 3

ELECTIVES

ACC 356	Financial Statement Analysis	3 / 6
ACC 453	Accounting Information Systems	3 / 6
ACC 454	International Auditing	3 / 6
ACC 464	Taxation and Turkish Tax Law	3 / 6
BF 461	Corporate Finance	3 / 6
BF 462	Investments	3 / 6
BF 464	International Finance	3 / 6

BF 467	Research in Finance	3 / 6
BF 480	Applied Capital Markets	3 / 6
BF 485	Introduction to Bank Risk Analysis and Evaluation	3 / 6
ECON 403	Issues in Public Finance	3 / 6
ECON 409	Contemporary Issues in Turkish Economy I	3 / 6
HART 117	Ways of Seeing: Approaches to Art and Architectural History	3 / 4
HUM 111	Cultures Civilizations and Ideas I	3 / 4
HUM 112	Cultures Civilizations and Ideas II	3 / 4
HUM 291	Selected Topics in the Humanities	3 / 6
MAN 485	Real Estate Finance	3 / 6
TRIN 473	Turkish Diction	1 / 2
TURK 104	Oral and Written Practice of Turkish	3 / 2

At least two elective courses should be taken from the elective courses list offered by BF (Banking/Finance), ACC (Accounting), ECON (Economics), and MAN (Management) departments, and the Faculty of Humanities and Letters departments.

COURSE DESCRIPTIONS

BF 161 Economics I
Supply and demand analysis, the pricing system, theory of consumer behavior, theory of production, market structures; perfect competition, monopoly, other forms of imperfect competition, distribution of income; factor mobility, factor pricing. *Credit units: 3 ECTS Credit Units: 6. Aut (N. Demir, M. N. Solakoğlu)*

BF 162 Economics II
National income and expenditure: national income, its measurements, flow of money income between households, firms and governments. Nature of money and monetary institutions, role of money in macroeconomics, inflation. Employment and unemployment, economic growth. Public finance: budget, monetary and fiscal policy, international trade. *Credit units: 3 ECTS Credit Units: 6.*

BF 173 Computer Applications I
Beginning usage of operating system software (Windows and Linux) and application of software (word processing, spreadsheet, presentation, the basics of internet and web page building. *Credit units: 3 ECTS Credit Units: 6. Aut (E. Maloney)*

BF 174 Computer Applications II
Students use and analyse complex formula and functions with spread sheets, use of basic financial functions and tools and particularly use of data analysis of excel, use of solver and other optimizing functions, database operations, generation of graphs, basic operations for creating and editing documents. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: BF 173.*

BF 175 Mathematics I
Applications of calculus, equations, derivatives, integrals and logarithms to financial data, linear functions and applications of functions in business and economics. Introduction to matrix and vector operations. *Credit units: 3 ECTS Credit Units: 6. Aut (E. Güven Solakoğlu)*

BF 178 Mathematics II
Computerized empirical analysis of financial mathematics applied to real world financial, accounting and banking data. Interest rates, compounding, annuities, present and future values, amortization of mortgage loans and sinking funds for bonds. Maximizing profit and utility and minimizing cost. Use of matrices for index numbers and for solving multi-equation systems. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: BF 175.*

BF 207 Interpersonal Communication in Business Setting
Theories and practice in verbal and nonverbal communication with a focus on interpersonal relationships. Emphasis on improving interpersonal skills and helping students increase their communication competence in business-related exchanges. *Credit units: 3 ECTS Credit Units: 6.*

BF 251 Accounting I
An introductory accounting course which covers the concepts and issues of financial accounting such as general accounting principles, the accounting cycle which starts with the analysis and recording of economic events and ends with the preparation of balance sheets and income statements for service and merchandize firms. Development of accounting principles and procedures related to assets, liabilities and ovner's equity. *Credit units: 3 ECTS Credit Units: 6. Aut (S. T. Ok)*

BF 252 Accounting II
Introduction to management accounting for internal reporting and decision making. Topics include cost behavior, cost determination, profit planning and control measures. Statement of Cash Flows and financial statement analysis are also covered. *Credit units: 3 ECTS Credit Units: 6.*

BF 264 Elements of Money and Banking I
Introduction to financial markets and institutions (domestic and foreign), financial services of banks and non-bank institutions, asset and liability management, rates of returns and pricing of bonds and stocks, risk structure and term structure of interest rates, CAMEL rules and performance evaluation of banks. *Credit units: 3 ECTS Credit Units: 6.*

BF 271 Applications in Probability and Statistics I
Introduction to probability, the central limit theorem, data collection, descriptive statistics of central tendency and dispersion, the normal distribution, summarizing and interpreting financial data, histograms, examining relationships between economic and financial variables using graphical techniques, simple correlation, sampling and point and interval estimates of parameters. *Credit units: 3 ECTS Credit Units: 6. Aut (M. N. Solakoğlu)*

BF 276 Applications in Probability and Statistics II
Parametric and non-parametric tests of hypothesis, simple and multiple regressions based on excel and other statistical package programs, index numbers, time series and panel data all applied to financial and banking data. *Credit units: 3 ECTS Credit Units: 6.*

BF 362 Banking Operations
Canons of lending, personal borrowers, other borrowers, general principles of security, review and control of accounts. Interpretation of financial statements, Interbank Nostro and Vostro accounts, remittance and receipt of funds, rates of exchange, financing international trade for exporters and importers. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: BF 252. (Prerequisite not required when offered as elective to other departments).*

BF 365 Elements of Money and Banking II
Central banks and monetary policies, inflation, monetary transmission mechanisms and macro economy, treasury and public sector borrowing as related to government budget and fiscal policy, major issues in central bank and banking industry. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: BF 162 and BF 252. Aut (N. Demir)*

BF 372 Computerized Financial Applications
This course aims to develop skills of empirical work by applying financial theories to real life problems with computers. It covers tools of financial statement analysis, forecasting, risk measurement in finance, technical analysis of stock markets, Markowitz portfolio design, the Capital Asset Pricing Model (CAPM) and performance assessment of portfolios. *Credit units: 3 ECTS Credit Units: 6.*

BF 383 Ethics, Responsibility and Citizenship
The aim of this course is to introduce ethical issues in relation to business and corporations. Emphasis will be given to the notion of corporate citizenship and its contribution to the framing of business ethics and to concepts of corporate social responsibility (CSR). *Credit units: 3 ECTS Credit Units: 6. Aut (L. Gün)*

BF 384 Introduction to Financial Econometrics
Introductionary level econometrics course designed to analyse financial time series and panel data with emphasis on model building and estimating parameters with the use of least squares techniques and maximum likelihood theories, testing stationarity, cointegration and volatility hypotheses for univariate and multivariate time series models. *Credit units: 3 ECTS Credit Units: 6.*

BF 385 Commercial Law
This course offers an introductory study of law of commercial enterprises, partnerships and corporations, negotiable instruments law and insurance law. *Credit units: 3 ECTS Credit Units: 6. Aut (E. Dedeağaç)*

BF 391 Summer Practice
One-month training period. (see www.bilkent.edu.tr/~sal) *Credit units: None ECTS Credit Units: None. Aut (Staff)*

BF 461 Corporate Finance
Overview of time value of money: present value, future value, annuities, perpetuities. Business finance with emphasis on investment and financing decisions of firms. Topics include ratio analysis, profit planning, capital structure and working capital management. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: BF 252 and BF 365. (Prerequisite not required when offered as elective to other departments).*

BF 462 Investments
Investments setting, alternative investments, securities markets, efficient capital markets, valuation of bonds and stocks. Optimum portfolio design and portfolio performance measures. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: BF 365 and BF 461.*

BF 464 International Finance
The international financial environment, the international monetary system, balance of payments and parity conditions, spot and forward markets, foreign exchange risk management, forecasting FX rates, economic exposure, transactions exposure, translation exposure, international financial markets, international portfolio diversification, trade financing, direct foreign investment decisions, strategy, political risk, capital budgeting. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: BF 162 and BF 461.*

BF 469 Banking Law
Sources of law: relevance to the business of banking, conflict resolving, judicial and quasi-judicial processes, court system, quasi-judicial bodies, bank ombudsman, contract law: role of contract law in banking, nature and elements of a contract, banker/customer contract. Property and its use as security; real and personal property, security functions and types. A bank's rights and duties as a mortgagee. *Credit units: 3 ECTS Credit Units: 6. Aut (Ş. Babuşcu)*

BF 473 Computerized Brokerage and Dealer Operations
Computerized Brokerage and Dealer Operations Applications with special emphasis on stocks, foreign exchange (FX) and commodity markets. *Credit units: 3 ECTS Credit Units: 6. Aut (U. Işık)*

BF 479 Issues in Banking
The course introduces issues such as new trends, risk and risk sources, structural changes and expectations all related to banking in Turkey and abroad. *Credit units: 3 ECTS Credit Units: 6.*

BF 480 Applied Capital Markets
Structure of capital markets: stocks, bonds, mortgages etc. and capital market institutions such as capital markets board, stock exchange markets, legal and institutional requirements of the equity markets. *Credit units: 3 ECTS Credit Units: 6. Aut (A. Hazar)*

BF 484 Law of Contracts
Students will be acquainted with the role of contract law in business and economic activity. The course aims to teach students the principles that underlie the common law of contract and explain to students the effect of legislative intervention on the common law principles of contract law. Students will learn both the common law rules and legislation affecting contract law, as well as the ability to avoid contractual disputes and/or solve them. *Credit units: 3 ECTS Credit Units: 6.*

BF 485 Introduction to Bank Risk Analysis and Evaluation
This course covers the Basel 1-2 (The New Accord) topics with particular emphasis on the three pillars of Basel 2: Minimum capital requirements, supervisory review of capital adequacy and public disclosure for market discipline. Topics such as external rating, internal rating; different approaches to the measurement of credit risk and operational risk, steps for the adaptation of the new accord in Turkey are also covered. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: BF 362 and BF 365. Aut (S. Yetim)*

BF 488 Computerized Insurance Services and Operations
The insurance sector and its public and private institutions; principles, basics and legal aspects of insurance services and operations in Turkey and abroad; Insurance operations in practice: Computerized insurance services, use of special soft ware currently used for insurance services and operations. *Credit units: 3 ECTS Credit Units: 6.*

BF 490 CRM and Data Mining for Financial Services
Customer relationship management (CRM) and data mining techniques customized to financial firms, designing acquisition strategies, evaluating "churn rates" and designing new strategies for higher profitability, data mining techniques include segmentation schemes, decision trees, binary response, cluster and principal components as data reduction techniques. *Credit units: 3 ECTS Credit Units: 6.*

BF 491 Summer Practice
One-month training period. (see www.bilkent.edu.tr/∼sal) *Credit units: None ECTS Credit Units: None. Aut (Staff)*

SFL 101 French I
The aim of this course is to develop basic communication skills in French for social and professional use. Students will be exposed to basic communication situations related to everyday communication through which they will learn the basic structures of French grammar and acquire essential notions of French culture. *Credit units: 3 ECTS Credit Units: 6. Aut (C. Cangır, A. Erkoç, A. Karanfilli, G. Özkök, Y. Tanbi)*

SFL 102 French II
This course expands on the skills acquired in SFL 101 and emphasizes language skills needed to describe and carry out typical tasks in the workplace. Special attention will be given to terminology and pronunciation. *Credit units: 3 ECTS Credit Units: 6.*

SFL 103 French III
This course emphasizes language skills needed to interact socially in a professional environment and aims to further develop language awareness and accuracy in language use by engaging students with texts, both written

and audio, from different contexts. Students will learn how to describe a company, follow instructions, write effectively and develop the ability to present information related to work settings cohesively and coherently both orally and in writing and to express ideas and opinions effectively. *Credit units: 3 ECTS Credit Units: 6.*

SFL 104 English for Business II

This course builds upon the skills required in English for Business I. Competency is further developed in speaking, writing, reading and listening, covering a wider range of business situations. *Credit units: 3 ECTS Credit Units: 6.*

SFL 105 English for Business I

This course aims to equip students with the ability to communicate effectively in English that is required in business life. Emphasis is placed on developing reading, writing, listening and speaking skills through realistic business cases, practice activities that cover a range of business situations (globalization trade etc.) role plays and the use of authentic material from the Economist and the Financial Times. *Credit units: 3 ECTS Credit Units: 6. Aut (A. Bayrakçeken, B. Blackwell Gülen, M. Karagülle, M. Tüzüner)*

SFL 201 French IV

This course aims at developing the ability to listen and read complex texts for gist and detail and to apply this knowledge and understanding to speaking and writing. Emphasis will be given to texts related to banking, finance and accounting and case studies will focus on customer relationships and banking services. *Credit units: 3 ECTS Credit Units: 6. Aut (A. Demir)*

SFL 202 French V

This course builds on the skills acquired in SFL 201. Besides professional skills and specific terminology concerning investment opportunities and types of credit, students will also deal with the intercultural aspect of business. *Credit units: 3 ECTS Credit Units: 6.*

SFL 207 Interpersonal Communication in Business Settings

Theories and practice in verbal and nonverbal communication with a focus on interpersonal relationships. Emphasis on improving interpersonal skills and helping students increase their communication competence in business-related exchanges *Credit units: 3 ECTS Credit Units: 6. Aut (B. Blackwell Gülen)*

SFL 208 Written Business Communication

Develops understanding of communication theories and builds skills in written communication emphasizing style and audience awareness. Practical applications center on external and internal business correspondence. Letters, memos that inform persuade, grant and refuse are stressed. *Credit units: 3 ECTS Credit Units: 6.*

SFL 307 English in Business Communication

This course aims to develop communicative competency in writing short reports, conducting meeting and delivering presentations through assignments designed to meet real organizational needs. *Credit units: 3 ECTS Credit Units: 6. Aut (E. Saatçi)*

SFL 308 English in Organizational Communication

Covering a range of communication issues and practices within businesses and other organizations, emphasis is placed on effective communication through oral and written reporting, proposals, negotiations and team presentation. *Credit units: 3 ECTS Credit Units: 6.*

SFL 335 French in Financial Communication I

This course aims to improve students' ability to communicate effectively in a wide-range of accounting and financial contexts. Realistic case studies related to finance, banking operations, investments and economics will be used to develop language skills. Emphasis will be given to a variety of topic areas such as financial reporting, corporate governance, mergers and acquisitions, insurance, investment banking. *Credit units: 3 ECTS Credit Units: 6. Aut (S. Özönder)*

SFL 336 French in Financial Communication II

This course aims to improve students' ability to communicate effectively in a wide-range of accounting and financial contexts. Realistic case studies related to finance, banking operations, investments and economics will be used to develop language skills. Emphasis will be given to a variety of topic areas such as financial reporting, corporate governance, mergers and acquisitions, insurance, investment banking. *Credit units: 3 ECTS Credit Units: 6.*

SFL 405 Intercultural Business Communication

This course focuses on business communication in intercultural environments. Cross-cultural communication theories and a cultural framework will be used to assist in the analysis, evaluation and creation of appropriate business messages addressed to specific audiences in both English and French. Practical applications center on designing a multilingual/multicultural website. *Credit units: 3 ECTS Credit Units: 6. Aut (E. Saatçi)*

SFL 406 Integrated Marketing Communications (IMC)
This course introduces students to the areas that comprise IMC: public relations, advertising, direct marketing, sales promotions, events promotions and online communication. Using these communication tools, students learn how to target an audience (in English + French), asses communication options and formulate IMC plans for organizations. *Credit units: 3 ECTS Credit Units: 6.*

SFL 431 French in Corporate Communication
This course aims to develop communications competency in writing short reports, conducting meetings and delivering presentations through assignments designed to meet real organizations. *Credit units: 3 ECTS Credit Units: 6. Aut (C. Özcan)*

SFL 432 Organizational Communication in French
Covering a range of communication issues and practices within business and other organizations, emphasis is placed on effective communication in French through oral and written reporting, proposals, negotiations and team presentations. *Credit units: 3 ECTS Credit Units: 6.*

SFL 490 Common European Framework of Reference Level B1
French Language Proficiency test. All students entering the Banking and Finance (BF) and Accounting Information Systems (ACC) programs in September 2009 are required to pass this test in order to graduate. *Credit units: None ECTS Credit Units: None.*

MASTERS IN CONFERENCE INTERPRETING

T. İnal (Chair), O. Güvenen, Ş. Okyayuz Yener, C. Özcan.

Part-time: Y. Bener, K. Bensan, R. Duran, E. Kanık, S. M. Kumbaroğlu.

GRADUATE PROGRAM

The Masters in Conference Interpreting Program is composed of two academic semesters and a summer school program. The objective of the degree program in Conference Interpreting is to train conference interpreters in Turkish/English/French. The language combinations offered in the program are A-CC, A-BC, A-BB or A-A.

The curriculum aims to develop the special skills needed for interpreting and to achieve mastery of the contemporary interpreting techniques. In addition, professional interpreters require a wide range of applied courses and a broad background in contemporary practices and theories. Professional interpreting studies in Turkish, English and French include: mastery in sight translation, consecutive interpreting, simultaneous interpreting, media interpreting. Theoretical and lecture courses deal with fields such as European/international organizations, technologies for interpreters, computer literacy and contemporary interpreting theories. Students who are trained by professional conference interpreters have to complete a single final examination given at the end of the Interpreting Seminar course in the summer school period. Students are expected to display their interpreting skills to a jury composed of professional interpreters from Turkey and professional interpreters from abroad.

CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
CINT 501	Theory of Interpreting	2 / 4
CINT 503	Introduction to the Practice of Interpreting	4 / 6
CINT 509	Advanced Consecutive Interpretation I	6 / 8
CINT 513	Advanced Simultaneous Interpreting I	6 / 8

Spring Semester		Credits / ECTS Credits
CINT 506	EU and International Institutions	4 / 6
CINT 510	Advanced Consecutive Interpretation II	6 / 8
CINT 514	Advanced Simultaneous Interpreting II	6 / 8
CINT 516	Conference Interpreting	6 / 8
CINT 518	Cross Cultural Negotiations	- / -

Summer School		Credits / ECTS Credits
CINT 520	Technology and Research for Interpreting	2 / 4
CINT 590	Interpreting Seminar	- / -

COURSE DESCRIPTIONS

CINT 501 Theory of Interpreting

Students will be acquainted with the theoretical aspects of interpretation and will be familiarizing themselves with the research findings that have a bearing on interpretation like cognitive, psycholinguistic, neurolinguistic, sociolinguistic paradigms and communication and discourse studies. *Credit units: 2 ECTS Credit Units: 4. Aut (S. M. Kumbaroğlu, Ş. Okyayuz Yener)*

CINT 503 Introduction to the Practice of Interpreting

This course aims to familiarize students with some basic communication skills, conference preparation techniques, professional ethics, conference procedures, working practices and conditions. They will learn about how they may attain the necessary skills to become effective communicators, how to keep up to date with world affairs in the various areas in which they work, how to improve their intuition and flexibility and develop their diplomatic skills. *Credit units: 4 ECTS Credit Units: 6. Aut (S. M. Kumbaroğlu)*

CINT 506 EU and International Institutions

Students are familiarized with basic legal and economic notions and especially focus on understanding how EU institutions and international organizations operate to develop a know-how of institutional processes and proce-

dures. They become familiar with specific terminology, registers, styles and discourses used in communication in the relevant settings. *Credit units: 4 ECTS Credit Units: 6.*

CINT 509 Advanced Consecutive Interpretation I

In this first course on consecutive interpretation preliminary exercises in content analysis, memory exercises, summarization, sight translation and note-taking techniques will be studied. Students are prepared to be able to deliver fluent and effective consecutive interpretations of speeches into the mother tongue. Students are trained with authentic conference materials in which they will confront a diversity of subject areas, styles and registers. The length, information density and degree of technicality and specifity of the speeches will increase throughout the course. *Credit units: 6 ECTS Credit Units: 8. Aut (Y. Bener, E. Kanık)*

CINT 510 Advanced Consecutive Interpretation II

Through a variety of advanced level exercises and speeches in which the information density, degree of technicality and specificity increases as the course progresses, students are trained to deliver fluent and effective consecutive interpretations into the target language, accurately reproducing the content of the original, using appropriate terminology and register. *Credit units: 6 ECTS Credit Units: 8.*

CINT 513 Advanced Simultaneous Interpreting I

Students will be building on skills such as effective communication, content analysis, fluency of speech, and memory exercises. Students will be acquainted with booth techniques and team interaction while acquiring the professional skill to interpret into the mother tongue from both active and passive foreign languages in actual conference settings and/or simulations in the booths. This is undertaken in order to enable them to reproduce the content of the original, using the appropriate terminology and register. The length, information density and degree of technicality and specifity of the speeches will increase throughout the course. Once they have mastered simultaneous interpreting skills, students will also be taught to interpret with the texts in front of them. *Credit units: 6 ECTS Credit Units: 8. Aut (K. Bensan, R. Duran)*

CINT 514 Advanced Simultaneous Interpreting II

Students will be trained to provide fluent and effective simultaneous interpretation of speeches into the target language undertaking advanced practice of simultaneous interpreting in the working languages in booths. Students will be attending conferences on diverse topics and they will analyze and criticize actual interpreting performance vis-a-vis actual conference situations. Through laboratory simulations and other opportunities they will be acquainted with the interpretation of diverse topics while undertaking research in relevant settings and terminology. *Credit units: 6 ECTS Credit Units: 8.*

CINT 516 Conference Interpreting

Students will be trained in the main types of work for conference interpreters. They will be acquainted with the types of interpreting necessary for committees and conferences, discussions between Heads of State, Prime Ministers, Ministers, business meetings, trade negotiations, court cases, working lunches, and field trips, working on the ability to rapidly shift between mother tongue and the active language, and from the passive language to the mother tongue. *Credit units: 6 ECTS Credit Units: 8.*

CINT 518 Cross Cultural Negotiations

Students will be exposed to cross-cultural negotiations in various domains/situations. They will be developing argumentation skills and the ability to deal with conflict issues through the use of different techniques. They will be asked to perform as speakers in mock debates, seminars, information sessions in their active languages; and they will have the opportunity to develop their attentive listening, comprehension and short-long term memory skills, especially through information dense speeches dealing with conflict issues in their passive languages. Students will work towards developing a sensitivity for such issues in performing as an intermediary/interpreter in differing cultures. *Credit units: None ECTS Credit Units: None.*

CINT 520 Technology and Research for Interpreting

This course aims to allow the student to familiarize with the technologies used in the interpretation milieu. They will be asked to research new virtual meeting technologies, use of multilingual communication in the media, multilingual chats, on-line communication on the Internet and new practices that may have a relevance for their fields. Students will be acquainted with up-to date research techniques such as the use of terminology management systems in line with recent developments. They will also be made aware of interpreting practices for TV and radio interviews, and videoconferences. *Credit units: 2 ECTS Credit Units: 4.*

CINT 590 Interpreting Seminar

This course aims to allow students to practice the skills they attained throughout the two semesters in actual conferences and simulated conferences with the help of an advisor. The course has a single final examination that will reflect practical, real-life conference situations and will be graded as either satisfactory or unsatisfactory. A team of professional interpreters, native speakers of the students A, B, C languages and other professionals deemed necessary will be able to follow the final examination and consult with the advisor about the status (satisfactory/unsatisfactory) of the student. *Credit units: None ECTS Credit Units: None.*

FRENCH PREPARATORY PROGRAM

V. Orenga (Director), C. Cangır, A. Demir, A. Erkoç, A. Karanfilli, G. Özkök, Y. Tanbi.

Basic French Section is part of the School of Applied Languages. It aims to provide preparatory programs in French (elementary and intermediate levels) to students who do not meet the French Language requirements necessary for studying in the department of Translation and Interpretation.

The overall objective of the program is to enable students to reach the level required by equipping them with the necessary language skills needed to study in their chosen disciplines.

To achieve this, two level courses are offered: Elementary French and Intermediate French.

Elementary French

This course is intended for students with no knowledge of the language. By providing a solid grounding in the basic skills students will be able to progress to higher levels. At this stage, students will start to familiarize themselves with spoken French, gradually moving on to developing speaking reading and writing skills. A successful completion of the course will enable students to follow the Intermediate French level course.

Intermediate French

This course is for students whose French knowledge is beyond the elementary stage. It will continue to reinforce the skills development of the elementary course. However, particular emphasis will be given to speaking and writing. To build on these two skills, language classes will be based on aspects of French contemporary life and society in addition to subjects such as economics and politics.

TRANSLATION AND INTERPRETATION

T. İnal (Chair), F. Arslan, B. Blackwell Gülen, İ. Boztaş, Ş. Okyayuz Yener, S. Özönder, H. Sunel.

Part-time: A. Akıncı Candoğan, E. Aksoy, G. Bilgehan, M. Çelik, A. Emre, S. M. Kumbaroğlu, E. Topuz.

UNDERGRADUATE PROGRAM

The degree program in Translation and Interpretation trains translators and interpreters in Turkish, English, and French. The curriculum aims to develop the special skills needed for translating and interpreting, and to achieve mastery of the contemporary spoken and written languages. In addition, a wide range of elective courses provide a broad cultural background required by professional translators.

Language studies in English and French include: oral and written comprehension, oral and written translation, oral proficiency, essays, precis writing, note-taking in addition to translation workshops. Elective courses deal with fields such as national government and administration, politics, economics, law, culture, current events, modern literature, European organizations, and computer literacy. The third year includes a summer program which forms an integral part of the curriculum. For this program, after a period of one month, spent in a firm/agency of the public or private sector, students submit a summer practice report which should also be presented orally either in English or French. In the fourth year students may follow a more specialized track of study by choosing one of the following: Written Translation or Conference Interpretation. However, access to Conference Interpretation requires the successful completion of a written and oral examination. This examination w ill be prepared by the school examination committee comprised of at least three members including the director and one instructor teaching the course. For both specializations a project will be undertaken which will require research to be carried out.

CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
GE 100	Orientation	1 / 1
TRIN 101	Comparative Grammar (English-Turkish)	3 / 6
TRIN 103	Comparative Grammar (French-Turkish)	3 / 6
TRIN 131	Texts and Composition in English I	3 / 6
TRIN 133	Texts and Composition in French I	3 / 5
TRIN 161	Introduction to Translation	3 / 6
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
TRIN 102	Applied Linguistics	3 / 6
TRIN 132	Texts and Composition in English II	3 / 6
TRIN 134	Texts and Composition in French II	3 / 5
TRIN 166	English-Turkish-French Translation	4 / 6
TRIN 172	Computer Literacy	3 / 6
TURK 102	Turkish II	2 / 1

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
HISTR 201	History of Turkish Republic I	2 / 1
TRIN 205	English-American and French Culture I	3 / 6
TRIN 265	Translation of Economic Texts (English-Turkish-French)	4 / 6
TRIN 267	Sight Translation I	3 / 6
TRIN 271	Business Communications	3 / 5
	Restricted Elective (1)	3 / 6

Spring Semester		Credits / ECTS Credits
HISTR 202	History of Turkish Republic II	2 / 1
TRIN 206	English-American and French Culture II	3 / 6

TRIN 236	Group Communication and Discussion	3 / -
TRIN 266	Translation of Politics and Legal Texts (English-Turkish-French)	4 / 6
TRIN 268	Sight Translation II	3 / 6
	Restricted Elective (1)	3 / 6

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
TRIN 335	Note-Taking and Consecutive Interpretation	3 / 6
TRIN 337	Precis Writing in English-French	3 / 6
TRIN 361	Technical Translation (English-Turkish)	3 / 6
TRIN 363	Technical Translation (French-Turkish)	3 / 6
	Restricted Elective (1)	3 / 6

Spring Semester		Credits / ECTS Credits
TRIN 330	Criticism and French Literature	3 / 6
TRIN 332	Selected Topics from English Literature	3 / 6
TRIN 364	Literary Translation (English-Turkish)	3 / 6
TRIN 366	Literary Translation (French-Turkish)	3 / 6
TRIN 390	Summer Practice	- / -
	Restricted Elective (1)	3 / 6

FOURTH YEAR (Conference Interpretation Track)

Autumn Semester		Credits / ECTS Credits
BF 409	Communication and Reporting	3 / 6
TRIN 461	English-French Translation Workshop I	3 / 6
TRIN 473	Turkish Diction	1 / 2
TRIN 481	Consecutive and Simultaneous Interpretation Techniques	6 / 10
TRIN 487	Interpreting for Public Services	3 / 6

Spring Semester		Credits / ECTS Credits
TRIN 462	English-French Translation Workshop II	3 / 6
TRIN 484	Simultaneous Interpretation II: Fieldwork+Projectwork	6 / 12
	Non Technical Elective (2)	6 / 12

FOURTH YEAR (Written Translation)

Autumn Semester		Credits / ECTS Credits
BF 409	Communication and Reporting	3 / 6
TRIN 461	English-French Translation Workshop I	3 / 6
TRIN 463	Translation Criticism	3 / 6
TRIN 473	Turkish Diction	1 / 2
TRIN 485	Translation Workshop for EU Texts and Documents I (English-French-Turkish)	6 / 10

Spring Semester		Credits / ECTS Credits
TRIN 462	English-French Translation Workshop II	3 / 6
TRIN 486	Translation Workshop for EU Texts and Documents II (English French Turkish)	6 / 12
	Non Technical Elective (2)	6 / 12

ELECTIVES

ACC 323	Business Law	3 / 6
ACC 374	Information Systems Security and Information Distortion (in French)	3 / 6
ACC 473	Management Information Systems (in French)	3 / 6
BF 161	Economics I	3 / 6
BF 478	Business Functions and Decision Making	3 / 6
TRIN 207	Language of Journalism	3 / 6
TRIN 301	Analysis of Scientific and Technical Texts	3 / 6
TRIN 303	Technology for Translators	3 / 6
TRIN 334	Media Studies	3 / 6
TRIN 336	Introduction to Simultaneous Interpretation	3 / 6

TRIN 339	Introduction to Interpersonal Communication (in French)	3 / 6
TRIN 340	Audiovisual Media Translation I	3 / 6
TRIN 371	Computer Literacy II	3 / 6

At least two elective courses should be taken from the elective courses list above.

COURSE DESCRIPTIONS

TRIN 101 Comparative Grammar (English-Turkish)
Comparative study of the principal grammatical structures of English and Turkish, including lexical items. Presentation of basic concepts necessary to the study of words: meaning, etymology, variants and formation. *Credit units: 3 ECTS Credit Units: 6. Aut (A. Bayrakçeken)*

TRIN 102 Applied Linguistics
Introduction to applied linguistics with special emphasis on the morphological, syntax and semantics of the French and Turkish languages. Role of linguistics in translation and in rhetoric analysis . *Credit units: 3 ECTS Credit Units: 6.*

TRIN 103 Comparative Grammar (French-Turkish)
Comparative study of the principal grammatical structures of French and Turkish, together with a study of lexical items. Presentation of basic concepts necessary to the study of words: meaning, etymology, variants and formation. *Credit units: 3 ECTS Credit Units: 6. Aut (H. Sunel)*

TRIN 131 Texts and Composition in English I
This course uses texts of a general nature as a basis on which to develop the students' oral and written command of English. Emphasis is on style, language registers, vocabulary building and composition. Oral work includes small group discussions and debates on current topics in addition to public speaking. *Credit units: 3 ECTS Credit Units: 6. Aut (A. Bayrakçeken, M. Tüzüner)*

TRIN 132 Texts and Composition in English II
This course uses texts of a general nature as a basis on which to develop the students' oral and written command of English. Emphasis is on style, language registers, vocabulary building and composition. Oral work includes small group discussions and debates on current topics in addition to public speaking. *Credit units: 3 ECTS Credit Units: 6.*

TRIN 133 Texts and Composition in French I
This course uses texts of a general nature as a basis on which to develop the students' oral and written command of French. Emphasis is on style, language registers, vocabulary building and composition. Oral work includes small group discussions and debates on current topics in addition to public speaking. *Credit units: 3 ECTS Credit Units: 5. Aut (V. Paternotte)*

TRIN 134 Texts and Composition in French II
This course uses texts of a general nature as a basis on which to develop the students' oral and written command of French. Emphasis is on style, language registers, vocabulary building and composition. Oral work includes small group discussions and debates on current topics in addition to public speaking. *Credit units: 3 ECTS Credit Units: 5.*

TRIN 161 Introduction to Translation
This course consists of an introduction to the theory and methods of translation. It includes study of the nature, function and features of language, a survey of the development of the English, French and Turkish languages, and a description of translation as a profession. *Credit units: 3 ECTS Credit Units: 6. Aut (F. Arslan, İ. Boztaş)*

TRIN 166 English-Turkish-French Translation
This course consists of oral and written translation from English into Turkish and from French into Turkish of topics drawn from a variety of sources. The course includes comparative stylistics of English / Turkish and French / Turkish, including a study of language registers. It also includes the use of recorded broadcasts and radio reports as a spoken source from which written translation is performed. *Credit units: 4 ECTS Credit Units: 6.*

TRIN 172 Computer Literacy
Basic Computer Literacy. Students use both system and application software: word processing, Internet, basic communications and web page building, and spreadsheet. In addition, students learn how to build glossary tables and how to prepare web pages for translation. *Credit units: 3 ECTS Credit Units: 6.*

TRIN 205 English-American and French Culture I
The study of contemporary American and French societies through a selection of texts and audiovisual materials. Emphasis on the cultural, social and legal aspects of American and French civilizations. *Credit units: 3 ECTS Credit Units: 6. Aut (E. Maloney, V. Orenga)*

TRIN 206 English-American and French Culture II
The study of British, American, and French societies through oral discussions and presentations with emphasis on the political and economic aspects of the culture.. *Credit units: 3 ECTS Credit Units: 6.*

TRIN 207 Language of Journalism
An analytical approach to the study of journalistic texts (French or English and Turkish). Emphasis is placed on journalistic style and register. *Credit units: 3 ECTS Credit Units: 6. Aut (G. Bilgehan)*

TRIN 236 Group Communication and Discussion
This course is designed to provide an understanding of group dynamics and aims to improve student communication in English and French. Emphasis will be given to verbal and non verbal communication, active listening and responding techniques, problem solving and decision making. *Credit units: 3 ECTS Credit Units: None.*

TRIN 265 Translation of Economic Texts (English-Turkish-French)
This course consists of written translation from English into Turkish and French into Turkish on topics related to economics and business drawn from a variety of sources. The course includes terminological research and emphasizes style and language registers. *Credit units: 4 ECTS Credit Units: 6. Aut (İ. Boztaş, S. Özönder)*

TRIN 266 Translation of Politics and Legal Texts (English-Turkish-French)
This course consists of written translation from English into Turkish and French into Turkish on topics related to politics and law drawn from a variety of sources. The course includes terminological research and emphasizes style and language registers. *Credit units: 4 ECTS Credit Units: 6.*

TRIN 267 Sight Translation I
This course consists of oral translation from English into Turkish and French into Turkish on texts related to economics and business. Sight translation is also used as a vehicle for voice training and enhancement of students' general knowledge. *Credit units: 3 ECTS Credit Units: 6. Aut (M. Karagülle, M. Kaya)*

TRIN 268 Sight Translation II
This course consists of oral translation from English into Turkish and French into Turkish of texts related to politics and law. Sight translation is also used as a vehicle for voice training and enhancement of students general knowledge. *Credit units: 3 ECTS Credit Units: 6.*

TRIN 271 Business Communications
Introduction to the theory of communication. Written and oral communication in a business environment. Emphasis is on writing business letters, business reports, participating in debates and negotiations and giving oral presentations. *Credit units: 3 ECTS Credit Units: 5. Aut (C. Özcan, E. Topuz)*

TRIN 301 Analysis of Scientific and Technical Texts
This course emphasizes the form and structure of scientific and technical texts. It includes language functions, modes of expression and some practice in writing technical reports. *Credit units: 3 ECTS Credit Units: 6.*

TRIN 303 Technology for Translators
This course aims to acquaint the students with Technologies and electronic tools used by translation in their professions. Special attention will be devoted to computer assisted translation systems, use of online material and resources, translation Project management and terminology compilation techniques. *Credit units: 3 ECTS Credit Units: 6.*

TRIN 330 Criticism and French Literature
Study of a French literary work using an interdisciplinary approach. Particular emphasis will be placed on a plural reading of a novel from different aspects (historical, sociological, structural, economical, political). In addition the essential elements of the novel such as time, space, narrator, characters will be analysed. *Credit units: 3 ECTS Credit Units: 6.*

TRIN 332 Selected Topics from English Literature
Research, discussion and reports on problems in English Literature. *Credit units: 3 ECTS Credit Units: 6.*

TRIN 334 Media Studies
This course provides an introduction to Media Studies. It covers all the key topics encountered in Media Studies, including images and languages, narratives, genres, representations, advertising, marketing, realisms, modernism and postmodernism, technologies, industries, institutions, independents and alternatives, and producing. The course also includes in-depth case studies and follow-up activities. Throughout the course, examples are provided from a rich range of media forms, including advertising, films, television, radio, newspapers, magazines and photography. *Credit units: 3 ECTS Credit Units: 6.*

TRIN 335 Note-Taking and Consecutive Interpretation
This course aims at combining oral comprehension with the ability to reproduce speeches and to note then down while a speaker delivers a speech. Note-taking procedures and bilateral interpretation techniques will also be stressed. *Credit units: 3 ECTS Credit Units: 6. Aut (A. Akıncı Candoğan, F. Arslan, M. Kaya, Ş. Okyayuz Yener)*

TRIN 336 Introduction to Simultaneous Interpretation
This course emphasizes the techniques and practice of simultaneous interpretation. It also includes the techniques of liaison interpretation. *Credit units: 3 ECTS Credit Units: 6.*

TRIN 337 Precis Writing in English-French
This course consists of an introduction to the technique of precis-writing based on texts of a specialized nature and on recorded speeches. It also includes note-taking, editing and minute-writing. *Credit units: 3 ECTS Credit Units: 6. Aut (B. Blackwell Gülen, V. Orenga)*

TRIN 339 Introduction to Interpersonal Communication (in French)
This course offers basic knowledge of interpersonal communication principles and their practical application in everyday interpersonal settings. Emphasis is on improving interpersonal skills and helping students increase their communication competence through readings, lectures, in-class activities and out of class assignments. *Credit units: 3 ECTS Credit Units: 6. Aut (V. Paternotte)*

TRIN 340 Audiovisual Media Translation I
This course aims to introduce the students to the knowledge and skills required for producing translated version of an audiovisual product. Besides becoming familiar with the professional practice in this field, students will concentrate on techniques, resources and strategies for practical translation work in the media and enhance their awareness dubbing, subtitling, web translation and audio descriptim, including linguistic and cultural problems specific to audiovisual translation. *Credit units: 3 ECTS Credit Units: 6.*

TRIN 361 Technical Translation (English-Turkish)
This course consists of written and oral translation from English into Turkish of scientific and technical material drawn from a variety of sources, including medical and pharmaceutical. The course includes documentary and terminological research and emphasizes style and language registers. *Credit units: 3 ECTS Credit Units: 6. Aut (M. Tüzüner)*

TRIN 363 Technical Translation (French-Turkish)
This course consists of written and oral translation from French into Turkish of scientific and technical material drawn from a variety of sources, including medical and pharmaceutical. The course includes documentary and terminological research and emphasizes style and language registers. *Credit units: 3 ECTS Credit Units: 6. Aut (E. Aksoy, H. Sunel)*

TRIN 364 Literary Translation (English-Turkish)
This course consists of written and oral translation from English into Turkish and includes documentary and terminological research with emphasis style and language registers. *Credit units: 3 ECTS Credit Units: 6.*

TRIN 366 Literary Translation (French-Turkish)
This course consists of written and oral translation from French into Turkish and includes documentary and terminological research with emphasis on style and language registers. *Credit units: 3 ECTS Credit Units: 6.*

TRIN 371 Computer Literacy II
Web Page and Database Design. For the first half of the course students build a database. For the second half of the course students learn advanced HTML code, using both menu-driven and keyboard-driven software. *Credit units: 3 ECTS Credit Units: 6.*

TRIN 461 English-French Translation Workshop I
This workshop progressively leads the student to develop French-English, English-French translation skills through intensive work on translation assignments and individual and group projects involving comparative analysis of a variety of texts. *Credit units: 3 ECTS Credit Units: 6. Aut (V. Paternotte)*

TRIN 462 English-French Translation Workshop II
This workshop further develops the students English-French, French-English translation skills through intensive work on translation assignments and individual and group projects involving the translation of a variety of texts. *Credit units: 3 ECTS Credit Units: 6.*

TRIN 463 Translation Criticism
Analysis of translated text and discussion of parallel points. Criticism of translations. *Credit units: 3 ECTS Credit Units: 6. Aut (İ. Boztaş, A. Emre)*

TRIN 464 Professional Communication for Interpreters
The course aims to train students in the communication skills techniques required by interpreters in the professional world. Emphasis will be given to conducting meetings, negotiating contracts and presenting projects to English and French speaking audiences. *Credit units: 3 ECTS Credit Units: 6.*

TRIN 473 Turkish Diction
This course will particularly stress the need to speak Turkish efficiently and correctly with a special emphasis on the right pronunciation of words. *Credit units: 1 ECTS Credit Units: 2. Aut (M. Çelik)*

TRIN 481 Consecutive and Simultaneous Interpretation Techniques
This course provides further practice in the techniques of consecutive interpretation. Emphasis on bilingual practical applications. Prerequisite: TRIN 335. *Credit units: 6 ECTS Credit Units: 10. Aut (F. Arslan, S. M. Kumbaroğlu)*

TRIN 483 Simultaneous Interpretation I
This course emphasizes the techniques and practice of simultaneous interpretation in conference situations. *Credit units: 6 ECTS Credit Units: 8.*

TRIN 484 Simultaneous Interpretation II: Fieldwork+Projectwork
Implementing simultaneous interpretation. Under the supervision of a professional interpreter, the student will work in actual conference situations. Students are required to work on a project (under the supervision of an instructor) based on videotape recordings of conferences/seminars. Emphasis will be given to the preparation of dialogue lists/scripts in English/Turkish and French/Turkish and vice-versa. *Credit units: 6 ECTS Credit Units: 12.*

TRIN 485 Translation Workshop for EU Texts and Documents I (English-French-Turkish)
This course consists of translation from English into Turkish, French into Turkish on topics of current interest. Related with the European Union, its institutions and Turkish legal and official documents. *Credit units: 6 ECTS Credit Units: 10. Aut (İ. Boztaş, T. İnal)*

TRIN 486 Translation Workshop for EU Texts and Documents II (English French Turkish)
This course provides training in translation from English into Turkish and French into Turkish of legal and official documents as well as texts related with current European issues. *Credit units: 6 ECTS Credit Units: 12.*

TRIN 487 Interpreting for Public Services
This course provides an initial introduction to the context of public service interpreting and stresses interpreting for the courts, the police and the immigration services. Students will be introduced to the techniques of liaison and whisper interpretation and will reinforce the technique of consecutive interpretation. These techniques will be practiced through simulations of relevant interpreting situations. *Credit units: 3 ECTS Credit Units: 6. Aut (T. İnal, Ş. Okyayuz Yener)*

SCHOOL OF APPLIED TECHNOLOGY AND MANAGEMENT

Kamer Rodoplu, Director
Aykut Pekcan, Ph.D., Asst. Director
Engin Türel, B.A., Asst. Director

The School of Applied Technology and Management comprises three academic departments:

- Business Information Management
- Computer Technology and Information Systems
- Tourism and Hotel Management

The Department of Business Information Management (BIM) provides an "**Applied Business**" education with enriched "**Information Management**" and "**Business Communications**" components. BIM courses are designed to prepare innovative, adaptable graduates who have administrative and management skills and a solid grounding in the primary functions of business; who have the ability to use information effectively and to manage information resources and systems strategically; and who have sound teamwork and interpersonal communication abilities and can apply these skills equally to internal and external audiences. A very valuable part of the curriculum is the Industrial Training placement. This gives the student a "real life" business experience and adds a practical perspective to the theoretical studies. Students can specialize in the desired area of the study program through a wide variety of elective courses.

The Computer Technology and Information Systems Department (CTIS) aims to provide a first rate education in the field of computers and information technologies for college and high school graduates who are willing to apply themselves diligently to a computer education and who wish to prepare themselves for the broad range of exciting career opportunities, in this dynamic and rapidly expanding field. The CTIS curriculum is designed to meet the popular and expanding IT industry requirements like rapid application development, networks and web technologies, data warehousing, where technical background is not sufficient and needs to be supported by social skills. To accomplish this, CTIS technical courses are complemented by a range of business studies. These include both management and social/communication courses. Main goal is to graduate students who are technically both competent and confident, who are innovative, adaptable, and who have sound teamwork and interpersonal communication skills.

The Tourism and Hotel Management Department (THM) aims to prepare students for managerial and supervisory positions in hotel, restaurant and travel establishments, encouraging them to establish their own firms in hospitality and travel industries. Hotel and restaurant business, culinary arts and travel industry studies emphasized with management courses are taught theoretically. On-premise training facilities including the Practice Restaurant; fully equipped demonstration kitchen, the small quantity food laboratory, practice kitchen and furnished hotel rooms are the practical side of the curriculum. The THM Department also conducts industrial training programs, so that students may complete internships and externships providing real life experience with well known leading international hotel and restaurant chains and multinational travel and tour operators offering a healthy blend of theoretical and applied learning of the 21st century. Bilkent Hotel and Conference Center - Ankara is a significant part of the Departments' training programs.

ACADEMIC STAFF

Mustafa Akgül, Associate Professor
Ph.D., Combinatorics and Optimization, University of Waterloo, 1981. Combinatorial optimization, mathematical programming, linear programming, theoretical computer science, nonsmooth optimization.

Beyhan Akporay, Instructor
M.S., Technology Management, University of Maryland University Collage, 2007. Software engineering, distributed systems, project management.

Duygu Albayrak, Instructor
M.S., Physics, Middle East Technical University, 2000. Discrete mathematics, information technologies. E-learning, distance learning, effectiveness of educational strategies, learning management systems, software engineering education.

Özlem Albayrak, Instructor
Ph.D., Financial Information Systems, Ankara University, 2002. Quality Assurance and Reliability, Markup Languages and Web Programming, Software Engineering, Systems Design and Analysis Production Operations Management, Business Applications, System Development, Database Management.

Syed Amjad Ali, Assistant Professor
Ph.D., Electrical and Electronic Engineering, Eastern Mediterranean University, 2007. Algorithms, distributed programming, telecommunications, image processing, wireless sensor networking.

Ayşegül Altaban, Instructor
M.S., Industrial Engineering, Middle East Technical Engineering, 1990. Business mathematics, calculus, PC business applications, industrial training project, business research skills.

Oğuz Benice, Instructor
Diplôme, Etudes Supérieures en Hôtellerie et Restauration, Ecole Hôtellière de Lausanne, Switzerland, 1992. Food and beverage operations and management.

İbrahim Boz, Instructor
M.A., Economics, Eastern Michigan University, 1992. Economics, accounting, tourism.

Jamel Ben Mohamed Chafra, Instructor
M.B.A., Bilkent University, 1996. Rooms division management, service operations management.

Ayşe Baş Collins, Assistant Professor
Ph.D., Educational Sciences, Middle East Technical University, 1999. Human resources management, senior project.

Nazende Özkaramete Coşkun, Instructor
Ph.D., Economics, Yeditepe University, 2007. Economics, mathematics.

İhsan Çetin, Instructor
Ph.D., Economics, İstanbul University, 1973. Economics.

Hacer Çınar, Instructor
B.A., Business Administration, Hacettepe University, 1984. Accounting.

Gülgün Demirel, Instructor
M.B.A., Gazi University, 1977. Keyboarding, industrial training project.

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Ph.D., Sociology, Middle East Technical University, 2002. Sociology, organizational behavior.

Ebru Eren, Instructor
M.B.A., Atılım University, 2007. Database management systems, information systems analysis, project management.

Yener Ergüven, Instructor
B.S., Business Administration, Ankara University, 1972. Business administration.

Cevat Ertuna, Instructor
Ph.D., Business and Economics, University of Memphis, 1999. Quantitative decision techniques, finance.

Zeliha İlhan Ertuna, Instructor
Ph.D., Finance, Old Dominion University, 2001. Finance, accounting, economics.

Güliz Esen, Instructor
B.A., Foreign Language Education, Middle East Technical University, 1991. Database management, hospitality industry computerization, PC business applications I, and PC business applications II.

Tony Evans, Instructor
B.A., Economics, Sir George Williams University, Canada, 1968. Financial Statement Analysis, Corporate Finance, PC Business Applications II, strategic management.

Serkan Genç, Instructor
M.S., Computer Engineering, Middle East Technical University, 1999. Computer graphics, operating systems, website design and implementation.

Eda Gürel, Assistant Professor
Ph.D., Business Administration, Hacettepe University, 2006. Marketing, world travel destinations, world geography.

Arzu Sibel İkinci, Instructor
B.A., Economics, Hacettepe University, 1987. Hospitality industry computerization, website development 2.

Ebru İnanç, Instructor
M.A., European Union, Atılım University, 2007. Business research skills, psychology, business communications 1.

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M.B.A., Social Sciences, Gazi University, 2000. Travel operations and management, tour development and implementation, event management.

Hendrik C. Kuchlein, Instructor
Diploma, George Brown College, Canada, 1970. Food production, international cuisines.

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Ph.D., Dietetics and Nutrition, Hacettepe University, 1995. Nutrition, dietetics, sanitation, hygiene, health studies.

Elif Sibel Özdilek, Instructor
M.A., Bilgi University, 2001. Business communications I and II, public relations.

Burcu Özdoğru, Instructor
M.S., Computer Engineering, Atılım University, 2006. JAVA programming, e-learning, learning management systems.

Perin Öztin, Instructor
M.B.A., Alaska Pacific University, 1987. Tourist attractions of Turkey.

Feray Özverim, Instructor
Ph.D., Wirtschaftsuniversität, 1976. Economics, finance, business.

Aykut Pekcan, Assistant Professor
Ph.D., Management, Ankara University, 1997. Management, accounting, senior project.

Kadir A. Peker, Assistant Professor (on leave)
Ph.D., Electrical and Computer Engineering, New Jersey Institute of Technology, 2001. Multimedia content analysis, sensor data mining, time series analysis, applications of machine learning.

Vural Polat, Instructor
B.S., Computer Science, Southern Illinois University at Carbondale, 1992. Computer networks, programming.

Kamer Rodoplu, Instructor
Diplôme d'Ingénieur en Génie Electrique, Institut National des Sciences Appliquées de Lyon, 1982. Hardware design and interfacing, signal processing, telecommunications and networking, Calculus.

Nur Sağlam, Instructor
M.B.A., Gazi University, 1998. PC business applications I and II, hospitality industry computerization, financial statement analysis.

Cüneyt Sevgi, Instructor
M.S., Information Systems, Middle East Technical University, 2003. Software engineering, and software management, computer networks, wireless sensor networks.

Fatin Sezgin, Visiting Professor
Ph.D., Statistics, Atatürk University 1975.Business statistics, decision analysis, industrial training project.

Mustafa Siyahhan, Instructor
M.S.J., Ohio State University, 1974. Introduction to Business, Tourism Law, Principles of Marketing,

Ayşin Solak-Örkçüoğlu, Instructor
M.S., Computer Engineering and Information Science, Bilkent University, 1991. Problem solving and algorithms, programming languages, natural language processing.

Neşe Şahin Özçelik, Instructor
M.S., Computer Engineering, Atılım University, 2004. Object oriented programming, JAVA, web programming, mechatronics.

Esin Şenol, Instructor
B.S., Food Engineering, Middle East Technical University, 1989. Food sciences, cost control, health studies.

Erkan Tın, Assistant Professor
Ph.D., Computer Engineering, Bilkent University, 1995. Software engineering and project management, software validation and verification, management information systems, temporal and deductive databases, wireless communication systems.

Serpil Tın, Instructor
M.S., Electrical and Electronics Engineering, Middle East Technical University, 1991. Computer networks, data communications, software engineering, algorithms and programming languages, management information systems.

Satılmış Topçu, Assistant Professor
Ph.D., Electrical and Electronics Engineering, Bilkent University, 1994. Discrete Mathematics, Management of Frequency Spectrum, RF Propagation Simulation, Frequency Planning, Geographic Information Systems (GIS) - Spatial Data Manipulation, VLSI and Circuit Simulation.

Engin Türel, Instructor
B.A., Business Administration, Ankara Academy of Economics and Commerce, 1971. Hotel operations, industrial training.

Erkan Uçar, Instructor
M.S., Computer Engineering and Information Science, Bilkent University, 1993. Software engineering, programming languages, IT outsourcing, business process reengineering, data mining.

Ali Ünal, Instructor
M.B.A., Başkent University , 2003. Food and beverage service, restaurant service.

Rabia Üşenmez, Instructor
B.S., Computer Technology in Tourism, Bilkent University, 1998. Business computer applications, website development 1, PC buciness applications 1.

Hamdi Murat Yıldırım, Instructor
Ph.D., Mahematics, Middle East Technical University, 2007. Algorithms, operating systems, cryptography.

VOCATIONAL SPECIALISTS

Nimet Ceren Alparslan
M.S., Computer Engineering, Atılım University, 2009.

Cem Aydın
A.S., Computer Technology and Programming, Bilkent University, 1997.

Seçil Aydın
B.S., Computer Technology and Information Systems, Bilkent University, 2005.

Leyla Öksüz
B.S., Computer Technology and Information Systems, Bilkent University, 2004.

Zeki Polatkesen
Diploma, Culinary Arts, The Institute of Culinary Education, USA, 2000.

Baran Topal
M.S., Geology Engineering, Hacettepe University, 2007.

Hatice Zehra Yılmaz
A.S., Computer Technology and Programming, Bilkent University, 1994.

PART-TIME ACADEMIC STAFF

Çavlan Başarır, B.S., Graphic Design, Bilkent University, 1997.
Serdar Bilecen, B.S., Electrical and Electronic Engineering, Middle East Technical University, 1987.
Esra İsfendiyar, B.A., Administrative Sciences, Middle East Technical University, 1986.
Mehmet İzgi, B.S., Architecture, Portsmouth Polytechnic School of Architecture, 1975.
G. Doğan Özgödek, B.A., Law, Ankara University, 1986.
Ayşin Paşamehmetoğlu, M.B.A., Business Administration, Atılım University, 2003.
Haluk Tüfekçioğlu, B.A., Faculty of Literature, 1984.
Hale Havva Üstünel, M.B.A., University of Leeds, 1995.
Elif Yeloğlu, M.B.A., EADA International, 2006.

BUSINESS INFORMATION MANAGEMENT

N. Sağlam (Chair), A. Altaban, G. Demirel, E. Eren, G. Esen, T. Evans, A. S. İkinci, E. İnanç, E. S. Özdilek, F. Sezgin, R. Üşenmez.

Vocational Specialists: C. Aydın.

Part-time: Ç. Başarır, S. Bilecen, G. D. Özgödek, H. H. Üstünel.

All major organizations place a high value on graduates who combine general business knowledge with solid computer and information management training, plus strong communication and interpersonal skills. The BIM study program is designed to prepare its students for this challenge. Specifically the curriculum has three main focuses:

Business Administration: Business Administration courses constitute about 40% of the curriculum. To provide a foundation in basic administrative and management skills, students are given a wide range of business studies. In addition to specialized courses like accounting, finance, statistics and law, students also gain a clear perspective of the human, organizational and social factors related to successful business operations, through a range of supporting business studies which provide a foundation in basic administrative and management skills.

Information Management: The courses on information management area address goals as active information finding, quantitative reasoning, analytical thinking and problem solving. Starting with extensive hands-on experience and business- oriented applications, students then learn to evaluate, select, implement and manage information systems. By the time they graduate, Business Information Management graduates will have experienced all phases of project development through a web based project, which introduces 'creative elements', graphics design, plus new challenges in Information Systems Analysis and Information Architecture.

Business Communications: Business Information Management aims to graduate students who have strong teamwork and interpersonal communication abilities, developed through courses that focus on writing, speaking, presenting, debating and negotiating in English. The students also strengthen their verbal and written communication skills through an experience in various communication techniques such as; drama, presentation techniques, team discussions and the use of audio visual aids.

Internship: The curriculum includes both a 50-day summer training program and a full-semester corporate internship. These training programs are a significant part of the BIM curriculum and an important component of the students' development. Students experience, in first hand, the challenges, opportunities and frustrations of business life. They learn how to interact with people from a variety of backgrounds and to serve as contributing team members. They also gain the perspective and self-confidence they will need when selecting a career upon graduation. In fact, our students frequently receive offers for later full-time employment during their internship periods.

CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
BIM 100	Applied General Mathematics	- / -
BIM 103	Keyboarding	3 / 5
BIM 121	PC Business Applications I	3 / 6
ECON 105	Principles of Economics I	3 / 6
ENG 101	English and Composition I	3 / 6
GE 100	Orientation	1 / 1
SOC 101	Introduction to Sociology	3 / 5
THM 105	Introduction to Business	3 / 6
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
BIM 107	Elements of Business Mathematics	3 / 6
BIM 122	PC Business Applications II	3 / 6

BIM 205	Principles of Accounting	3 / 5
ECON 106	Principles of Economics II	3 / 6
ENG 102	English and Composition II	3 / 6
PSYC 100	Introduction to Psychology	3 / 6
TURK 102	Turkish II	2 / 1

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
BIM 108	Elementary Business Statistics	3 / 6
BIM 201	Problem Solving and Algorithms	3 / 6
BIM 223	Business Communications I	3 / 5
BIM 242	Web Site Development I	3 / 5
BIM 260	Financial Statement Analysis	3 / 5
HISTR 201	History of Turkish Republic I	2 / 1

Spring Semester		Credits / ECTS Credits
BIM 215	Database Management Systems	4 / 6
BIM 224	Business Communications II	3 / 6
BIM 261	Corporate Finance	3 / 5
BIM 306	Decision Analysis	3 / 6
HISTR 202	History of Turkish Republic II	2 / 1
THM 309	Principles of Marketing	3 / 5

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
BIM 206	Managerial Accounting	3 / 6
BIM 231	Business Research Skills	3 / 5
BIM 316	Information Systems Analysis	3 / 5
BIM 341	Web Site Development II	4 / 5
BIM 390	Summer Training	- / -
	Restricted Elective	3 / 6

Spring Semester		Credits / ECTS Credits
BIM 310	Industrial Training Project	4 / 30

FOURTH YEAR

Autumn Semester		Credits / ECTS Credits
BIM 210	Legal Aspects of Business	3 / 5
BIM 375	Public Relations	3 / 6
BIM 418	Management Information Systems	3 / 6
	Restricted Electives (2)	6 / 12

Spring Semester		Credits / ECTS Credits
BIM 405	Organizational Behaviour	3 / 6
BIM 406	International Business	3 / 6
BIM 492	Strategic Management	3 / 6
	Restricted Electives (2)	6 / 12

RESTRICTED ELECTIVES

BIM 402	Advanced Selling Skills	3 / 6
BIM 403	Communications Skills	3 / 6
BIM 404	Interactive Communications	3 / 6
BIM 408	Business Communications II	3 / 6
BIM 413	Marketing Management	3 / 6
BIM 414	Research Methodology	3 / 6
BIM 416	Negotiation Skills	3 / 6
BIM 417	Senior Seminars in Business Information Management	3 / 6
BIM 420	Team Effectiveness	3 / 6
BIM 421	Total Quality Management	3 / 6
BIM 423	Advertising Management	3 / 6

BIM 424	Integrated Business Management	3 / 6
BIM 430	Consumer Behavior	3 / 6
BIM 432	Customer Satisfaction	3 / 6
BIM 440	European Union	3 / 6
BIM 445	Implementing Web Based Intra Portals	3 / 6
BIM 450	Multimedia Techniques	3 / 6
BIM 455	Judgement and Decision Making	3 / 6
BIM 469	International Communications	3 / 6
BIM 471	Information Architecture	3 / 6
BIM 482	Electronic Business	3 / 6
BIM 490	Project Management	3 / 6
BIM 492	Strategic Management	3 / 6
BIM 494	Selected Topics in Business	3 / 6
BIM 496	Selected Topics in Business Communications	3 / 6
BIM 498	Selected Topics in Information Management	3 / 6

COURSE DESCRIPTIONS

BIM 100 Applied General Mathematics

Applied General mathematics aims at helping the students to remind basic algebra and improve analytic thinking. The course starts with number systems, exponentials, radicals, ratio, proportion, percentages, solutions of equalities and inequalities, as an application solution of stated problems, analytic study of line, graphs, combination, permutation, binomial, set theory, Venn diagrams and by the word problems end. *Credit units: None ECTS Credit Units: None. Aut (A. Altaban)*

BIM 103 Keyboarding

With the proliferation of personal computers and computer workstations, keyboarding proficiency has become an important skill for employees at all levels of an organization, and is of immediate value to undergraduate students. This course introduces the touch typewriting system to beginning students. The emphasis is upon developing the correct techniques to achieve speed and accuracy, using a personal computer. By the end of this course, the student will be able to touch type without visual assistance on a standard keyboard. *Credit units: 3 ECTS Credit Units: 5. Aut (G. Demirel)*

BIM 107 Elements of Business Mathematics

This course provides the students who study business with three important needs: (a) strong mathematical background (b) effective methods of solving mathematical problems in business (c) advanced analytical approach to complex mathematical problems. The course focuses on dealing with business mathematics scenario problems in various contexts. The basic categories covered are: problems in economics, problems in financial calculations and problems in production settings. The students are familiarized with using linear and quadratic equations, their associated graphs and functions for solving various business and real life scenarious. The course lays the foundation for further mathematical departmental courses like Business Statistics and Decision Analysis. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: BIM 100.*

BIM 108 Elementary Business Statistics

In this course, statistics and its role in managerial decision making; discrete and continuous numerical data; level of measurement for numerical data; graphical description of data, descriptive measures, basic counting rules, probability concepts, discrete probability distributions; continuous probability distributions; standard, normal, t, chi square and f distribution; sampling and statistical inference; hypothesis testing; bivariate data; regression, correlation will be covered. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: BIM 105 or BIM 107. Aut (F. Sezgin)*

BIM 121 PC Business Applications I

Department of Business Information Management aims helping students to get European Computer Driving License (ECDL). (ECDL) is the internationally recognized qualification which enables people to demonstrate their competence in computer skills and consists a series of centrally controlled and standardized computer literacy exams. In this context, the course starts with a basic overview of Concepts of Information Technology, How to Use the Computer and How to Manage Files. Then continues with an introductory level usage of Word Processing, Spreadsheets, Database, Presentation and ends with Information and Communication related subjects like Use of the Internet, Web Navigation and Web Searching. *Credit units: 3 ECTS Credit Units: 6. Aut (G. Esen, R. Üşenmez)*

BIM 122 PC Business Applications II

This course covers three widely used PC business applications. The major focus is on spreadsheets, using MS-Excel. Starting from the very basics of data types, data entry, editing and formatting, the student progresses to advanced use of MS-Excel, through case studies that employ a range of mathematical, statistical, financial,

logical and lookup functions. Use of macros plus graphical data representation are included as part of the required term project. The term project combines MS-Excel with effective Internet research techniques and the advanced use of MS-Power Point, both of which are also taught in this course. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: BIM 121. Aut (N. Sağlam)*

BIM 181 PC General Applications
This course provides the fundamentals and basic concepts of personal computers and an introduction to general applications such as word processing, spreadsheets and the usage of Internet research. The course objective is to provide students with sufficient knowledge to effectively complete written and research assignments and to be component users during their summer training. *Credit units: 3 ECTS Credit Units: 6. Aut (H. H. Üstünel)*

BIM 191 PC General Applications I
The objective of this PC pandemic course is to ensure that students are competent as introductory users of the most frequently encountered General Application Software Packages. Emphasis is placed on managing the computer resources, effective Internet search techniques, creating publishing and presenting information using Word processors. *Credit units: 3 ECTS Credit Units: 5. Aut (H. H. Üstünel)*

BIM 201 Problem Solving and Algorithms
The aim of the course is to improve the students' analytical thinking and problem solving skills using a programming approach. The course will cover the basic problem solving concepts that the students need to know and understand when working with any programming language or application. The fundamental steps of structured programming, building conditions, repetition, functions and array manipulation are the main topics covered in the course. *Credit units: 3 ECTS Credit Units: 6. Aut (N. Fenmen)*

BIM 205 Principles of Accounting
The course introduces the accounting cycle and studies the concepts and principles of accounting that are utilized for business purposes. Accounting procedures that are used in the preparation of financial statements for sole proprietorships, partnerships and corporations, and financial statement analysis are covered. The course also aims to familiarize students with various tools and techniques that are currently used in accounting. A widely used accounting software and Microsoft Excel are used for recording transactions and preparation of financial statements using computers. *Credit units: 3 ECTS Credit Units: 5.*

BIM 206 Managerial Accounting
The objective of the course is to introduce the students the main issues in Management Accounting. The principal topics encompass; cost volume profit analysis, cost behaviour, costing systems, budgeting, unit cost calculations, pricing, variance analysis accounting and performance evaluation. At the end of this course, the students will be able to make decisions different levels of management, and on data and reports to facilitate the decision making process. *Credit units: 3 ECTS Credit Units: 6. Aut (A. Pekcan)*

BIM 210 Legal Aspects of Business
The basics of Turkish law and the Turkish Commercial Code are the focus of this course. Contract preparation and partnership operations are two major topics covered in the Course. During group studies students create samples of the legal documents typically encountered in business life. *Credit units: 3 ECTS Credit Units: 5. Aut (G. D. Özgödek)*

BIM 215 Database Management Systems
The course starts with an explanation of the techniques and methodologies of Database Management Systems in particular with the Entity Relationship approach to data modeling, and the relational model of DBMS. File systems and databases, the relational database model are introduced in database the concepts part. Entity relationship (E-R) modeling, normalization of database tables and Structured Query Language (SQL) are covered in the design concepts part. These theoretical concepts are applied and enhanced through labwork sessions, during which students will analyze, design, create and manipulate databases. The students gain the effective use of database application by using Microsoft Access. The labwork sessions prepare the students earn the certificate for European Computer Driving Licence (ECDL), Module AM5, Database, and Advanced Level. Finally, the contributions of DBMS to an organization's operations, control and planning activities will be studied. Students carry out a term project to implement the subjects introduced in both class and labwork sessions. *Credit units: 4 ECTS Credit Units: 6, Prerequisite: BIM 201. Aut (E. Eren)*

BIM 223 Business Communications I
This course is aimed at students in all fields, but especially for future managers who should be aware of the vital role of communications in effective organizational management. The course will help students evaluate their own behaviour to better understand themselves and to understand how to effectively interact with others. The course covers aspects of both interpersonal and intrapersonal communication and uses a performance-based approach that helps the students to position themselves for success in tomorrow's job market. *Credit units: 3 ECTS Credit Units: 5. Aut (E. İnanç)*

BIM 224 Business Communications II
Verbal and nonverbal communication, importance of body language, conflict management skills, managing change and innovation, negotiation skills, inputs and outputs of communication, leader vs. manager, foundations of individual and group behavior, motivation and its significance in organizational effectiveness and efficiency. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: BIM 223. Aut (E. S. Özdilek)*

BIM 231 Business Research Skills
Business Research Skills course introduces students to critical thinking and other skills needed to become a contributing team member in a dynamic, technology enhanced organization. Course materials and instruction focus on research process, research design, sources, collection, and analysis of data, and presentation of results and recommendations. Through participation in various assignments, projects, and activities, students successfully completing BIM 231 should be well prepared to: Effectively use library, electronic and community resources for secondary research, Exercise skills using primary research methods for business research,. Apply basic quantitative and quantitative and qualitative skills for problem solving and decision making. Provide meaningful business communications both internal and external to the organization. Effectively communicate research results in an oral presentation as well as written report. Successfully prepare and deliver business related oral presentations using appropriate technology. *Credit units: 3 ECTS Credit Units: 5. Aut (E. İnanç)*

BIM 242 Web Site Development I
This course covers the basics that Web Developers need to develop their skills: Internet Concepts, Creating Web pages with XHTML, configuring text, color, and page layout with CSS, Web Development process using media and interactivity on Web pages and JavaScript. Students will analyze, design and publish Websites, using popular technical tools including DreamWeaver MX 2004, Adobe Photoshop 7.0 Students will gain an understanding of Web Design, its uses and value to any organization. Working in teams, students will prepare a Web site as a project will be demonstrated to other project groups and a jury w at the end of the semester. *Credit units: 3 ECTS Credit Units: 5. Aut (R. Üşenmez)*

BIM 260 Financial Statement Analysis
The first half of this course is devoted to an in-depth study of the content of Financial Statements, commencing with a review of IFRS and accrual accounting. Students then learn to analyze, interpret and draw conclusions about a company's "health" based on its financial statements. Topics include earnings quality, cash flow analysis, ratio analysis and capital structure. Trend analyses and common size statements are created using Excel. Upon completion students will understand both the importance and limitations of using financial statements to evaluate how well a company is managing its operating, investing and financing activities. *Credit units: 3 ECTS Credit Units: 5, Prerequisite: BIM 205 or THM 106. Aut (T. Evans)*

BIM 261 Corporate Finance
Building on the knowledge gained in BIM 260 (Financial Statement Analysis) this course focuses on how corporations plan and attain financial objectives. The challenge is to efficiently and profitably raise, allocate and manage the firm's capital resources; the goal is to maximize company cash flows, stock value and thus shareholder wealth. Topics in this exploratory course include TVM, capital markets, capital budgeting, working capital management, short and long term funding, dividend policy, financial forecasting and planning, plus selected topics in risk management. *Credit units: 3 ECTS Credit Units: 5, Prerequisite: BIM 260 or BIM 360. Aut (T. Evans)*

BIM 282 Hospitality Industry Computerization
The aim of the course is to introduce the students to the principles of EDP (Electronic Data Processing) and hotel MIS (Management Information Systems), and to explore the role of information in operational and management decision making. It is both a theoretical and a practical course. A case study using hotel management software, students will learn how management reports are derived from the operational level transactions that flow through the hotel system every day. The course will enhance the student's understanding of hotel operations and management and integrate their understanding of other theoretical courses such as Rooms Operations Management and Hospitality Industry Accounting. *Credit units: 3 ECTS Credit Units: 5. Aut (G. Esen)*

BIM 306 Decision Analysis
The objective of this course is to explore basic tools of decision making. A familiarity with elementary mathematical subjects such as functions, linear equations, matrices, probability theory and basic statistical concepts is required. These fundamental subjects are reviewed briefly in the beginning of the course. In studying these subjects, emphasis is given on the description and logic of different techniques instead of a rigorous mathematical treatment. Therefore the student will be able to choose the suitable tools and go through more detailed information sources if necessary in the future. Keeping this approach in mind, Multiple Regression and Modelling, Analysis of Time Series, Analysis of Variance, Index Numbers, Quality Control are explored. In the studying problems involving Decision-Making Under Uncertainty, the concepts of relative cost and profit tables, decision trees, Bayes' Theorem, marginal analysis and utility are introduced. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: BIM 106 or BIM 108. Aut (F. Sezgin)*

BIM 310 Industrial Training Project
The student will spend one semester working in industry. This provides the student with an opportunity to apply his present knowledge in a real-life environment, and to observe, document and evaluate the operations of a department. The student will be required to present an analysis of his experience, identifying the factors contributing to the success and/or problems of the department. The student's contributions to the department during his internship will be evaluated by his manager. *Credit units: 4 ECTS Credit Units: 30, Prerequisite: BIM 390. Aut (A. Altaban, N. Sağlam, F. Sezgin)*

BIM 316 Information Systems Analysis
The course offers a layout that reflects real-world systems analysis skills and techniques within the framework of the systems development life cycle (SDLC). Strategic planning, review of systems requests, and the steps in a preliminary investigation are included in analyzing the business case. Creation of a logical model for the new system by using entity-relationship diagrams, data flow diagrams and process description tools are the basic topics discussed in the enterprise modeling. Microsoft Project, a project management tool, is used to plan, schedule, monitor and manage IT projects. Upon successful completion of this course, students will know how to translate business requirements into information systems that support a company's short- and long-term objectives. *Credit units: 3 ECTS Credit Units: 5, Prerequisite: BIM 215. Aut (E. Eren)*

BIM 341 Web Site Development II
This course reinforces and builds on the basics taught in BIM 242. Students will learn how to convert static web sites into response empowered sources of dynamic information. Using a programming language (ASP) students will develop interactive feedback web pages and a database support system. Working in teams, students will prepare a website at which visitors can review products or services and can place on-line orders or requests for further information. *Credit units: 4 ECTS Credit Units: 5, Prerequisite: BIM 201 and BIM 215 and BIM 242. Aut (A. S. İkinci)*

BIM 375 Public Relations
This course offers an understanding of public relations concepts and practices. The major objectives are to teach students how to effectively communicate in attaining marketing/public relations goals, to help students understand the impact of public relations writing on a variety of audiences, to provide basic information about social identification and behavior, and to help students become familiar with the various media employed by public relations practitioners. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: BIM 224. Aut (E. S. Özdilek)*

BIM 390 Summer Training
This program provides the students with exposure to the workplace, in a supervised setting. Summer Training assignments are scheduled and monitored through the school's Industrial Training Office. The main objective is for the student to obtain practical real-life experience of the working environment. This training, which comprises a minimum of fifty (50) working days, is undertaken during the summer break following completion of the student's second academic year. *Credit units: None ECTS Credit Units: None. Aut (G. Demirel, N. Sağlam)*

BIM 402 Advanced Selling Skills
The task of "selling" is becoming more and more challenging each year. This course is designed to develop sales professionals who possess the required knowledge and skills to succeed in this profession. The course defines and uses the selling process as a platform to address the needs of complex sales situations. When there is a requirement to go beyond the basic selling models, particularly in large volume sales situations, this course can enhance the sales performance of even the best Sales Representatives. *Credit units: 3 ECTS Credit Units: 6.*

BIM 403 Communications Skills
This course is designed to enhance the students' ability to analyze, summarize and effectively present their opinions, observations and recommendations on a variety of business issues. The emphasis is on oral presentation techniques and skills. Students will be given the basic concepts of determining the purposes of a speech and the necessity of using visual aids in presentation. Upon successful completion of the course, students will be able to deliver a presentation professionally. *Credit units: 3 ECTS Credit Units: 6.*

BIM 404 Interactive Communications
The aim of the course is to enhance the students' understanding of the concepts of interpersonal communication and to develop their interpersonal communication skills in English focusing in particular on more formal discourse. Focus is on listening skills, verbal communication, communication in group, leadership in group communication and customer relations. Particular emphasis will be placed on the ability to communicate in writing in order to achieve work-related goals. *Credit units: 3 ECTS Credit Units: 6.*

BIM 405 Organizational Behaviour
As an eclectic field of study, integrating the behavioral sciences; psychology, sociology, anthropology etc., into the study of human behavior within organizations, the course focuses on the analytical approach to studying organizational behavior and on increasing student's ability to think in analytical terms. The dilemma of organizational behavior is to attempt to increase the predictability of human behavior. *Credit units: 3 ECTS Credit Units: 6.*

BIM 406 International Business
The main aim of this course is to define the field of international business and emphasize the differences between business within the domestic context and business in the international context. It provides a basis for understanding the global business environment and a person's place in it as the global business environment has increasingly influenced our professional, business and personal lives. *Credit units: 3 ECTS Credit Units: 6.*

BIM 411 Senior Project I
Students are given a research project on a subject that will enrich their theoretical and practical knowledge in an area related to their future careers, preferably in the hospitality and travel industry. Students learn how to conduct research in an introductory level. They will take a project from the stage of selecting a topic through to the production of a well-planned, well-written project final document. The course also aims to improve the students communication skills by concentrating on effective presentations at various stages of the study. Each student will understand the importance of responsibility delegation in a team. *Credit units: 3 ECTS Credit Units: 6.*

BIM 412 Senior Project II
Continuation of BIM 411. *Credit units: 3 ECTS Credit Units: 6.*

BIM 413 Marketing Management
The role of marketing in organizations and society. Combining fundamental marketing principles with management processes. Marketing strategy, strategic marketing planning and implementation. Dealing with competition in contemporary marketing environment. Measuring and forecasting market opportunities. Marketing mix strategies. *Credit units: 3 ECTS Credit Units: 6.*

BIM 414 Research Methodology
The aim of this course is to give students an understanding of scientific research and teach how to conduct research in an introductory level. The course covers topics such as the scientific method, problem definition, hypothesis formulation, research design, data collection and measurement methods, analyzing data and reporting. They will take a project from the stage of selecting a topic through to the production of a well-planned, well-written project final document. The course also aims to improve communication skills of students by concentrating on effective presentations at various stages of the study. *Credit units: 3 ECTS Credit Units: 6.*

BIM 416 Negotiation Skills
Negotiation is a life skill. Every day we negotiate with colleagues, suppliers or customers. Negotiation skills can have a serious impact on profits, project deadlines, your reputation with your colleagues and your ability to implement change successfully. This course will help students to: Recognise the strengths and weaknesses of their negotiation style; Plan and prepare effectively for a negotiation; Cope with difficult negotiations; Know how to trade concessions conditionally, and; Adapt their style in differing situations. *Credit units: 3 ECTS Credit Units: 6. Aut (S. Bilecen)*

BIM 417 Senior Seminars in Business Information Management
Exposes students to selected topics of current issues in business, information management and organizational communication, mostly with the support of guest speakers. The students will also participate in the planning and organization of the seminars. *Credit units: 3 ECTS Credit Units: 6.*

BIM 418 Management Information Systems
The goal of this course is to help students learn how to use and manage information technologies to revitalize business processes, improve business decision making, and gain competitive advantage. Particular emphasis is placed on Internet technologies that provide a platform for business collaboration processes among all stakeholders in today's networked enterprises and global markets. The course is built on five major areas of information systems knowledge needed by business professionals: Foundation Concepts, Information Technologies, Business Applications, Development Processes, and Management Challenges. *Credit units: 3 ECTS Credit Units: 6. Aut (A. Altaban)*

BIM 420 Team Effectiveness
The aim of the course is to provide students with theoretical and practical insights into the nature of team dynamics, the stages of team development, the factors that affect team effectiveness and the methods for building team cohesiveness. *Credit units: 3 ECTS Credit Units: 6.*

BIM 421 Total Quality Management
This course provides an introduction to the application of Total Quality Management tools and techniques in both product and service industries. The theory and history of Quality Management in the world, important milestones and trends are discussed. the main principles of Total Quality management (customer focus, leadership, social impact, employee management, etc.) are introduced and some group work is done on those topics. Finally, the widely accepted Business Excellence Model of European Foundation for Quality Management (EFQM) is given with some real life business examples of successful companies. *Credit units: 3 ECTS Credit Units: 6.*

BIM 422 Technology Entrepreneurship and Innovation

Learning intensive that flexibly covers many topics important to creating and maintaining a positive environment in which entrepreneurship can flourish. The course provides participants with an intense immersion in entrepreneurship, the creation and care of an entrepreneurial ecosystem. The course content has been developed by an initiative of Intel Corporation and its Higher Education group, and the Lester Center for Entrepreneurship and Innovation at the University of California, Berkeley. the course focuses on effective teaching of entrepreneurship and creation of programs and organizations to support entrepreneurship. It brings wide variety of techniques and theoretical frameworks in teaching and content. *Credit units: 3 ECTS Credit Units: None.*

BIM 423 Advertising Management

This course is an introduction to both the theory and practice of advertising and provides important insights into how advertising is done. The main purpose is to develop the ability to manage basic advertising campaigns on the client side. The course is designed to introduce the student to advertising foundations and environment. How advertising began, and where it fits in today's market will be discussed. Social issues, ethics, regulation, and responsibility will be covered. The students as future clients to the advertising agencies will be able to practice the progress of an agency while campaigning with the research methods and strategic planning for advertising. Print, broadcast, and interactive online media will be analyzed. The creative process will be discussed and practised. *Credit units: 3 ECTS Credit Units: 6. Aut (Ç. Başarır)*

BIM 424 Integrated Business Management

In this course students apply the concepts and techniques of Strategic Management to run a $100 million company, using a dynamic business simulator. Teams comprising three or four students complete in an evolving, competitive environment that requires integration of many common management functions, including product development, production, pricing and marketing, plus financial planning and forecasting and strategic positioning of the firm within selected market segments. This course is offered only to senior year students who have a superior academic standing. *Credit units: 3 ECTS Credit Units: 6.*

BIM 425 Contemporary Practices in Human Resources Management

This course focuses on strategic implications of "people" issues within organizations. It covers contemporary Human Resources Management practices to assist the organization in meeting its business objectives through the effective performance and job satisfaction of its employees. This course builds on steps for developing and delivering HR programs to ensure that HRM adds value to the organization and gaining basic knowledge and practicing in job analysis, personnel planning, recruitment, selection, hiring, orientation, performance management, motivation, compensation, training, leadership, change management and business ethics. Students will analyze case studies, identify problems and their causes, and propose solutions. *Credit units: 3 ECTS Credit Units: None. Aut (Ş. E. Ural Özkan)*

BIM 430 Consumer Behavior

Consumer Behavior is the study of social sciences that examine core influencing factors of consumer needs before, during and after the consumer purchasing process. Psychological, social, cultural influences in the competitive markets and consumers? decision making strategies are discussed under the framework of consumer buyer behavior. Target market, market segmentation and consumer motivation are also discussed. *Credit units: 3 ECTS Credit Units: 6. Aut (M. Ferendeci-Özgödek)*

BIM 432 Customer Satisfaction

Customer satisfaction is still one of the hardest challenges for today's businesses and becoming a hot issue in emerging markets. Concentrating on customer satisfaction is believed to drive businesses off the traditional marketing strategies while making them look and see through customers' eyes. In this course, concepts regarding the customer satisfaction as well as factors shaping customer satisfaction will be reviewed. Then the course will go into customer satisfaction programs aiming at reaching customer loyalty as an ultimate goal. In the second part of the course, the ways and means of assessing customer satisfaction will be reviewed. The results of assessment and reflecting results on customer relations performance will be the last issue to be covered in this course. Students will also participate in group studies to form customer satisfaction surveys as well as to conduct surveys on various subjects. *Credit units: 3 ECTS Credit Units: 6.*

BIM 440 European Union

The objective of this course is to become aware of the developments around us, what our personal responsibilities are and to investigate the importance of the issue of Turkey's Western integration and Turkey's importance to the West in this new post cold war era. To understand EU as a regional organization, students will first learn about its peculiar law, which is entirely different from International Law. Also it is mandatory to understand the institutions of EU and their functions. Topics to be covered in this course are: European Union Law and its tools, national characteristics of European institutions, supranationality of European Union, Turkey and European Union relations, approximation of Turkish Law to European Law, challenges and prosperity in Turco-European relations. *Credit units: 3 ECTS Credit Units: 6.*

BIM 445 Implementing Web Based Intra Portals

How to achieve the performance in an organisation by using the information systems goes through the combination of “common usages” and “common goals” in one screen from various locations at various periods where it is called as “portal”. This lecture aims to give basic and important principles to settle, develop a portal and also how to make this technology usable, and always live in real working life. *Credit units: 3 ECTS Credit Units: 6.*

BIM 450 Multimedia Techniques

Introduction to multimedia presentation techniques combined with selective types of digital media such as graphics, video, animation, sound, etc. Course is based on practical exercises and weekly assignments. Students are expected to be working as groups and perform a major multimedia project fulfilling the given criteria by the end of the semester. The course will focus on special multimedia editing software such as Adobe Premiere, Adobe Photoshop and Macromedia Flash technology will be examined for authoring and development of interactive online or offline media. *Credit units: 3 ECTS Credit Units: 6.*

BIM 455 Judgement and Decision Making

This course focuses on understanding judgement and decision making processes, and is based on social psychology which includes cognitive, personality, development and psychology. We shall try to analyze why these decisions produce strong feelings and emotions, what braces our decisions, what are beyond our control and how we can make better decisions. *Credit units: 3 ECTS Credit Units: 6.*

BIM 469 International Communications

The aim of the course is to introduce students to the main concepts, dilemmas, controversies and conflicts, as experienced in both historical and modern society, in light of the international communication system. International communications will be studied in terms of the political, economic and cultural relations between nation states. It is also an aim to provide a broad understanding of the role of the media in international communication and international relations. Students will be required to discuss current political events and news during each lecture. Students’ participation in class and seminar discussions is expected and will be considered in the final course grades. *Credit units: 3 ECTS Credit Units: 6.*

BIM 471 Information Architecture

This is a “finishing course” for BIM students who have successfully completed the System Development course (63-316) plus both Website Development courses, (63-242, 63-341). The focus is on effective *presentation of information* produced by computer applications, with particular emphasis on Website design and e-commerce. The first aim is to sensitize students to Human Computer Interactions related to information input, retrieval and display. Then, through critical analysis of existing systems, students will gain a sound understanding of Website Organizational Schemes, Organizational Structures, Labeling and Navigation systems, plus Information Retrieval tools. The creative aspects of Webpage design - graphics and content editing - will be evaluated in terms of Website usability. Finally, the organizational challenges of dealing with conflicting requirements when developing Web-based information systems, plus techniques for reconciling these differences, are explored. *Credit units: 3 ECTS Credit Units: 6.*

BIM 482 Electronic Business

Information systems, particularly those dealing with Electronic Business, have become a critical part of the products, services, and management of organizations. The effective and efficient use of information technology is an important element in achieving competitive advantage for business organizations and excellence in service for government and non-profit organizations. This course will not only help the student to gain the ability to develop, implement and manage an infrastructure of information technology, data, and organization-wide systems, but it will also help develop the skills to manage, analyze and develop applications dealing with electronic business. They will also be able to assist in incorporating information technology into the organization’s strategy, planning, and practices. *Credit units: 3 ECTS Credit Units: 6.*

BIM 490 Project Management

Project management is the application of knowledge, skills, tools, and techniques to project activities to meet project requirements. The course introduces the project management discipline and the project management life cycle. It covers a comprehensive view of the project management processes (initiating, planning, executing, monitoring and controlling, and closing) and PMI?s (Project Management Institute) project management methodology including nine knowledge areas (Scope Management, Integration Management, Time Management, Cost Management, Quality Management, Risk Management, Procurement Management, Human Resource Management and Communication Management). The students will also learn the advanced features of MS-Project and will be able to use it in their project implementation. *Credit units: 3 ECTS Credit Units: 6.*

BIM 492 Strategic Management

In this course students apply the techniques of Strategic Management to run a $100 million company, using a dynamic business simulator. Teams comprising four or five students manage companies in a constantly evolving market. This enables the students to apply the skills and knowledge they have obtained in the previous three years. Effective interpersonal, team building and communications skills are required to formulate decisions that integrate accounting, finance, marketing, R&D and production planning activities, plus Human Resource Management, in a highly competitive environment. *Credit units: 3 ECTS Credit Units: 6. Aut (T. Evans)*

BIM 494 Selected Topics in Business

This course, together with BIM 498, will provide graduating students with leading edge information in each of the three areas of BIM department specialization. Guest instructors drawn from industry will offer real world perspective on the current trends and debates in their professions. Topics covered can range from ethical legal and social issues to an advanced treatment of material studied in earlier semesters. *Credit units: 3 ECTS Credit Units: 6.*

BIM 496 Selected Topics in Business Communications

The subject matter of this advanced Business Communication course will vary from year to year based upon the recommendations of the guest instructors who are drawn from industry. The aim of the course is to ensure that BIM graduates enter the marketplace sensitized to the most recent trends and techniques in the constantly evolving field of Business Communications. Class projects may be assigned to supplement readings, lectures and class discussion. *Credit units: 3 ECTS Credit Units: 6.*

BIM 498 Selected Topics in Information Management

The objective of this Senior Year course is to provide graduating students with current trends in the rapidly changing area of Information Management. To ensure that course material is at the leading edge of IM developments, instruction is provided by IM professionals drawn from business and industry. Although the course content is dynamic, the focus is on integrating state-of-the-art information technologies into the daily operations of an organization. *Credit units: 3 ECTS Credit Units: 6.*

COMPUTER TECHNOLOGY AND INFORMATION SYSTEMS

E. Uçar (Chair), M. Akgül, B. Akporay, D. Albayrak, Ö. Albayrak, S. A. Ali, S. Genç, B. Özdoğru, F. Özverim, K. A. Peker, V. Polat, C. Sevgi, A. Solak-Örkçüoğlu, N. Şahin Özçelik, E. Tın, S. Tın, S. Topçu, H. M. Yıldırım.

Vocational Specialists: N. C. Alparslan, S. Aydın, L. Öksüz, B. Topal, H. Z. Yılmaz.

Department of Computer Technology and Information Systems offers a four-year BSc. degree in information technology (IT) and information systems (IS) with a curriculum concentrated in software development and designed to meet the popular and expanding IT industry requirements. A semester-long industrial training opportunity - in their 3rd year -enables our students to practically apply their background on topics like database, data communications and networking, Internet and e-commerce applications, software engineering, programming and even get solid job offers from contemporary software companies.

Technical courses are complemented by a range of business studies. These include both management and social/communication courses. Our aim is to graduate students who are technically both competent and confident, who are innovative, adaptable, and who have sound teamwork and interpersonal communication skills.

CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
BM 100	Keyboarding	2 / 2
CTIS 151	Introduction to Programming	5 / 8
CTIS 153	Discrete Mathematics I	3 / 6
CTIS 155	Information Technologies I	3 / 6
ENG 101	English and Composition I	3 / 6
GE 100	Orientation	1 / 1
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
CTIS 152	Algorithms and Data Structures	5 / 8
CTIS 154	Discrete Mathematics II	3 / 5
CTIS 156	Information Technologies II	3 / 5
ENG 102	English and Composition II	3 / 6
THM 105	Introduction to Business	3 / 6
TURK 102	Turkish II	2 / 1

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
CTIS 251	Object Oriented Programming	5 / 9
CTIS 255	Web Technologies I	3 / 5
CTIS 259	Database Management Systems and Applications	5 / 9
CTIS 261	Computer Networks I	4 / 6
HISTR 201	History of Turkish Republic I	2 / 1

Spring Semester		Credits / ECTS Credits
CTIS 252	Programming in Java	5 / 8
CTIS 256	Web Technologies II	3 / 5
CTIS 262	Computer Networks II	4 / 6
HISTR 202	History of Turkish Republic II	2 / 1
THM 258	Principles of Economics	3 / 5
	Non-Technical Elective	3 / 5

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
CTIS 290	Summer Training	- / -
CTIS 351	Rapid Application Development	4 / 7

CTIS 357	Algorithms and Problem Solving	3 / 7
CTIS 359	Principles of Software Engineering	3 / 7
ELS 301	Advanced Communication Skills	3 / 4
	Management Elective	3 / 5

Spring Semester Credits / ECTS Credits

CTIS 310	Industrial Training Project	4 / 30

FOURTH YEAR

Autumn Semester Credits / ECTS Credits

CTIS 457	Survey in Information Technologies	2 / 4
CTIS 459	Applied Software Engineering	4 / 9
	Technical Electives (2)	6 / 12
	Unrestricted Elective	3 / 5

Spring Semester Credits / ECTS Credits

CTIS 456	Senior Project	4 / 9
CTIS 458	Seminars in Information Systems	2 / 4
	Technical Electives (2)	6 / 12
	Unrestricted Elective	3 / 5

TECHNICAL ELECTIVES

CTIS 453	Selected Topics in Information Systems I	3 / 6
CTIS 454	Selected Topics in Information Systems II	3 / 6
CTIS 490	Distributed Systems	3 / 6
CTIS 491	Software Validation Verification and Testing	3 / 6
CTIS 492	Information Systems Outsourcing	3 / 6
CTIS 493	Information Systems Project Management	3 / 6
CTIS 494	Software Quality Assurance	3 / 6
CTIS 495	Robotics and Embedded Computing	3 / 6
CTIS 496	Data Security in Computing	3 / 6
CTIS 497	LAN Switching and Wireless Networks	3 / 6
CTIS 498	Wide Area Networks	3 / 6

COURSE DESCRIPTIONS

CTIS 151 Introduction to Programming

An introduction to programming from both design and programming standpoints. Syntax and semantics of programming languages. Programming style. Program debugging and testing. Data representation, simple arithmetic expressions, decision and control statements. Arrays. Introduction to standard libraries, structured and modular programming technique will be introduced along with the usage of C language (Four hours lecture, four hours lab, one hour recitation.) *Credit units: 5 ECTS Credit Units: 8. Aut (B. Özdoğru, A. Solak-Örkçüoğlu)*

CTIS 152 Algorithms and Data Structures

Implementation of abstract data types and structures. Dynamic data structures. Strings, stacks, queues, linked lists, doubly linked lists. Multidimensional structures. Recursion. Implementation of basic searching and sorting methods. File I/O (Four hours lecture, four hours lab, one hour recitation.) *Credit units: 5 ECTS Credit Units: 8, Prerequisite: CTIS 151. Aut (S. Tın)*

CTIS 153 Discrete Mathematics I

This course focuses students on the construction and computation of objects. Designed as an introductory course in discrete mathematics, it serves a variety of majors, including mathematics, and computer science. Logic and proof. Elements of logic and logic circuit, mathematical inductions, set theory and operations on sets, relations and functions, counting methods and the Pigeonhole Principle. Recurrence Relations. (Three hours lecture.) *Credit units: 3 ECTS Credit Units: 6. Aut (D. Albayrak, A. Solak-Örkçüoğlu)*

CTIS 154 Discrete Mathematics II

The course introduces algebra that directly applies to computer science. In addition to Boolean algebra, abstract data types are introduced as algebras and computational algebras. Topics include graph theory, Boolean algebra, theory of trees, combinational circuits, automata theory, grammars and languages. (Three hours lecture.) *Credit units: 3 ECTS Credit Units: 5, Prerequisite: CTIS 153.*

CTIS 155 Information Technologies I

The aim of the course is to provide knowledge on the essential current computer applications and computer literary. The main topics are: General history of computer. Hardware components, configurations and setup.

Basics of operating systems. Windows administration. Office applications and utilities. The students are expected to gain the familiarity with the fundamentals of computer usage. (Three hours lecture in lab.) *Credit units: 3 ECTS Credit Units: 6. Aut (C. Sevgi)*

CTIS 156 Information Technologies II

The course introduces basic operating system concepts by using Linux operating system. Covered Linux topics include: Linux GUI, kernel, CUI, shells, basic shell programming, Linux file system architecture, file security, linux tools for software developments, etc. The course also introduces networking and internetworking concepts. (Three hours lecture in lab, 1 hour lab.) *Credit units: 3 ECTS Credit Units: 5, Prerequisite: CTIS 155. Aut (H. M. Yıldırım)*

CTIS 251 Object Oriented Programming

The objective of the course is to make the students familiar with the object oriented programming paradigm by focusing on the principal concepts such as objects, classes, encapsulation, modular design, hierarchy between classes, inheritance, polymorphism and abstract classes. Java language will be used as the programming language and all the applications and examples both in the lecture and in the lab will be implemented using Java. (Four hours lecture, three hours lab.) *Credit units: 5 ECTS Credit Units: 9, Prerequisite: CTIS 152. Aut (B. Özdoğru, N. Şahin Özçelik)*

CTIS 252 Programming in Java

The main goal of this course is to teach advanced subjects of programming in java. The course content will be taught together with example programs and lab practice. The students are expected to have a background on object oriented programming concepts with Java. The course topics are: JApplet, Multi Frame, Jdialog, Java I/O, File Operators, Serialize objects, Generics, Collections, Multi-Threaded Programming, Using Threads, Creating a Multi-Threaded Program, Thread Synchronization, JDBC, Overview of SQL Language, Overview of JDBC and its drivers, JDBC API: connections, statements, result sets, Using JDBC: updates, queries, Basic Networking, Overview of Networking, Networking Concepts, Identifying Your Computer's IP Address, Using the Inet Address Class, Sockets, Implementing the Client Side of a Socket, Implementing the Server Side of a Socket, Developing a multi-threaded Server, Datagram Socket, Servlet, Java Server Pages, Personalizing the Site, Displaying Dynamic Content, Remote Method Invocation (RMI), Java Beans, J2EE, Model View Controller (MVC). (Four hours lecture, four hours lab.) *Credit units: 5 ECTS Credit Units: 8, Prerequisite: CTIS 251. Aut (N. Şahin Özçelik)*

CTIS 255 Web Technologies I

The objective of the course is to give the necessary background information and the technologies to develop a professional web site. It focuses mainly on design and implementation of interactive web pages using different web technologies like html, dhtml, css, javascript, flash. Through both lectures and laboratory work, students will gain a comprehensive understanding of the Internet and the purpose and value to an organization of owning a website. (Three hours lecture in lab.) *Credit units: 3 ECTS Credit Units: 5, Prerequisite: CTIS 151. Aut (S. Genç)*

CTIS 256 Web Technologies II

The aim of this course is to enable students to develop information systems using web as the main interface between users and the system. To do this; all necessary information, design techniques and the concepts will be taught such as PHP, my SQL, ASP, JSP e-commerce concepts, XML. (Three hours lecture in lab.) *Credit units: 3 ECTS Credit Units: 5, Prerequisite: CTIS 255.*

CTIS 259 Database Management Systems and Applications

Entity-Relationship(E-R) Data Model, Relational Data Model, Relational Schema, Functional Dependency and Normalization, Logical and Physical Database Design, Relational Algebra, Structured Query Language (SQL), Views, Constraints, Triggers, Transaction Processing, Concurrency Control, Recovery, and Security Issues in Multi-User Databases, SQL in Programming Environments, Practices in Commercial Database Management Systems. (Four hours lecture, three hours lab.) *Credit units: 5 ECTS Credit Units: 9, Prerequisite: CTIS 152. Aut (E. Tın)*

CTIS 261 Computer Networks I

CCNA Exploration-1: Introduction to computer networks. LANs, WANs and Internetworks. Protocols and Layered models. The Open System Interconnection (OSI) model. TCP/IP model. Application Layer Protocols and services: DNS, www, e-mail, FTP, DHCP, P2P, Telnet. OSI Transport Layer: TCP and UDP protocols. OSI Network Layer: IPv4 protocol and addressing: Special addresses, subnetting. Routing. Data-Link Layer: Media access control techniques. MAC addressing and framing. Ethernet protocol concepts and types. OSI Physical Layer: Signalling and encoding. Physical media. Planning and cabling networks. Basic network configuration and testing.(Four hours lecture in lab.) *Credit units: 4 ECTS Credit Units: 6, Prerequisite: CTIS 153 and CTIS 155. Aut (S. A. Ali, V. Polat)*

CTIS 262 Computer Networks II
CCNA Exploration-2: Introduction to Routing and Packet forwarding: The router components and configuration using the Cisco IOS. Building the routing table. Path determination and switching functions of a router. Static routing. Introduction and classification of Dynamic Routing Protocols: Metrics and administrative distances. Distance Vector Routing Protocols: RIPv1 and RIPv2. Variable Length Subnet Masking and CIDR. EIGRP operation and configuration. Link-State Routing Protocols: OSPFv2 operation and configuration. (Five hours lecture in lab.) *Credit units: 4 ECTS Credit Units: 6, Prerequisite: CTIS 261.*

CTIS 290 Summer Training
This program provides the students with their first exposure to the workplace, in a supervised setting. Summer Training assignments are scheduled and monitored through the school's Industrial Training Office. The main objective is for the student to observe an information systems institution first-hand, and obtain practical real-life experience. This training, which comprises a minimum of forty (40) working days, is undertaken during the summer break following completion of the second academic year. A training report has to be submitted. *Credit units: None ECTS Credit Units: None. Aut (Staff)*

CTIS 310 Industrial Training Project
The student will spend one semester working in industry. This provides the student with an opportunity to apply his present knowledge in a real-life environment and to observe, document and evaluate the operations of a computing department. The student will be required to present an analysis of his experience, identifying the factors contributing to the success and/or problems of the department. The student's contributions to the department during his internship will be evaluated by his manager. *Credit units: 4 ECTS Credit Units: 30, Prerequisite: CTIS 290. Aut (D. Albayrak)*

CTIS 313 Money Management
The course covers the usage and storage of money and the management of it; in order to avoid unnecessary losses. In the first part of the course the price and different forms of money will be analized, where as in the second part foreign currency markets and management will be included in the discussions to be able to complete the money management process. (Three hours lecture.) *Credit units: 3 ECTS Credit Units: 5. Aut (F. Özverim)*

CTIS 315 Introduction to Matrix Games
The aim of the course is to show the students how to develop a strategy that minimizes the loss under strong competition. Five or six relatively simple games will be defined and played. The possible and rational moves in each one of the games will be determined and gathered in form of a matrix. Based on the matrix and the statistical frequency of the appearance the strategy that minimizes the loss will be chosen. This choice will be discussed and compared, and lastly theoretically proven in case it is possible. The findings of the game will be applied to similar economic cases in real life. *Credit units: 3 ECTS Credit Units: 5. Aut (F. Özverim)*

CTIS 351 Rapid Application Development
Introduction to the concepts and tools of the rapid development process. Basic programming applications and visual interface design using a Rapid Application Development (RAD) environment and toolset, enabling students to be more productive, more quickly. (Three hours lecture, two hours lab.) *Credit units: 4 ECTS Credit Units: 7, Prerequisite: CTIS 251. Aut (Staff)*

CTIS 357 Algorithms and Problem Solving
Algorithms and problem solving techniques. Sorting, searching, divide and conquer algorithms, dynamic programming, greedy algorithms, graph algorithms, cryptographic algorithms, string matching algorithms. Basic analysis of algorithms. Improves students' analytical thinking skills. (Three hours lecture.) *Credit units: 3 ECTS Credit Units: 7, Prerequisite: CTIS 152 and CTIS 154. Aut (M. Akgül)*

CTIS 359 Principles of Software Engineering
Software processes; requirements analysis and specification, design, development and testing methodologies, and software lifecycle. Importance of planning and managing the software processes. Software modeling, review of Unified Modeling Language and CASE technology. Software development, planning, management and engineering standards such as ISO/IEC 12207 and EIA/IEEE J-STD-016-1995. An in-depth introduction to the concepts and techniques for software development. Experience team-oriented software engineering through conventional software life cycle models via small-scale software project. (Three hours lecture, one hour lab.) *Credit units: 3 ECTS Credit Units: 7, Prerequisite: CTIS 251 and CTIS 259. Aut (Ö. Albayrak)*

CTIS 453 Selected Topics in Information Systems I
The course introduces the students to the fundamental concepts of information systems. These include, systems theory; management information in organizations, MIS; decision support systems; enterprise resource planning systems; information systems planning; organizing for information system projects; IS project lifecycle models; IS development and maintenance principles; organization, management and control IS, IS outsourcing. (Three hours lecture.) *Credit units: 3 ECTS Credit Units: 6.*

CTIS 454 Selected Topics in Information Systems II

The objective of this course is to provide the required information and technology to 2D and 3D graphics software systems. In addition to giving the basic concepts behind the graphics systems. It enables students to learn a widely used graphics library. Open GL, for the implementation. (Three hours lecture in lab.) *Credit units: 3 ECTS Credit Units: 6. Aut (S. A. Ali)*

CTIS 456 Senior Project

Students are assigned a project that will allow them to use their skills and knowledge under close supervision of a faculty advisor. This course is the 2nd half of a yearly software project where the 1st half starts with the course CTIS459. In CTIS459, student teams complete the planning, requirements specification and design and in CTIS456 they continue with the implementation and testing. During an oral presentation to a faculty board, the students provide a full demonstration of their work. Some of the projects are sponsored by contemporary Software Companies. *Credit units: 4 ECTS Credit Units: 9, Prerequisite: CTIS 459.*

CTIS 457 Survey in Information Technologies

During this first semester course student teams will perform advanced research on related IT and/or IS topics mainly focusing on new trends and technologies. They need to consult with at least 5 related contemporary establishments on their specific research area. At the end of the semester, they need to prepare a research thesis and make a presentation. Some of the topics are Mobile Communication, IS security, E-learning, Distance Education and Outsourcing. (Two hours lecture.) *Credit units: 2 ECTS Credit Units: 4. Aut (S. Tın, E. Uçar, H. M. Yıldırım)*

CTIS 458 Seminars in Information Systems

During this final semester course, managerial level guest speakers from the IT industry, provide weekly seminars. Each team of 3-4 students, get prepared for the topics for two weeks before the seminar date. At the end of each seminar, Q-A sessions and panel discussions are hold. Main aim of the course is to enable senior level students get familiar with latest technologies and hot topics as well as to get acquainted with the corporates and organizations in the IT and Software Industry. (Two hours lecture) *Credit units: 2 ECTS Credit Units: 4.*

CTIS 459 Applied Software Engineering

Selecting an appropriate software development life cycle model for the senior project, and applying appropriate requirements, analysis, design and testing methodologies. Employing techniques that help achieve SEI CMMI and IEEE goals while enhancing the impact of CASE tools and formal methods. Students are guided in technical analysis, design, development, testing and documentation phases in the context of their senior project topics and required to prepare a complete set of documents and plans ranging from software requirements specification (SRS) and software design description (SDD) to software development plan (SDP) and software installation plan (SIP). Supplementary, but selected software engineering issues in areas such as software estimation techniques, project management concepts, software validation and verification, real-time operating systems and design, user interface design, rapid software development and prototyping, software quality and configuration management, distributed system architectures are covered. (Three hours lecture, two hours lab.) *Credit units: 4 ECTS Credit Units: 9, Prerequisite: CTIS 359. Aut (B. Akporay)*

CTIS 490 Distributed Systems

This course covers the fundamentals of distributed systems. The underlying principles, technologies, and real-world applications are discussed. The concepts studied are system models, networking, internetworking, inter-process communications, synchronization, consistency, replication, fault tolerance, and security. The case-studies of object-based (CORBA & DCOM), file-based (NFS), document-based (Web-services), and coordination-based (Jini) distributed systems are examined. The coursework will include a research paper and an application project. (Three hours lecture) *Credit units: 3 ECTS Credit Units: 6.*

CTIS 491 Software Validation Verification and Testing

Critical role of testing in successful completion of quality software projects inevitably makes it an integral part of software development process. The objective of this course is to provide a framework for understanding Software Validation and Verification concepts, processes and techniques in order for the students to effectively contribute to the testing effort in software development organizations. The course concentrates on software inspections and reviews, requirements tracing, and system and component testing. Test planning, test case design, defect reporting and tracking, and control of testing process are practiced on sample software projects. (Three hours lecture.) *Credit units: 3 ECTS Credit Units: 6.*

CTIS 492 Information Systems Outsourcing

The course introduces the students to the fundamental concepts of information systems. These include, management information in organizations, decision support systems, enterprise resource planning, information systems planning, organizing for information system projects, IS project lifecycle models, IS development and maintenance principles, organization, management and control IS. This course will outline the major aspects of outsourcing with a focus on IT and IT-enabled services outsourcing. The course will - in detail - explain the conditions in which outsourcing makes sense and conditions where short term cost gains are offset by long term systemic issues. The course explores both voluntary and involuntary outsourcing for both consumers and

producers of IT and IT-enabled services. Variables that impact outsourcing are discussed and the impacts of outsourcing are explored from business as well as social perspectives. (Three hours lecture.) *Credit units: 3 ECTS Credit Units: 6. Aut (E. Uçar)*

CTIS 493 Information Systems Project Management

Project management is the application of knowledge, skills, tools, and techniques to project activities to meet project requirements. IT projects are unique because of rapid changes in technology, required user involvement, various systems development life cycle methodologies, product scope changes, team dynamics, and global teams. This course covers a comprehensive view of the IT project management processes. It introduces the project management discipline and the project management life cycle. It covers the management of project teams and project communications. Project selection, scheduling, and control tools and techniques such as Net Present Value (NPV), Return on Investment (ROI), Work Breakdown Structures (WBS), Critical Path Method (CPM), and Earned Value (EV) management are examined. Project risk, quality, and procurement management are also included. (Three hours lecture.) *Credit units: 3 ECTS Credit Units: 6. Aut (B. Akporay)*

CTIS 494 Software Quality Assurance

The purpose of this course is to provide students a common understanding of software quality assurance. The course aims to arm students with tools, techniques and methodologies of developing robust software. It provides both the theoretical and the practical concepts. The course requires several group project/ case study assignments. Topics include; Software Inspections and Testing, Capability Maturity Model, ISO9000 and SPICE, Software Quality Metrics, The Seven MP Tools, Software QFD and Voice of the Customer, Risk Assessment and Failure Modes and Effects Analysis, Quality Measures and Statistical Methods, Verification and Validation, Testing and Evaluation, Integration, Extension and Maintenance for Trustworthiness. (Three hours lecture.) *Credit units: 3 ECTS Credit Units: 6. Aut (Ö. Albayrak)*

CTIS 495 Robotics and Embedded Computing

Introduction to the concepts and tools of the embedded development process. Microsoft Robotics Developer Studio 2008 as a Robotics application development and simulation environment. Lego NXT, Corobot robots and various sensors enabling students to be more productive and ready for international robotics competitions. Important concepts to be included are; Embedded Systems Hardware and Software, Overview of Robotics Hardware, Working with Decentralized Services, Advanced Topics in robotics development. (Three hours lecture in lab.) *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CTIS 351.*

CTIS 496 Data Security in Computing

The course covers theory and practice of computer security, focusing in particular on the security aspects of the computing systems. Access control mechanisms are analyzed together with distributed security model architectures. It surveys cryptographic tools used to provide security, such as shared key encryption (DES, 3DES, AES, etc.); public key encryption, key exchange, and digital signature (Diffie-Hellmann, RSA, DSS, etc.) Besides, it then reviews how these tools are utilized in the internet protocols and applications such as Kerberos, SSL, IPSEC, TLS, and others. Network security issues, such as viruses, intrusion, firewalls, and others will also be covered. (Three hours lecture.) *Credit units: 3 ECTS Credit Units: 6. Aut (H. M. Yıldırım)*

CTIS 497 LAN Switching and Wireless Networks

CCNA Exploration-3: Principles of hierarchical network design. Basic switch concepts and configuration. Design considerations for IEEE 802.3 Ethernet networks. Forwarding frames using a switch. Switch management and security configuration. Introduction to Virtual LANs and VLAN trunking. Configuring VLANs and trunks. VLAN Management and VLAN Trunking Protocol (VTP). VTP operation and configuration. Introduction to Spanning-Tree Protocol (STP). Inter-VLAN routing. Basic Wireless LAN concepts and operation. WLAN Security and configuration. (Three hours lecture in lab.) *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CTIS 261. Aut (V. Polat)*

CTIS 498 Wide Area Networks

CCNA Exploration-4 : Introduction to Wide Area Networks: Circuit-switching vs Packet-switching. HDLC, PPP, Frame Relay protocol concepts and configuration. Introduction to Network Security. Using Access Control Lists to secure networks. Standard and extended ACL configuration. Teleworker Services: Broadband services: Cable, DSL and Wireless. Virtual Private Networks (VPNs). IP Addressing Services : DHCP, NAT, IPv6. Network troubleshooting. (Four hours lecture in lab.) *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CTIS 262 and CTIS 497.*

TOURISM AND HOTEL MANAGEMENT

A. Pekcan (Acting Chair), O. Benice, İ. Boz, J. B. M. Chafra, A. B. Collins, N. Ö. Coşkun, İ. Çetin, H. Çınar, Ş. Elmas, Y. Ergüven, C. Ertuna, Z. İ. Ertuna, E. Gürel, G. Karamullaoğlu, H. C. Kuchlein, N. Örer, P. Öztin, K. Rodoplu, M. Siyahhan, E. Şenol, E. Türel, A. Ünal.

Vocational Specialists: Z. Polatkesen.

Part-time: E. İsfendiyar, M. İzgi, A. Paşamehmetoğlu, H. Tüfekçioğlu, E. Yeloğlu.

TOURISM AND HOTEL MANAGEMENT PROGRAM

Tourism is the fastest growing sector not only in our country, but also in the world. Since the world became a global market, the multi-national corporations are entering into this leading sector to a large extent. Thus students who select Tourism and Hotel Management as their area of specialization will have a chance to follow a curriculum that prepares them for a career both domestically and world-wide.

The practical and theoretical courses have a wide spectrum extending from department specific travel, hotel and food and beverage operations courses to managerial skill development, accounting, finance courses supported with English as teaching medium, second foreign languages, internships and project courses.

CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
BIM 191	PC General Applications I	3 / 5
BM 100	Keyboarding	2 / 2
ENG 101	English and Composition I	3 / 6
GE 100	Orientation	1 / 1
THM 106	Principles of Accounting	3 / 5
THM 163	Dynamics of Tourism	3 / 5
THM 172	World Travel Destinations	3 / 5
TURK 101	Turkish I	2 / 1
	Second Foreign Language*	3 / 6

Spring Semester		Credits / ECTS Credits
ENG 102	English and Composition II	3 / 6
THM 107	Microeconomics	3 / 5
THM 164	Calculus	3 / 5
THM 166	Health Studies	1 / 1
THM 167	Behavior and Etiquette	1 / 1
THM 168	Nutrition and Sanitation	3 / 5
TURK 102	Turkish II	2 / 1
	Second Foreign Language*	3 / 6

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
BIM 282	Hospitality Industry Computerization	3 / 5
HISTR 201	History of Turkish Republic I	2 / 1
THM 205	Macroeconomics	3 / 5
THM 243	Rooms Division Management	3 / 5
THM 245	Purchasing and Cost Analysis	3 / 5
THM 247	Food and Beverage Management	3 / 5
THM 269	Co-Op Management Application	- / -
	Second Foreign Language*	3 / 6

Spring Semester		Credits / ECTS Credits
HISTR 202	History of Turkish Republic II	2 / 1
THM 202	Principles of Management	3 / 5

THM 242	Social Psychology	3 / 5
THM 244	Food Production Techniques	2 / 4
THM 246	Restaurant Service	3 / 5
THM 252	Tourist Attractions of Turkey	3 / 5
	Second Foreign Language*	3 / 6

THIRD YEAR

Autumn Semester		Credits / ECTS Credits
THM 300	Summer Training	- / -
THM 301	Human Resources Management	3 / 5
THM 309	Principles of Marketing	3 / 5
THM 313	Hospitality Management Accounting	3 / 5
THM 323	International Cuisines	4 / 5
THM 326	Tourism Policies and Sustainability	3 / 5
THM 348	Service Operations Management	3 / 5
	Restricted Elective	3 / 5

Spring Semester		Credits / ECTS Credits
THM 310	Industrial Training Project	4 / 21

FOURTH YEAR

Autumn Semester		Credits / ECTS Credits
THM 403	Organizational Behavior	3 / 5
THM 409	Tourism Law	3 / 5
THM 415	Finance	3 / 5
THM 417	Quantitative Decision Techniques	3 / 5
	Restricted Elective	3 / 5

Spring Semester		Credits / ECTS Credits
THM 418	Senior Project	3 / 8
THM 419	Tourism Management Applications	3 / 5
THM 420	Seminars on Tourism Industry	2 / 2
THM 423	Tourism Economics	3 / 5
	Restricted Electives (2)	5 / 10

RESTRICTED ELECTIVES

THM 327	Event Management	3 / 5
THM 391	Business Forecasting	3 / 5
THM 392	Nutrition and General Health	3 / 5
THM 396	Case Studies for Tourism	3 / 5
THM 397	Ethics in Hospitality Industry	3 / 5
THM 452	Tourism Planning	3 / 5
THM 453	Total Quality Management	3 / 5
THM 454	Management Behavior and Team Effectiveness	3 / 5
THM 475	Strategic Marketing for the Hospitality Industry	3 / 5
THM 476	Research Techniques	3 / 5
THM 477	Planning for Profit	3 / 5
THM 478	Hotel Investment Decision	3 / 5
THM 482	Club Management	3 / 5
THM 483	Select Issues in Turkish Tourism	3 / 5
THM 484	Case Studies in Applied Marketing	3 / 5
THM 485	Hospitality Architecture and Design	3 / 5
THM 487	Concept and Design for Food and Beverage Outlets	3 / 5
THM 488	Eco-Tourism	3 / 5
THM 493	Nutritional Anthropology	3 / 5
THM 911	Selected Topics in Tourism I	3 / 5
THM 912	Selected Topics in Tourism II	3 / 5

* SECOND FOREIGN LANGUAGE COURSES

One of the following four-semester sequences of courses in Japanese, Chinese, Russian, German, Italian, French or Spanish, offered by the Faculty of Humanities and Letters, can be taken to fulfill the second foreign language requirements:

Japanese : JAP 161/162/163/164/261
Chinese : FRL 165/166/167/168
French : FRE 161/162/163/164/261/262/263
German : GER 161/162/163/164/261/262/263
Italian : ITA 161/162/163/164/261/262/263
Spanish : SPA 161/162/163/164/261/262/263
Russian : RUS 161/162/163/164/261

COURSE DESCRIPTIONS

THM 105 Introduction to Business
Designed to give an overall view to all the relevant functions of a business. Emphasizes the integrational aspects of the entire business organization and paves the way for functional area knowledge to be developed. Helps to understand and to conceptualize the nature of business, and gives the necessary orientation to the areas that will require functional specialization later on. *Credit units: 3 ECTS Credit Units: 6. Aut (M. Siyahhan)*

THM 106 Principles of Accounting
Introduces and studies the concepts and principles of accounting that are utilized for managerial purposes. This course aims to familiarize students with various tools and techniques that are currently used in accounting. *Credit units: 3 ECTS Credit Units: 5. Aut (H. Çınar, Z. İ. Ertuna)*

THM 107 Microeconomics
Familiarizes students with the basic principles and concepts of microeconomics. The course will mainly concentrate on the general knowledge, terminology, concepts and procedures utilized in the analysis of microeconomic units and provide an overview of microeconomic problems and their possible solutions. *Credit units: 3 ECTS Credit Units: 5. Aut (İ. Çetin)*

THM 158 Principles of Economics
Basic principles of micro and macroeconomics. Important highlights are, background, terminology, concepts, procedures in microeconomic analysis. Problem solving with microeconomic units. National output, national income, money, monetary institutions, unemployment, growth and international monetary systems. *Credit units: 3 ECTS Credit Units: 6.*

THM 163 Dynamics of Tourism
Focuses on the position of tourism as the world's largest industry which has led to the widespread acknowledgment of the decisive role it plays in shaping the world. Thus, a global overview of the industry; trends, its socio-cultural and economic impact, motivators, hospitality related services, transportation, intermediaries and attractions are discussed. *Credit units: 3 ECTS Credit Units: 5. Aut (G. Karamullaoğlu)*

THM 164 Calculus
Provides background knowledge of mathematical procedures that are designed to analyze numerical information essential in decision making, for those who intend to pursue a career in hospitality management. Topics include: linear and quadratic equations; rate of change of functions; derivatives and integration. *Credit units: 3 ECTS Credit Units: 5. Aut (K. Rodoplu)*

THM 166 Health Studies
The course provides students with the knowledge and skills necessary to help domestic and international tourists whose first-aid problems have to be addressed promptly and properly. It enhances students' comprehension of theoretical and practical concepts and aspects of health issues routinely encountered in the tourism industry worldwide. *Credit units: 1 ECTS Credit Units: 1. Aut (E. Şenol)*

THM 167 Behavior and Etiquette
The purpose of this course is to provide basic knowledge and practical guidelines on everyday manners and common courtesies. It also aims at giving a perspective for proper behavior and etiquette acceptable in social and business situations. To sensitize students to the rules of protocol and dynamics of contrasting cultures is also another aim of this course. *Credit units: 1 ECTS Credit Units: 1. Aut (E. Türel)*

THM 168 Nutrition and Sanitation
This course consists of two parts, Nutrition and Sanitation. The course provides information in response to today's concern over adequate sanitation and health. It also provides information about food, nutrients and health interrelations, common nutritional problems and their prevention by means of proper nutritional interventions. *Credit units: 3 ECTS Credit Units: 5. Aut (N. Örer)*

THM 172 World Travel Destinations
Provides geographic knowledge for effective and efficient service in the travel industry. Terms and concepts that are important to a travel counselor are studied. Also, the geographic resources and man-made attractions that

function as a tourist destination, and the developments taking place on a world-wide basis are examined. *Credit units: 3 ECTS Credit Units: 5. Aut (A. Paşamehmetoğlu)*

THM 202 Principles of Management
Provides insights into the basic managerial functions, primarily planning and decision making, organizing, leading and controlling. The objective of the course is to encourage students to investigate and learn unified, universal, valid principles and theories applicable. *Credit units: 3 ECTS Credit Units: 5. Aut (A. Pekcan)*

THM 205 Macroeconomics
Focuses on topics in macroeconomics; national output and national income; nature of money and monetary institutions; unemployment and growth; international monetary systems. *Credit units: 3 ECTS Credit Units: 5. Aut (İ. Çetin)*

THM 242 Social Psychology
Includes some of the fundamental components of the study of tourism from a social-psychological standpoint. The course will study tourism along two dimensions: by an understanding of the social, organizational and the community contexts of tourism. *Credit units: 3 ECTS Credit Units: 5. Aut (Ş. Elmas)*

THM 243 Rooms Division Management
The course is intended to examine the two basic functions of rooms division management: housekeeping and front office operations. The course is also aimed at helping students acquire the basic skills necessary for the operations and other management analyses. Students will be introduced to the concepts and techniques of rooms sales forecasting, revenue budgeting, analyses of rooms sales and profit, break-even analysis, rooms pricing and yield management. *Credit units: 3 ECTS Credit Units: 5. Aut (J. B. M. Chafra)*

THM 244 Food Production Techniques
The course introduces students to the most common tools and equipment and basic methods used in the preparation of foods. These are the standards used in international kitchens of the hotel industry. Students will be introduced to the various products used with common basic preparation methods; use and interpretation of recipes, as well as planning menus considering the traditional organization of medium to large kitchen operations. *Credit units: 2 ECTS Credit Units: 4. Aut (Staff)*

THM 245 Purchasing and Cost Analysis
Provides students will skills and knowledge for effective management of purchasing and cost analysis in a hotel and presents the responsibilities of a purchaser and a food and beverage controller. The course also covers determination of standards, development of operating budget and cost-volume-profit analysis, as well as basic operating activities, menu planning, purchasing, receiving, storing, issuing, production and serving. In addition, the course provides the knowledge required to prepare food and beverage reconciliation reports. *Credit units: 3 ECTS Credit Units: 5. Aut (E. Şenol)*

THM 246 Restaurant Service
Provides students with practical knowledge for effective management of food and beverage service. Students will have experience work in a fine dining room and will have theoretical knowledge before the service starts. *Credit units: 3 ECTS Credit Units: 5. Aut (A. Ünal)*

THM 247 Food and Beverage Management
Provides students with practical training in all aspects of restaurant operations and an in-depth approach to managerial skills for efficient food and beverage operations. Major topics include marketing strategies, menu planning and analysis, as well as labor organization and control. *Credit units: 3 ECTS Credit Units: 5. Aut (O. Benice)*

THM 252 Tourist Attractions of Turkey
Discusses regional distribution of touristic activities with an emphasis on the natural, historical and archaeological attractions along with their characteristics as tourism products in Turkey. *Credit units: 3 ECTS Credit Units: 5. Aut (P. Öztin)*

THM 258 Principles of Economics
Basic principles of micro and macroeconomics. Important highlights are, background, terminology, concepts, procedures in microeconomic analysis. Problem solving with microeconomic units. National output, national income, money, monetary institutions, unemployment, growth and international monetary systems. *Credit units: 3 ECTS Credit Units: 5.*

THM 269 Co-Op Management Application
An integration of hospitality work experience and class room instruction along with the practical management application opportunities in the hospitality industry. Completion of 40 work hours in a semester and attainment of on-the-job training goals are required. Hospitality position to be secured prior to the start of the semester. *Credit units: None ECTS Credit Units: None. Aut (E. Türel)*

THM 300 Summer Training
This program provides students with an intensive exposure to the tourism workplace. Assignments are scheduled and monitored through the school's Industrial Training Office. The main objective is to obtain practical, real-life experience. The training program, comprised of a minimum of seventy-five (75) work days, takes place during the summer period. *Credit units: None ECTS Credit Units: None. Aut (E. Türel)*

THM 301 Human Resources Management
Designed to help students understand and work with human resources managers and also deal directly and successfully with human resources issues themselves. The course focuses on hiring, training and supervision of employees. *Credit units: 3 ECTS Credit Units: 5. Aut (A. B. Collins)*

THM 309 Principles of Marketing
Provides an overview of the evolution of marketing, identifies the basic characteristics of consumer and individual market, explains target marketing providing insight into the four elements of the marketing mix; product concepts, marketing channel, promotion planning and international marketing. *Credit units: 3 ECTS Credit Units: 5. Aut (E. Gürel)*

THM 310 Industrial Training Project
Students spend one full semester working in the industry. This provides the students with an opportunity to apply their present knowledge in a real-life environment, and to observe, document and evaluate the operations of a department. During their internship the student will be required to prepare a report of their experience, identifying the factors contributing to the success and/or problems of the department. *Credit units: 4 ECTS Credit Units: 21, Prerequisite: THM 300. Aut (J. B. M. Chafra, C. Ertuna, Z. İ. Ertuna, G. Karamullaoğlu, N. Örer, M. Siyahhan)*

THM 313 Hospitality Management Accounting
The course, with the help of accounting and internal control techniques, provides students an analytical perspective to evaluate the hospitality industry. *Credit units: 3 ECTS Credit Units: 5, Prerequisite: THM 106. Aut (H. Çınar)*

THM 323 International Cuisines
This practical, hands-on course will enable the students in small groups to work in the a la carte kitchen of the practice restaurant. They will have the opportunity to, using the knowledge gained in food preparation techniques, apply standard recipes, prepare a selection of international dishes for service in the restaurant. *Credit units: 4 ECTS Credit Units: 5, Prerequisite: THM 244 or THS 221. Aut (H. C. Kuchlein)*

THM 326 Tourism Policies and Sustainability
The central role that governments play in development and sustainability of the tourism industry. Government attitudes and involvement on the tourism development and protection of natural resources are analyzed. *Credit units: 3 ECTS Credit Units: 5. Aut (İ. Boz)*

THM 327 Event Management
Events, meetings and conventions have become major activities in world tourism industry. The course first focuses on historic development and importance of meetings and conventions, together with the terminology and classification. Prominent event destinations in the world and their attributes are also discussed. Costing details and operation process of small to medium size events are the final major topic. *Credit units: 3 ECTS Credit Units: 5.*

THM 348 Service Operations Management
Focuses on the management of hotel and tourism service operations. Conceptual and quantitative skills for dealing with key operational issues are taught. *Credit units: 3 ECTS Credit Units: 5. Aut (J. B. M. Chafra)*

THM 391 Business Forecasting
The course aims at presenting the basic statistical techniques used for business forecasts and long-term loans. The focus is on deriving meaning from a particular data set and the use of statistical estimation methods. Moving averages, simple and multiple regression, time series analysis and box-jenkins methodology are the topics of the course. *Credit units: 3 ECTS Credit Units: 5.*

THM 392 Nutrition and General Health
The goal of the course is to reveal the fascination of the science of nutrition and share the fun and excitement of nutrition with students and also aims students to understand how the scientific facts apply to people's health in daily life. *Credit units: 3 ECTS Credit Units: 5.*

THM 396 Case Studies for Tourism
The purpose of the course is to cover the innovative techniques of defining different aspects of tourism and hospitality world's problem areas and exploring through the use of selected domestic and international case studies the solution of those. *Credit units: 3 ECTS Credit Units: 5. Aut (Staff)*

THM 397 Ethics in Hospitality Industry
The objective of this course is to improve the understanding of ethical aspects of traditional operational problems in tourism industry, stressing the roles of national and international companies and how individuals should socially

respond to in practice; considering the rules and regulations, staff and executive relationships. *Credit units: 3 ECTS Credit Units: 5. Aut (Ş. Elmas)*

THM 403 Organizational Behavior

As an eclectic field of study, integrating the behavioral sciences; psychology, sociology, anthropology etc., into the study of human behavior within organizations, the course focuses on the analytical approach to studying organizational behavior and on increasing student's ability to think in analytical terms. The dilemma of organizational behavior is to attempt to increase the predictability of human behavior. *Credit units: 3 ECTS Credit Units: 5. Aut (Ş. Elmas)*

THM 409 Tourism Law

All facets of the tourism industry are subject to laws and regulations that govern their operations. The course reviews these regulations as they pertain to such areas as: tourism organizations, investments and operations; the travel industry; and the tourist. This course is conducted in Turkish. International students may elect to follow a course of project based tutoring, covering the legal aspects of international tourism. *Credit units: 3 ECTS Credit Units: 5. Aut (M. Siyahhan)*

THM 415 Finance

Focuses on the theory and practice of financial management, including financial planning and control, valuation and financial structure, cash flows, economic and financial optimization, cost of capital, capital budgeting decisions, short-term and long-term financing and valuation processes. Studies tourism industry financial statements including consideration of the significant relationships between the various accounts found in financial reports. Tax environment, profit planning, budgeting and forecasting. *Credit units: 3 ECTS Credit Units: 5. Aut (C. Ertuna, Z. İ. Ertuna)*

THM 417 Quantitative Decision Techniques

Scales of measurement, empirical distributions; property measures of distributions; probability concepts; theoretical distributions; sampling; interval estimation; hypothesis testing; correlation and regression analysis; analysis of variance; other methods of multivariate analysis. *Credit units: 3 ECTS Credit Units: 5. Aut (N. Ö. Coşkun)*

THM 418 Senior Project

Students are required to prepare a project on a given subject matter. The aim of the course is to enrich their theoretical and practical refinement, and investigate new trends in the hotel and travel industry. *Credit units: 3 ECTS Credit Units: 8. Aut (İ. Boz, A. B. Collins, N. Ö. Coşkun, Ş. Elmas, E. Gürel, A. Pekcan)*

THM 419 Tourism Management Applications

Overviews management challenges in the hospitality and tourism industry, and the quantitative methods of control and decision making employed in this industry world-wide. The course explores practical applications of general management theory in the context of the tourism and hospitality industry. *Credit units: 3 ECTS Credit Units: 5. Aut (H. Çınar)*

THM 420 Seminars on Tourism Industry

Exposes students to selected facets and faces of tourism, mostly by lectures of guest speakers from different areas of the tourism industry. *Credit units: 2 ECTS Credit Units: 2. Aut (G. Karamullaoğlu)*

THM 423 Tourism Economics

Analyzes macro and micro aspects of domestic-international tourism with their impact on national economies, tourism sector and individual operations. The interrelation among macro economic factors and components of the tourism sector are also projected. *Credit units: 3 ECTS Credit Units: 5, Prerequisite: THM 107 and THM 205. Aut (İ. Boz)*

THM 452 Tourism Planning

This course is designed to teach tourism planning as a step of development in a particular tourism destination. At the beginning the stages of resort type of tourism planning is explained theoretically. Then the students are expected to learn the experiences of tourism development plans in general, but Turkey's experiences in particular. The course is tried to be covered as practical as possible. *Credit units: 3 ECTS Credit Units: 5.*

THM 453 Total Quality Management

Focuses on the ways to set standards in hotels, restaurants, airlines and other hospitality companies and explores monitoring, evaluating and redesigning the quality requirements in tourism industry. *Credit units: 3 ECTS Credit Units: 5.*

THM 454 Management Behavior and Team Effectiveness

Exposes students to varied styles of management types in real world samples, the pros. and cons. of different cultural effects of managing companies combined with increasing the effectiveness of workers forming groups of staff taking responsibilities to carry out the jobs. *Credit units: 3 ECTS Credit Units: 5.*

THM 475 Strategic Marketing for the Hospitality Industry
The course intends to present the strategies of management of the marketing function, the preparation of internal and external analyses, objectives strategies, action plans, and controls to develop and maintain a strategic fit between the organization's goals and capabilities/resources and its changing marketing opportunities. Thus, to provide guidance to the development and preparation of strategic planning of any hospitality operation. *Credit units: 3 ECTS Credit Units: 5. Aut (E. Gürel)*

THM 476 Research Techniques
Definition and main fundamentals of science, fundamentals of research, kinds of research. Steps in research process. Determination of methodology, selection of data collection techniques, analysis techniques and reporting phase. *Credit units: 3 ECTS Credit Units: 5.*

THM 477 Planning for Profit
Focus is on how to think about profit and considers situations from four perspectives : the product, the competitor, the employee and the customer. Designed to provide students to implement stages for expansive and contractive strategies in all domains of the tourism and hotel sectors. Revenue management is the key challenge in identifying the historical data as well as future forecasts, considering the impacts of the economic environment on the system. *Credit units: 3 ECTS Credit Units: 5.*

THM 478 Hotel Investment Decision
A survey of various theories and techniques available by which management may determine the financial feasibility of investments in the hospitality field. *Credit units: 3 ECTS Credit Units: 5.*

THM 482 Club Management
The Club Management course tends to create an awareness in the mind of the Hospitality students that Clubs might be either a good potential employment opportunities in their future business lives as staff, supervisor, manager or decent business endeavor as operator and owner. *Credit units: 3 ECTS Credit Units: 5.*

THM 483 Select Issues in Turkish Tourism
The course adds new dimensions and an awareness in the minds of tourism and hospitality students that knowledge already gained will easily result in the formation of new ideas. Students will develop logical approaches towards different modes of cases pertaining to structural, operational, social and cultural problems. *Credit units: 3 ECTS Credit Units: 5.*

THM 484 Case Studies in Applied Marketing
The course is designed to provide students with the analytical skills necessary to make major marketing decisions in an organization. Students will analyze marketing practices of hospitality and tourism companies and apply marketing principles to actual hospitality and tourism cases in an integrative and chosive manner. The specific objectives are; to provide an opportunity for the integration of diverse marketing knowledge, to develop/practice decision-making skills required for effective marketing, to be exposed to actual marketing applications of marketing management through case study analysis of real life marketing situations to provide an opportunity to improve written and oral participation/discussion skills through the case study methodology. *Credit units: 3 ECTS Credit Units: 5.*

THM 485 Hospitality Architecture and Design
The course is designed to inform students about the relationship between architecture and tourism, stressing the importance of environmental principles, complexities and contradictions. Hotel design, design objectives, sites, the building law and regulations, environmental control, landscape and interior design, permanence and change are studied. *Credit units: 3 ECTS Credit Units: 5. Aut (M. İzgi)*

THM 487 Concept and Design for Food and Beverage Outlets
Concept and real estate research of architectural and technical design of food & beverage systems, covering menu engineering, public relations and promotions, pre-opening, opening, post-opening and monitoring concepts. *Credit units: 3 ECTS Credit Units: 5. Aut (O. Benice)*

THM 488 Eco-Tourism
The course is designed to concentrate on ecotourism and ecosystems. Formation of coastal forms, effects of progressive river deltas on the antique sites located in the coastal zones, negative impact of man on the coastal zones and resulting coastal erosion are explored. Formation of karstic forms and karstic springs, volcanic landforms, evolution of the landscapes of Cappadocia and of its cultural heritage with ecotourism potential of a sample site and its surroundings are studied. *Credit units: 3 ECTS Credit Units: 5.*

THM 493 Nutritional Anthropology
Anthropology shares much in common with other fields that study humans and their interaction with the natural world, including sociology, geology, geography, biology, nutrition and psychology. This approach of the understanding culture and food relations in human population grows out of the tradition of holism in anthropology. This course will inform students on eating habits and kitchen culture through history. Based on assigned readings,

case studies and presentations will be used as centerpieces for informing students and simulating discussion on the complex dynamics of culinary arts and culture of different societies in the history. *Credit units: 3 ECTS Credit Units: 5. Aut (N. Örer)*

THM 911 Selected Topics in Tourism I

An advanced course in the study of tourism and hospitality management. Emphasis is placed on the development of the tourism industrial base and development of infra - superstructure. Students are expected to engage in a wide range of discussion and analysis of the effects of tourism and hospitality management on various environments. *Credit units: 3 ECTS Credit Units: 5. Aut (İ. Çetin)*

THM 912 Selected Topics in Tourism II

Aim of this course is to provide the students with the opportunity to focus on the latest trends and issues of the tourism industry. Recent research findings, articles, news, reports and statistics are examined and discussed. *Credit units: 3 ECTS Credit Units: 5.*

SCHOOL OF ENGLISH LANGUAGE

John O'Dwyer, Ph.D., Director

Bilkent University School of English Language (BUSEL) has three main areas of activity: providing a Preparatory Program to enable students to meet the English language requirements for study in the different faculties and schools of Bilkent University; providing credit bearing courses in English for Academic Purposes to the same faculties and schools; and, offering an associate degree in English and Translation Studies.

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Semra Kunt-Akbaş, Instructor
M.A., Translation and Interpretation, Hacettepe University, 2007.
Nihal Kurtay, Instructor
B.A., Linguistics, Hacettepe University, 1986.

Hülya Kurugöllü, Instructor
B.A., English Language Teaching, Middle East Technical University, 2005.
Elif Kutevu Kantarcıoğlu, Instructor
M.A., English Language Teaching, Middle East Technical University, 2001. A.D.L.T.M., Bilkent University, 2001.
Habibe Elif Kutlugün, Instructor
M.A., Management in Education, Bilkent University, 2006. D.E.L.T.A., 2005.
Yeşim Kuzanlı, Instructor
M.A., American Literature, Hacettepe University, 1996.
Esra Küçük, Instructor
M.A., English Teacher Education, Bilkent University, 2007.
Şerife Küçükal-Dalbudak, Instructor
Ph.D., American Literature, Hacettepe University, 1998. A.D.L.T.M., Cambridge University, 1997.
Erhan Kükner, Instructor
M.A., English Language and Literature, Bilkent University, 1991. A.D.L.T.M., Cambridge University, 1996.
Tuba Küsmenoğlu, Instructor
M.A., English Literature, Bilkent University, 1994.
Marinus Langbroek, Instructor
M.Sc. Teaching English to Speaks of other Languages, Aston University, 2008. R.S.A. Dip., 1995.
Jerrad Kyle Langlois, Instructor
B.A., Modern Languages, Fort Hays State University, 2000. D.E.L.T.A., 2008.
Jamie Alexander Levitt, Instructor
B.A., International Relations and History, Tufts University, 2008.
Zeynep Mandacı, Instructor
B.A., English Language Teaching, Middle East Technical University, 2008.
Gökçe Mandalı, Instructor
B.A., English Language Teaching, Hacettepe University, 2006.
Linda Denise Marshall, Instructor
M.A., Englsih, Wichita State University, 2009.
Clare McCann Yalçın, Instructor
M.Ed., Teacher of English to Speakers of Other Languages, The University of Edinburgh, 2004.
Vanessa McDonagh, Instructor
M.A., European Integration, University of Limerick, 2000.
Maggie Mei-Hua Li, Instructor
B.A., Journalism and International Studies, Northwestern University, 2009.
Bürin Menküer Çeçen, Instructor
M.A., English Literature, Middle East Technical University, 1997.
Özlem Mert Akkaya, Instructor
B.A., English Language Teaching, Anadolu University, 2002.
Andrew Guy Miller, Instructor
B.Sc., Hospitality Business Development, Bournemouth University, 2008.
Jennifer Lisa Mitton, Instructor
Ph.D., Philosophy, University of Alberta, 2008.
Antoinette Ifeoma Mmoh, Instructor
B.A., Government and International Relations, George Mason University, 2007.
Sara Kate Morrison, Instructor
B.A., Education, St. Francis Xavier University, 2009. B.A., Concentration in French, Cape Breton University, 2007.

Hasan Mullaoğlu, Instructor
B.A., English Language and Literature, Hacettepe University, 1987.
Zerrin Mullaoğlu, Instructor
B.A., English Language and Literature, Hacettepe University, 1987. R.S.A. Dip., 1992.
Sevcan Mutlu, Instructor
B.A., English Language Teaching, Middle East Technical University, 2008.
Çiğdem Nakilcioğlu, Instructor
B.A., English Language Teaching, Middle East Technical University, 2006.
Deborah Jade Nelson, Instructor
B.A., Cultural Anthropology, Duke University, 2009.
Marci Nelson, Instructor
B.A., English, University of Utah, 1993.
Richard James Nicholas, Instructor
M.A., Applied Linguistics, The University of Manchester, 2006.
John O'Dwyer, Assistant Professor
Ph.D., Curriculum and Project-Evaluation, University of Surrey, 2005. School and project management, organisational learning, curriculum development.
Gülnur Oğuz, Instructor
M.A., Linguistics, Hacettepe University, 1988. M.S., English Language Teaching, Aston University, 1993.
Rana Okandan, Instructor
B.A., English Language and Literature, Bilkent University, 2001.
İlkay Orğan, Instructor
B.A., English Language Teaching, Middle East Technical University, 2006.
Pelin Ödağacıoğlu Sakalsız, Instructor
B.A., American Language and Literature, Hacettepe University, 2003.
Gülten Öğütal, Instructor
M.A., English Language and Literature, Hacettepe University, 1973.
Ümran Ölmez-Board, Instructor
M.A., Management in Education, Bilkent University, 2009.
Gamze Öncül, Instructor
Ph.D., English Language Teaching, Hacettepe University, 2005.
Pınar Esma Önkol, Instructor
M.Sc., Education, Middle East Technical University, 2002.
İlgin Özbek, Instructor
B.A., Sociology, Middle East Technical University, 1998.
Işıl Özbek Çakan, Instructor
B.A., English Language and Literature, Hacettepe University, 2005.
Nazmiye Aslı Özdel Sağ, Instructor
M.A., Management in Education, Bilkent University, 2006. D.E.L.T.A., 2005.
Zeynep Özek Vural, Instructor
M.A., British Cultural Studies, Hacettepe University, 2002.
Selin Özer, Instructor
B.A., English Language Teaching, Middle East Technical University, 2006.
Ayşe Funda Özeski, Instructor
M.A., Management in Education, Bilkent University, 2006. D.E.L.T.A., 2005.
Suzan Özgelen, Instructor
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B.A., Linguistics, Hacettepe University, 1987.
Kamile Özkartal, Instructor
M.A., English Teacher Education, Bilkent University, 2007.
Ayşe Özmen-Özdemir, Instructor
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Figen Özsoy, Instructor
B.A., English Language Teaching, Middle East Technical University, 2006.
Tülay Özyurt Erkan, Instructor
M.A., Management in Education, Bilkent University, 2007.
Tania Louise Patch, Instructor
B.A., German and Business, University of Warwick, 2008.
Anika Shana Patel, Instructor
B.A., Public Policy Analysis, University of North Carolina, 2009.
Seda Pekşen Yanıkoğlu, Instructor
Ph.D., English Language and Literature, Middle East Technical University, 2008.
Simon Phipps, Instructor
Ph.D., Teacher Education, University of Leeds, 2009. Teacher education, teacher cognition, second language acquisition, educational management.
Olga Malgorzata Piasecka, Instructor
B.A., English and Spanish, Saint Thomas University, 2008.
Philip Poole, Instructor
LL.B., Law, University College, London, 1969. R.S.A. Dip., 1994.
Adam Jacob Popiel, Instructor
B.A., Central European Studies, University of Massachusetts, 1999.
Elizabeth Anne Pullen, Instructor
B.S., Animal Science, Cornell University, 2006.
Prasanna Raman, Instructor
B.A., Economics and Art History, Williams College, 2008.
Christy Michelle Randal, Instructor
B.A., East Asian Studies, University of Arizona, 2009.
Natalie Richman, Instructor
B.A., Political Science, Haverford College, 2009.
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B.A., Political Science and English, Amherst College, 2009.
Pembe Müşerref Saraçoğlu, Instructor
M.A., Management in Education, Bilkent University, 2006. D.E.L.T.A., 2001.
Jennifer Lyn Schroeder, Instructor
B.A., Religion and Philosophy, Berry College, 2000.
James Scotland, Instructor
M.Ed., Applied Linguistics, The British Open University, 2007.
Çiğdem Selim-Dabir, Instructor
M.A., English Language and Literature, Ankara University, 1996.
Hülya Severgün, Instructor
B.A., English Language Teaching, Middle East Technical University, 2009.
Julia Natana Shaddox, Instructor
B.A., Anthropology, Ancient Mediterranean Studies, Trinity University, 2008.

Caitlin Anne Shea, Instructor
M.A., Sociology, University of Chicago, 2009.
Lorie Marie Shepski Tan, Instructor
B.A., Elementary Education, Edinboro University of Pennysylvania, 1995.
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B.A., English, Law and Anthropology, Oxford Polytechnic, 1976.
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B.A., Archaeology, University of Southampton, 2000. D.E.L.T.A., 2008.
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B.A., English Language Teaching, Middle East Technical University, 2007.
Ersin Soylu, Instructor
M.A., Counseling and Guidance, Hacettepe University, 1983.
Elif Sönmez, Instructor
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Peter Stephan, Instructor
Ph.D., British Literature, Suny at Stony Brook, 1996.
Kathryn Marie Stewart, Instructor
B.A., History and English Language, University of British Columbia, 2007.
Tony Duane Sturtevant, Instructor
M.Sc., Conflict Resolution, Portland State University, 1998. M.A., Management in Education, Bilkent University, 2008.
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Carole Thomas, Instructor
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M.A., Education, Marshall University, 1979.

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Mediha Toraman, Instructor
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Tim Vandenhoek, Instructor
B.A., Political Science and History, Carleton University, 2003.
Robert Verburg, Instructor
M.Ed., University of Hong Kong, 2007.
Stephen Warchol, Instructor
M.S., English Language Teaching, Middle East Technical University, 1991.
Ray Wiggin, Instructor
B.A., English with Philosophy, University of East Anglia, UK, 1979.
Aisha Anjali Woodward, Instructor
B.A., Government and Legal Studies, Bowdoin College, 2008.
Aimee Marie Wuthrich, Instructor
M.A., Middle Eastern Studies, Middle East Technical University, 2007.
Müştak Yağuş, Instructor
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Fatma Efser Yalçın Civelekoğlu, Instructor
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Fatma Gül Yıldırım, Instructor
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Tuğba Yıldırım, Instructor
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Serap Yıldırım Varol, Instructor
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Halime Yıldız, Instructor
B.A., English Language Teaching, Middle East Technical University, 2008.
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M.A., English Teacher Education, Bilkent University, 2005.
Bengü Yurtseven, Instructor
M.Sc., English Language Teaching, Middle East Technical University, 2004.
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M.A., Management in Education, Bilkent University, 2007. D.E.L.T.A., 2003.
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B.A., English Language and Literature, Ankara University, 1998.
Emine Zafer, Instructor
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ENGLISH LANGUAGE PREPARATORY PROGRAM

E. Kükner (Director)

The medium of instruction at Bilkent University is English. The BUSEL English Language Preparatory Program aims to equip students with the necessary language and study skills for successful entry to and study in their chosen faculties and schools. There is an emphasis on English for Academic Purposes (EAP) in the program as a whole, which recognizes that students need more than linguistic input in order to be successful in their studies. During their stay in the program, students are required to develop the ability to analyze texts and information sources, as well as critical thinking skills and awareness of their own learning styles and preferences. The program is demanding and requires a full-time commitment on the part of the students.

Newly arriving students are required to take the Certificate of Proficiency in English Examination (COPE)[†] in September. Students who meet the required standards will pass directly into their freshman year. Students whose English does not meet the required standards will be placed in the Preparatory Program courses at different levels based on their results in the COPE exam.

The Preparatory Program consists of five levels (Elementary, Pre-Intermediate, Intermediate, Upper Intermediate, Pre-Faculty) which build on one another. Each level includes the production of a complete learning portfolio (vocabulary journal, oral presentation, written outcomes and core homework). The courses are explained below but it is important to realize that, in addition to class work, students are expected to attend tutorials, make use of computerized learning facilities, do regular independent study, and produce assignments. Students will be evaluated continuously through achievement tests, classroom assessment and assignments. Those students who have successfully completed the exit levels may sit the proficiency test and, if successful, be eligible to enter their freshman year.

Elementary Course

This course provides grounding in the English language and equips students with the necessary basic skills essential for work at higher levels. Students start to develop speaking, listening, reading, and writing skills and are required to produce assignments in these areas as well as mastering the Elementary level word list. Students also begin to develop some of the basic study skills needed for successful study in an English medium university.

Pre-Intermediate Course

This course offers a comprehensive introduction to a number of language items and follows on from the initial introduction at the Elementary level. Students are expected to both develop their awareness of language points and produce accurately through the skills. In order to prepare students for higher levels, skills development is graded according to a strict language framework. In addition, students are required to use both current and previous level lexis.

Intermediate Course

At Intermediate level students are primarily expected to develop fluency and accuracy in the language they were presented with at previous levels. Students focus in more depth on the academic skills

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[†]
- **4-year Department Students-** A pass at (i) FCE/CAE/CPE or (ii) a score of at least 6.5 in IELTS (academic exam), with a minimum of 5,5 scored in every section, or (iii) a score of 550 on TOEFL PBT, with a minimum of 4 on the Test of Written English (TWE) or a score of 80 on TOEFL iBT, with a minimum of 20 scored in every section (Listening, Reading, Speaking, Writing), or (iv) a score of 87 on KPDS/ÜDS allows students the right to enter directly into the departments (ETS students inclusive).
- **2-year Vocational School Students-** A pass at (i) FCE/CAE/CPE or (ii) a score of at least 6 in IELTS (academic exam), with a minimum of 5 scored in every section, or (iii) a score of 490 on TOEFL PBT, with a minimum of 4 on the Test of Written English (TWE) or a score of 75 on TOEFL iBT, with a minimum of 19 scored in Listening, Reading, Writing sections and 18 scored in Speaking section, or (iv) a score of 80 on KPDS/ÜDS allows students the right to enter directly into the vocational schools.

they are required to have at entry into their freshman year. All the skills, speaking, listening, reading and writing are extended with particular emphasis on the productive skills. At the same time students are required to further develop their lexical knowledge to extend their means of expression through oral and written production.

Upper Intermediate Course

This course offers a new set of advanced language items and further consolidates the ones introduced from the previous levels. Students are expected to produce coherent and accurate language and appropriate to a university setting, and be fluent in skills with specific reference to those required for academic success. They are required to demonstrate a good command of the productive skills with an ability to express themselves clearly and concisely together with an ability to read effectively a broad range of material, and to follow lectures and talks in English.

Pre-Faculty Course

This course aims to bring students' language, skills and lexis up to the level required for entry into faculties and schools and to equip them with the ability to follow lectures successfully, to write to an acceptable academic standard, to read a wide range of academic literature of relevance to their chosen discipline, and to participate in seminars and discussions related to their field of study.

Tutorials

In addition to normal teaching hours, students are also given instruction individually or in small groups of 3-5 to further meet their needs.

FACULTY ACADEMIC ENGLISH PROGRAM

F. T. Akşit (Director), A. Akçam, A. L. Akkaş, C. Akpınar, S. Altıparmak, F. T. Arıkan, J. Asquith, N. Avcıbaşıoğlu, H. Başol-Çetin, E. Bekişoğlu, D. C. Bennette, Ş. Bezci, S. Birlik Karaca, Y. Bistren, I. Board, L. M. S. Bruce-Özdemir, D. Butcher, T. Cankatan, C. A. Close, G. J. Cotten, J. E. Cox, A. Çetindağ Güven, D. Çiçekoğlu, H. Dabir, M. Demirkaya, R. Edwards, M. D. Elwell, S. Evliyagil, R. Gahramanova, J. Goggin, M. E. Grove, S. İrfaner, A. Kadıoğlu, İ. Kaya-Yıldırım, C. Kennedy-Karpat, S. Keşkekci, B. Köktürk, M. Krugman, A. Kuglin, Y. Kuzanlı, Ş. Küçükal-Dalbudak, T. Küsmenoğlu, M. Langbroek, J. K. Langlois, L. D. Marshall, B. Menküer Çeçen, G. Oğuz, G. Öncül, P. E. Önkol, Z. Özek Vural, S. Pekşen Yanıkoğlu, P. Poole, J. L. Schroeder, Ç. Selim-Dabir, M. Sherwood, E. Soylu, P. Stephan, R. Şabi Koç, B. Tanrıverdi-Akalın, T. Thurston, R. D. Tickfer, A. S. Tunaoğlu, M. Tunca, R. Turner, R. Verburg, S. Warchol, R. Wiggin, A. M. Wuthrich.

COURSE DESCRIPTIONS

ENG 101 English and Composition I
The central basis of ENG 101 is to introduce students to an academic approach to thinking, reading, speaking and writing in an integrated, meaningful manner such that they are able to apply the skills learnt to their departmental studies. In addition, the ENG 101 course aims to further develop the students' linguistic accuracy and range in English. *Credit units: 3 ECTS Credit Units: 6. Aut (A. Akçam, S. Altıparmak, F. T. Arıkan, J. Asquith, N. Avcıbaşıoğlu, H. Başol-Çetin, E. Bekişoğlu, D. C. Bennette, Y. Bistren, I. Board, L. M. S. Bruce-Özdemir, D. Butcher, T. Cankatan, M. Demirkaya, R. Gahramanova, J. Goggin, M. E. Grove, S. İrfaner, C. Kennedy-Karpat, B. Köktürk, M. Krugman, A. Kuglin, Y. Kuzanlı, T. Küsmenoğlu, M. Langbroek, L. D. Marshall, P. E. Önkol, Z. Özek Vural, S. Pekşen Yanıkoğlu, Ç. Selim-Dabir, M. Tunca, R. Turner, R. Verburg, S. Warchol)*

ENG 102 English and Composition II
The central basis of ENG 102 is to consolidate students' academic approach to thinking, reading, speaking and writing and language usage, as initiated in ENG 101. In addition, the ENG 102 course aims to develop the students' abilities to synthesise and evaluate information and conduct basic, independent research. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ENG 101 or ELS 111 or ELS 101. Aut (A. L. Akkaş, F. T. Akşit, N. Avcıbaşıoğlu, Ş. Bezci, S. Birlik Karaca, A. Çetindağ Güven, R. Edwards, M. D. Elwell, S. Evliyagil, A. Kadıoğlu, İ. Kaya-Yıldırım, B. Menküer Çeçen, B. Tanrıverdi-Akalın)*

ENG 117 Advanced English Grammar I
This course is designed specifically to help students to further develop competency in grammar, vocabulary and modes of written expression under timed conditions. In order to improve their self-editing skills, students will keep a portfolio of their written work. *Credit units: 3 ECTS Credit Units: 4. Aut (R. Wiggin)*

ENG 118 Advanced English Grammar II
This course is designed to build on the skills developed in ENG 117, specifically by helping literature students to improve their competency in grammar, vocabulary and modes of written expression under timed conditions. In order to improve their self-editing skills, students will keep a portfolio of their written work. *Credit units: 3 ECTS Credit Units: 4, Prerequisite: ENG 117.*

ENG 206 Business Communications
The objective of this course is to develop professional communication skills necessary for Business Administration majors as they enter the business world. Coursework includes writing proposals, memos, persuasive letters, and business reports as well as conducting business meetings and presentations through adopting documents to particular needs and audiences via authentic business communication cases. *Credit units: 2 ECTS Credit Units: 5, Prerequisite: ENG 102.*

ENG 241 Sophomore Academic English I
This course aims to reinforce and develop students' academic English skills beyond the level reached in the Freshman year. This is done in conjunction with Phil 241, with a particular focus on reading, thinking, writing and speaking about influential social and political philosophy texts. *Credit units: 3 ECTS Credit Units: 5. Aut (D. Butcher, G. J. Cotten, A. Kadıoğlu, İ. Kaya-Yıldırım, M. Krugman, A. Kuglin, T. Küsmenoğlu, M. Tunca)*

ENG 242 Sophomore Academic English II
This course aims to reinforce and develop students' academic English skills beyond the level reached in the Freshman year. This is done in conjunction with Phil 242, with a particular focus on reading, thinking, writing and speaking about influential social and political philosophy texts. *Credit units: 3 ECTS Credit Units: 5, Prerequisite: ENG 241. Aut (M. Tunca)*

ENG 400 Technical and Professional Composition
This course for industrial and electrical engineers will develop technical and professional communication skills. Students will be expected to become competent in writing proposals, technical reports and business letters and in presenting academic and technical papers. The tasks performed as part of the course will mirror the tasks students will be expected to do in their prospective professional lives and in their faculty classes. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: ENG 102.*

ENG 401 Technical Report Writing and Presentation
The objective of this course is to assist computer engineering students in effectively presenting various types of information in both the written and oral modes. Students will be expected to become competent in writing and organizing technical reports and in effectively presenting academic and technical papers. The tasks performed as part of the course will mirror the tasks students will be expected to do in their prospective professional lives and in their faculty classes. *Credit units: 2 ECTS Credit Units: 2, Prerequisite: ENG 102 or ENG 104. Aut (A. L. Akkaş, S. Birlik Karaca, P. E. Önkol, Ç. Selim-Dabir)*

ENG 404 English for Philosophy of Education
This course aims to provide students with the necessary academic skills to read, analyse, discuss and write about primary political theory texts. An emphasis is placed on close reading and evaluation of key passages and on the logical and coherent structuring of short written arguments. *Credit units: 3 ECTS Credit Units: None. Aut (A. Kuglin)*

ENG 406 Graduate Writing and Presentation Seminar
ENG 406 is primarily a writing seminar for graduate students. The course will focus on issues of style, voice, logic, grammars, and audience awareness in students' written work. In addition, students will learn and discuss how to present their papers effectively to an audience of pears. The objective of the course is to develop in students a scholarly identity within the conventions of their discipline. Students' own writing will serve as the xxx for class discussions. *Credit units: 3 ECTS Credit Units: None. Aut (A. Kuglin)*

ELS 103 Advanced English I
This course aims at improving language accuracy and fluency through critical analysis of content and regular oral and written tasks which require students to present, express, and support their opinions. *Credit units: 3 ECTS Credit Units: 5. Aut (J. Goggin)*

ELS 104 Advanced English II
This course builds on ELS 103 and aims to develop the ability to argue, formulate and organise various viewpoints and present them in written and spoken English. *Credit units: 3 ECTS Credit Units: 5, Prerequisite: ELS 103. Aut (J. Asquith)*

ELS 203 Advanced English III
The objective of this course is to develop professional communication skills necessary for Vocational School students and to bring the real world of international business into the language-teaching classroom. Course-work includes writing e-mails, business letters, discussing case studies, and giving oral presentations, learning problem-solving techniques and analytical skills. *Credit units: 2 ECTS Credit Units: None, Prerequisite: ELS 103 and ELS 104. Aut (S. İrfaner, B. Menküer Çeçen)*

ELS 204 Advanced English IV
The general basis of ELS 204 is to consolidate the business communication skills necessary for students in their professional life, as initiated in ELS 203. Throughout the course students are encouraged to use their own experience and opinions in order to maximise their analytical and persuasive skills. *Credit units: 2 ECTS Credit Units: None, Prerequisite: ELS 103 and ELS 104 and ELS 203. Aut (G. Öncül)*

ELS 301 Advanced Communication Skills
This course for CTIS students aims to develop advanced level oral, written, and thinking skills through presentations, debates, secondary research and technical report writing in an extended problem and solution analysis scenario. *Credit units: 3 ECTS Credit Units: 4, Prerequisite: ELS 102 or ENG 102. Aut (Staff)*

VOCATIONAL PROGRAM IN TRANSLATION

N. Yeşil (Chair), T. Esmer, S. Katlan, S. Kunt-Akbaş.

English and Translation Studies is a two-year program for students seeking employment in business and professional organizations where proficiency in English and Turkish is essential to translate into either language. Upon successful completion of the program students are awarded the degree of Associate of Arts in Translation.

The program provides sound vocational training in translation and interpreting from English into Turkish and Turkish into English. Courses specifically designed to lay a foundation for linguistic ability and to heighten awareness in the target and source cultures are offered to students as support to a wide range of courses in written translation, audiovisual translation and interpreting.

A high standard of English and Turkish is required for successful translators. Those students who are admitted into the program but whose level of English does not permit them to join the freshman year of the program are required to enter the Preparatory Program in order to meet the minimum requirement for entry into the freshman year.

UNDERGRADUATE PROGRAM

CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
CTP 191	Introduction to Computers	3 / 5
ENG 101	English and Composition I	3 / 6
ETS 105	Discourse Analysis I	2 / 3
ETS 107	Comparative Grammar I	3 / 4
ETS 115	Reading for Translation Purposes	3 / 4
ETS 121	Written Translation I	3 / 4
ETS 145	Communication Skills	3 / 4
GE 100	Orientation	1 / 1
TURK 103	Turkish Usage and Style	3 / 1

Spring Semester		Credits / ECTS Credits
ENG 102	English and Composition II	3 / 6
ETS 108	Comparative Grammar II	3 / 4
ETS 122	Written Translation II	3 / 4
ETS 124	Written Media Translation	3 / 5
ETS 136	Translation for Business I	3 / 5
ETS 184	Societies and Cultures	3 / 4
TURK 104	Oral and Written Practice of Turkish	3 / 2

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
ETS 205	Discourse Analysis II	3 / 4
ETS 213	Translation for Dubbing and Subtitling I	3 / 5
ETS 215	Interpreting I	3 / 5
ETS 221	Theories of Translation	3 / 5
ETS 237	Translation for Social Sciences	3 / 5
ETS 281	Translation for Science and Technology I	3 / 4
HISTR 201	History of Turkish Republic I	2 / 1

Spring Semester		Credits / ECTS Credits
ETS 208	Translation for Business II	3 / 5
ETS 214	Translation for Dubbing and Subtitling II	3 / 5
ETS 216	Interpreting II	3 / 5
ETS 222	Translation Project	3 / 5
ETS 224	Literary Translation	3 / 5

ETS 282 Translation for Science and Technology II . . . . . 2 / 4
HISTR 202 History of Turkish Republic II . . . . . 2 / 1

COURSE DESCRIPTIONS

ETS 27 Translation for Specific Purposes I
Open to several departments, this elective course is designed to improve the translation skills that may be required from students after their graduation. Based on area translation into Turkish and/or preparation for English proficiency exams, students are familiarized with the norms of various text types, along with the constraints that surface in their translations. The selection of topics is made in accordance with the departments of those students that register for the course. *Credit units: 3 ECTS Credit Units: 5. Aut (N. Yeşil)*

ETS 28 Translation for Specific Purposes II
As a sequel to "Translation for Specific Purposes I", this elective course aims at further improving the translation skills of prospective graduates. A wide variety of topics or sub-topics are selected for course material in accordance with the students' needs for area translation into English and/or preparation for English proficiency exams. Focusing on how various translational constraints can be approached, students attain a higher awareness of their decision-making processes in translation, which is essential to their success in exams based on translation. *Credit units: 3 ECTS Credit Units: 5.*

ETS 29 Translation for Specific Purposes III
Based on the framework for the structural analysis of English provided in the courses Translation For Specific Purposes I and II, this course aims to prepare graduate students for English proficiency exams. Students learn to use their translation skills as they work on mock proficiency exam questions. By guiding students on how to answer questions testing reading comprehension or skills in vocabulary, grammar and translation, students will be able to attain higher scores in English proficiency exams. *Credit units: 3 ECTS Credit Units: 5.*

ETS 105 Discourse Analysis I
This course aims to analyze texts in English with discourse tools such as cohesion, coherence, etc. In this way, students improve the analytical skills necessary for comprehension and develop an understanding of how linguistic devices may be used in translation. Throughout the course, students apply the above-mentioned skills in textual analyses for translation purposes. *Credit units: 2 ECTS Credit Units: 3. Aut (S. Kunt-Akbaş)*

ETS 107 Comparative Grammar I
The aim of the course is to raise awareness about the usage of different structures in both English and Turkish by comparing and contrasting them, and thus to help students use both languages accurately and consciously. The structural analysis and translation is done at sentence level with emphasis given to the context, as well. Students receive a great amount of input on grammar and they are expected to practise the translation of grammatical structures. *Credit units: 3 ECTS Credit Units: 4. Aut (Staff)*

ETS 108 Comparative Grammar II
As a sequel to ETS 107 Comparative Grammar I, the course aims to help students further refine their understanding of both English and Turkish usage through text analysis and translation. The course offers the students a chance to practise how to take context into account when rendering grammatical structures in their translations. Students are expected to acknowledge that the context has an influence on the choice of grammatical structures in the translation process. *Credit units: 3 ECTS Credit Units: 4.*

ETS 115 Reading for Translation Purposes
The objective of this course is to assist students in reading texts in English so that they can inquire into the variety of resources and strategies the translator uses in comprehending the text. In either written or verbal form, the students transfer into Turkish their understanding of English texts. To this end, students summarize the texts for different recipients or give short presentations. *Credit units: 3 ECTS Credit Units: 4. Aut (T. Esmer)*

ETS 121 Written Translation I
This is an introductory translation course aimed to familiarize students with the basic terms and concepts of translation studies. Students will analyze, discuss and translate informative, expressive and vocative texts from English into Turkish. At the end of this course, they are expected to have learnt norms and constraints pertinent to the translation of various types of texts from English into Turkish, be able to produce target texts that fulfill the criteria set out in the translation brief of each translation task, and be able to explain their and others' translation processes and products using translation studies terminology. *Credit units: 3 ECTS Credit Units: 4. Aut (N. Yeşil)*

ETS 122 Written Translation II
As a follow-up to ETS 121 Written Translation I, this course aims to focus on the translation of informative, expressive and vocative texts from Turkish into English. Students will analyze, discuss and translate informative, expressive and vocative texts from Turkish into English. At the end of this course, they are expected to have learnt norms and constraints pertinent to the translation of various types of texts from Turkish into English, be

able to produce target texts that fulfill the criteria set out in the translation brief of each translation task, and be able to explain their and others' translation processes and products using translation studies terminology. *Credit units: 3 ECTS Credit Units: 4.*

ETS 124 Written Media Translation
This course helps students compare/contrast and learn the use of the norms which operate in the Turkish media and those of English-speaking countries. The students' vocabulary is expanded in the areas likely to be the subject of news. Students keep abreast of current affairs and get plenty of practice in written media translation from and into Turkish and English. *Credit units: 3 ECTS Credit Units: 5.*

ETS 136 Translation for Business I
This course is designed to help students to acquire the skills required for translating English business texts and documents into Turkish. Students analyze and compare the norms which operate in English and Turkish in the context of business. For this purpose, students work on the translation of texts like contracts, business letters and tender invitations. *Credit units: 3 ECTS Credit Units: 5.*

ETS 145 Communication Skills
The objective of this course is to introduce the aspects of active listening and different kinds of speeches that interpreters have to deal with and to raise an awareness of the properties of such speeches. Identifying the type of speech, students learn how to analyze its structure, discerning the main ideas and the links between them. Students are also familiarized with the barriers to communication such as implied meaning, metaphor, under-statement, hyperbole, irony, etc . Through the preparation and presentation of speeches, students consolidate what they have learnt and overcome their anxiety when speaking before a group. Students will be able to benefit from these skills in their interpreting courses. *Credit units: 3 ECTS Credit Units: 4. Aut (S. Katlan)*

ETS 153 English Lexis
The objective of this course is to enhance the students' knowledge of English vocabulary. To this end, students shall be informed of Greek and Latin roots, prefixes and suffixes in English. The course shall heighten the students' awareness of the norms and constraints in translating such lexical items. *Credit units: 3 ECTS Credit Units: 5.*

ETS 184 Societies and Cultures
The primary intent of this course is to closely study the concepts of society and culture with a view to analyzing the relationship between the individual and society. Students are expected to read texts critically and discuss topics related to social institutions such as politics, religion, education, economy, and family. Through questioning and critical thinking, students shall have the opportunity to gain insight into themselves, their close environment as well as the society and culture they belong to. *Credit units: 3 ECTS Credit Units: 4.*

ETS 205 Discourse Analysis II
In this course, students further develop the discourse analytical skills attained in "Discourse Analysis I". Students analyze the discourse properties in encyclopedic entries, articles, black humor texts as well as excerpts from short stories and novels in English and translate these texts into Turkish under the light of their analyses. *Credit units: 3 ECTS Credit Units: 4. Aut (S. Katlan)*

ETS 208 Translation for Business II
The course aims at improving students' competence in the translation of a variety of business documents and texts in Turkish and English and helping them analyze and compare the norms which operate in the business world of the source and target systems. Together with these analyses, students produce translations in contexts such as law (court verdicts, judicial records, etc.) or international organizations like the European Union and the World Bank (presidency conclusions, educational sector study reports, etc.). *Credit units: 3 ECTS Credit Units: 5.*

ETS 213 Translation for Dubbing and Subtitling I
This course is designed to be practical and to mimic the professional working environment. The norms and technical aspects of subtitle translation are taught through readings, lectures and demonstrations. Students who gain practice in adjusting film dialogues into subtitle units and translating them into Turkish, also read about and discuss issues such as the role of audiovisual (AV) translation in the transmission of cultural values and the concepts of adequacy and acceptability in AV translation. *Credit units: 3 ECTS Credit Units: 5. Aut (S. Katlan)*

ETS 214 Translation for Dubbing and Subtitling II
The main objective of this course is to familiarize the students with the mechanics of revoicing, with a particular emphasis on lip-sync dubbing of feature films. Students are exposed to sample dubbing texts in Turkish, which are compared to and contrasted with original dialogue scripts in English. They also gain practice in translating film dialogues into Turkish and synchronising the translated dialogues with the lip movements of the actors. *Credit units: 3 ECTS Credit Units: 5.*

ETS 215 Interpreting I
This course is intended to introduce the types of interpreting and raise an awareness of the skills and strategies used in consecutive interpreting and sight translation. Students improve consecutive interpreting and sight translation skills in the interpreting laboratory of the department. Throughout the semester, students interpret

and translate authentic conference texts on a variety of topics from English into Turkish. *Credit units: 3 ECTS Credit Units: 5. Aut (S. Kunt-Akbaş)*

ETS 216 Interpreting II

This course aims to help students learn and practice the basics of simultaneous interpreting. After some simultaneous-specific preparation exercises, students simultaneously interpret authentic conference texts from English into Turkish in the department's interpreting laboratory and get acquainted with the tools and strategies of the simultaneous interpreter. *Credit units: 3 ECTS Credit Units: 5.*

ETS 221 Theories of Translation

The main objective of this course is to assist students in discovering how theory relates to practice in the field of translation. Given an introduction to the history of translation theory, students develop a critical outlook on theories of translation and translation criticism. By means of this method, the student is expected to acquire a deeper insight into the process and product of translation. *Credit units: 3 ECTS Credit Units: 5. Aut (T. Esmer)*

ETS 222 Translation Project

This course aims to ensure that students make use of their knowledge of translation theory in the areas of translation practice and criticism. Students are expected to prepare and present three projects. The first project involves a description of the student's practical training. For the second project, students write a critical comparison of at least two translations of one source text. The third project comprises a translation of a short story (or an informative text) along with a description of the decision-making process of the translation. *Credit units: 3 ECTS Credit Units: 5.*

ETS 224 Literary Translation

This course aims to familiarize students with the norms in literary translation with reference to textual traditions in Turkish and English literatures. To this end, students translate excerpts from plays and short stories as well as samples of poetry. Based on their decision-making processes in translation assignments, students acknowledge the polysemous nature of literary texts that may be conveyed by means of various translation solutions. *Credit units: 3 ECTS Credit Units: 5.*

ETS 237 Translation for Social Sciences

This course aims at helping students expand their vocabulary and develop an awareness of particular norms operating in Turkish and English texts in fields such as politics, art, tourism, archeology, psychology, sociology, anthropology and philosophy. After reading the texts, students are encouraged to find parallel texts in the target language and to analyse them in terms of lexis and textual norms. Students not only enhance their vocabulary and comprehension skills, but also improve their translation skills by translating excerpts from these texts. *Credit units: 3 ECTS Credit Units: 5. Aut (Staff)*

ETS 281 Translation for Science and Technology I

The aim of this course is to help students acquire and use the skills required in the translation of texts from various areas of science and technology. Through readings in Turkish, students attain background knowledge and learn the terminology in related areas such as innovations, architecture, engineering, etc. This activity helps students discover those norms that regulate the translation of texts of this kind and enables them to do their translations bearing such norms in mind. *Credit units: 3 ECTS Credit Units: 4. Aut (T. Esmer)*

ETS 282 Translation for Science and Technology II

This course is designed to familiarize students with the translation of medical texts. To this end, students read a variety of Turkish texts in different fields of medicine and discover the terminology used. Students explore the norms that operate in Turkish medical texts and make use of this knowledge in the decision-making processes of their translations. *Credit units: 2 ECTS Credit Units: 4.*

VOCATIONAL SCHOOL OF COMPUTER TECHNOLOGY AND OFFICE MANAGEMENT

Kamer Rodoplu, Director

The Vocational School of Computer Technology and Office Management offers two-year programs in the following areas:

- Accounting
- Bureau Management and Executive Assistantship
- Commerce and Administration
- Computer Technology and Programming

The school places an emphasis on maintaining a continuous dialogue with business and industry. This cooperation allows for a dynamic curriculum to reflect the changing needs of these environments. A training period under the supervision of the School is incorporated into the summer programs to familiarize the students with their respective industrial areas of study.

ACADEMIC STAFF

Ceren Aydoğmuş, Instructor
M.B.A., Management, Bilkent University, 1995. Computer applications, audit, financial regulations, finance, macroeconomics, international marketing, organizational behavior, communication skills, transferable skills, community service.

Can Uğur Ayfer, Instructor
M.S., Computer Engineering, Middle East Technical University, 1980. Internet programming, operating systems, network applications.

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M.S., Computer Engineering, Middle East Technical University, 1981. Database management, programming languages, data structures.

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B.S., Mathematics, Middle East Technical University, 1984. Business mathematics, principles of accounting, management information systems.

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B.S., Business Administration, Middle East Technical University, 1979. Systems development, project management, computer applications, operating systems.

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B.S., Computer Technology and Information System, Bilkent University, 2002. Programming languages, business applications, networking applications and principles.

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B.S., Management, Middle East Technical University, 1995. Economics, management, banking and insurance, finance.

Ahmet Durukal, Instructor
M.S., Industrial Engineering, University of Oklahoma, 1994. Management science, mathematics, economics.

Hayrünnisa Erdem, Instructor
Diploma, Kings College, General Secretarial School, USA, 1980. Advanced word processing, reports and audio transcription, keyboarding.

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M.S., Chemical Engineering, Middle East Technical University, 1982. Mathematical modeling of engineering applications, computer simulation, algorithms, management information systems.

Meltem Ferendeci-Özgödek, Instructor
M.A., Management, Hacettepe University, 1993. Management, marketing, consumer behavior, human resources management, organizational behavior.

Esra Fındık, Assistant Professor
Ph.D., Library Information Sciences, Hacettepe University, 1985. Etiquette and modern business manners, business writing techniques in Turkish.

Burcu Fisher, Instructor
M.S., European Economics and Finance, Loughborough University, 1997. Mathematics, economics.

Sezer Kadayıfçılar, Instructor
M.S., Industrial Engineering, Middle East Technical University, 1990. M.B.A., Başkent University , 1998. Statistics, advanced spreadsheet applications, production management.

İlker Kalender, Instructor
M.S., Secondary Mathematics Education, Middle East technical University, 2002. Computerized adaptive testing procedures detection of aberrant/response/cheating through software, educational technology.

Ceylan Kızılduman Yazıcı, Instructor
Ph.D., Computer Education and Instructional Technology, Middle East Technical University, 2009. Instructional technology and design, development and evaluation, print and web-based learning material production, instructor training, project management and English language teaching.

Can Kültür, Instructor
Ph.D., Computer Education and Instructional Technologies, Middle East Technical University, 2009. Software engineering, human computer interaction, instructional technology, distance education, instructional systems design.

Reyyan Ödemiş, Instructor
B.S., Political Science, Ankara University, 1972. Organizational behavior, principles of management, presentation techniques on the job training.

Halil Özmen, Instructor
M.S., Computer Engineering, Middle East Technical University, 1981. Data structures, algorithms, computer architecture, web based software development.

Murat Özsoy, Instructor
M.S., Computer Science and Technology, Linkoping Institute of Technology, Sweden, 1986. Introduction to computers, computer applications for business.

Lori Russell-Dağ, Instructor
M.S., Computer Engineering, Atılım University, 2006. Object oriented programming, database management systems, computer applications.

Selda Sevin, Instructor
M.A., Management, Hacettepe University, 1999. Financial and cost accounting, computer applications in accounting.

İpek Sözen, Instructor
M.S., Computer Engineering, Middle East Technical University, 1989. Programming languages, data structures, information systems.

Sibel Uğurlubilek, Instructor
M.S., Computer Engineering, Atılım University, 2005.

Hülya Yavuz, Assistant Professor
Ph.D., Educational Sciences, Middle East Technical University, 1991. Computer aided education, curriculum development, mathematics education.

Füsun Yürüten, Instructor
M.S., Computer Engineering, Middle East Technical University, 1993. Database management systems, object oriented system analysis and design, systems development, programming languages.

VOCATIONAL SPECIALISTS

Selen Aktaş
B.S., Management, Anadolu University, 2003. Computer applications in statistics and accounting.

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A.S., Computer Aided Accounting, Bilkent University, 1999. Computer applications in business.

Aslı İyidil
M.S., Business Administration, Atılım University, 2006. Accounting standards, computer aided accounting applications.

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B.S., Computer Technology and Information Bilkent University, 2006. Programming languages, operating systems, computer applications, data structures.

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B.S., Computer Technology and Information Systems, Bilkent University, 2007. Elementary data structures, introduction to programming, data structures.

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B.S., Computer Technology and Information Systems, Bilkent University, 2003. Programming Languages, database applications.

Ergem Utkulu Özdemir
A.S., Computer Technology and Programming, Bilkent University, 1997. Introduction to programming, object oriented programming, operating systems.

PART-TIME ACADEMIC STAFF

Rana Atasoy, B.S., Business Administration, Bilkent University, 1996.
Erkut Bil, B.S., Office Management in Tourism, Bilkent University, 1999.
Selma Kapetanovic, M.S., Marketing, University of Leeds, 2002.
G. Doğan Özgödek, B.A., Law, Ankara University, 1986.
M. Ebru Savun, B.A., Italian Language and Literature, Ankara University, 1989.
İ. Serdal Takaç, M.S., Production Management, Gazi University, 1997.
Şule Ebru Ural Özkan, B.S., Environmental Engineering, Middle East Technical University, 1999.
Derek Van Loo, M.S., Economics, University of Rotterdam, 1994.

ACCOUNTING AND TAXATION

N. Fenmen (Chair), A. Durukal, S. Kadayıfçılar.

Vocational Specialists: S. Aktaş, S. Cevheri, A. İyidil.

Part-time: R. Atasoy, G. D. Özgödek, D. Van Loo.

This two year program leading to an Associate of Science degree in accounting aims at training qualified personnel to meet the requirements of the accounting world. Students are given a strong background in business and financial applications, and are trained so that they are familiar with the software packages used in real life. The curriculum of the department covers applied computer techniques, financial, managerial and advanced level accounting applications, auditing and taxation together with relevant topics in mathematics, statistics and business finance. All accounting courses involve hands-on experience in the most widely used spreadsheet and accounting software packages in the laboratory. At the end of their first year, students are required to successfully complete a 30 day industrial training program where they are expected to develop their practical skills in accounting applications.

CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
CAA 111	Financial Accounting	4 / 8
CAA 123	PC Business Applications	3 / -
CAD 111	Principles of Management	3 / 4
CAD 125	Business Mathematics	4 / 6
ENG 101*	English and Composition I	3 / 6
GE 100	Orientation	1 / 1
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
CAA 112	Cost Accounting	4 / 8
CAA 223	Advanced Spreadsheet Applications	3 / 6
CAD 113	Microeconomics	3 / 5
CAD 225	Management Science	3 / 6
ENG 102*	English and Composition II	3 / 6
TURK 102	Turkish II	2 / 1

* Depending on the result of the COPE exam, students may take ELS 103 - ELS 104 - ELS 203 - ELS 204 in place of ENG 101 - ENG 102.

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
CAA 200	Industrial Training	2 / -
CAA 211	Managerial Accounting	3 / 6
CAA 243	Auditing	3 / 6
CAA 245	Financial Regulations	3 / 4
CAD 126	Statistics	3 / 5
CAD 231	Macroeconomics	3 / 4
HISTR 201	History of Turkish Republic I	2 / 1

Spring Semester		Credits / ECTS Credits
CAA 212	Advanced Accounting Applications	3 / 6
CAA 226	Elements of Finance Analysis	3 / 6
CAA 246	Principles of Banking and Insurance	3 / 4
CAA 248	Legal Aspects of Business	3 / 4
HISTR 202	History of Turkish Republic II	2 / 1

COURSE DESCRIPTIONS

CAA 111 Financial Accounting

Generally accepted accounting principles, the accounting cycle, double-entry system with emphasis on the adjusting and closing processes, preparation of financial statements (balance sheet, income statement, cash flow statement), bank reconciliation, merchandising operations, plant assets and tangibles. Hands-on experience with popular accounting package software in the laboratory. *Credit units: 4 ECTS Credit Units: 8. Aut (Staff)*

CAA 112 Cost Accounting

Comprehensive study on the accountant's role in providing management with information to assist in the decision making process. Examination of concepts such as process and job-order costing, activity based costing, analysis of cost behavior (variable and fixed cost), cost-volume profit analysis, budgeting for profit planning, flexible budgets, standard cost and variance analysis, inventory planning and control (LIFO, FIFO weighted average). Hands-on experience with popular accounting package software in the laboratory. *Credit units: 4 ECTS Credit Units: 8, Prerequisite: CAA 111 or CAD 128.*

CAA 123 PC Business Applications

This course provides the fundamentals and basic concepts of personal computers and an introduction to general applications such as word processing, spreadsheets, PowerPoint and the usage of Internet research. The course objective is to provide students with sufficient knowledge to effectively complete written assignments and presentations in the field of business and prepare them for the course CAA 223 which involves the fundamental concepts of spreadsheets as required by the ECDL Advanced Spreadsheet certification. *Credit units: 3 ECTS Credit Units: None. Aut (D. Van Loo)*

CAA 200 Industrial Training

This non-credit course provides for the evaluation of the student's 30-day industrial training period which each student is required to complete during the summer break following his/her first year. During their industrial training period, students are expected not only to apply their knowledge and experience gained during their first year, but also to familiarize themselves with the actual business world, and concepts which may be new to them. *Credit units: 2 ECTS Credit Units: None, Prerequisite: CAA 111. Aut (N. Fenmen)*

CAA 211 Managerial Accounting

Advanced topics in financial and managerial accounting, with special emphasis on accounting practices applicable in Turkey. The uniform accounting plan, corporate accounting, and in-depth study on cost accounting, job order cost systems, process cost accounting. Hands-on experience with popular accounting package software in the laboratory. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CAA 112. Aut (Staff)*

CAA 212 Advanced Accounting Applications

Advanced financial, cost, and managerial accounting applications with spreadsheet and accounting software packages. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CAA 112 and CAA 223.*

CAA 223 Advanced Spreadsheet Applications

The aim of the course is to provide advanced computerized applications of analysis covered in other courses such as statistics, finance, economics, management science, and accounting. Major topics include creating, enhancing and linking worksheets, charts, statistical, decisional and financial functions, sorting and filtering lists, creating summary reports and pivot tables, modeling. All lectures take place in the computer laboratory. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CAA 123 or CTP 192 or CTP 193. Aut (D. Van Loo)*

CAA 226 Elements of Finance Analysis

An overview of financial management and principles. Financial statements and their analysis. Time value of money. Capital budgeting. Working capital management. Financial forecasting. Risk and rates of return. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CAD125 AND (CAD128 OR CAA111).*

CAA 236 International Finance

The international environment offers many opportunities and challenges to businesses. In this course, topics are treated in a realistic international context. The impact of fluctuating exchange rates, changes in international markets, news of political and economic changes, managing international account receivables etc. are discussed in this course to help the student understand the management of assets and financing in an open environment. *Credit units: 3 ECTS Credit Units: 4. Aut (İ. N. Durubal)*

CAA 243 Auditing

Basic of auditing financial records both for self control and outside auditors. Kinds of audits, purpose and the conduct of the audit. Maintaining accuracy in accounting transactions. Audit of financial statements. Cycles in the accounting system, computer auditing. Detailed examination of legal aspects involved in auditing. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CAA 111 or CAD 128. Aut (R. Atasoy)*

CAA 245 Financial Regulations

The aim of the course is to prepare accounting students regarding financial regulations concerning taxation, social security, incentives, foreign investments, exchange controls, customs union and free trade zones. *Credit units: 3 ECTS Credit Units: 4, Prerequisite: CAA 111 or CAD 128. Aut (R. Atasoy)*

CAA 246 Principles of Banking and Insurance

Principles of banking. Money and loans. World trends in banking. Central Banking. Sources and utilization of funds. International banking services, other basic banking services. Principles of insurance. *Credit units: 3 ECTS Credit Units: 4.*

CAA 248 Legal Aspects of Business

Constitutional law, administration. Law of obligations. Law of persons. Legal entities. Partnerships. Checks, promissory notes. Contracts. Labor law. Protection of consumers. Law of property. *Credit units: 3 ECTS Credit Units: 4.*

CAA 292 Database Applications for Business

The course introduces database management concepts with hands-on experience in database design and database applications using popular software packages. The course covers the analysis of the situation, identifying the requirements, creating the tables, queries and reports to meet these requirements. Lectures take place in the computer laboratory. *Credit units: 3 ECTS Credit Units: 4, Prerequisite: CAA 223.*

BUREAU MANAGEMENT AND EXECUTIVE ASSISTANTSHIP

E. Fındık (Chair), N. Aykanat, H. Erdem, R. Ödemiş.

Part-time: E. Bil, M. E. Savun.

The curriculum of the vocational program in Bureau Management and Executive Assistantship is designed to prepare the student to serve as a link between the decision maker/executive and the persons implementing those decisions.

The world of business has characterized by flexibility and change. Nonetheless, fundamental skill requirements endure. Among these is the need for a high level of competence on the part of the office manager. She/he has been referred to as an "executive extender," one who must be efficient and up-to-date in office skills, a highly trained member of the office team.

The program in Bureau Management and Executive Assistantship allows the student to develop skills in computer and information systems, computer applications, advanced word processing, office machine operation, accounting, business behavior, economics, management, and other related subjects. A six-week on-the-job training period, under the supervision of the department, is incorporated in the program during the summer months of the first year to familiarize the student with the business world. Graduates of the department will be qualified bilingual office managers in English and Turkish with experience in business correspondence in both languages and will thus be in a position to undertake duties as responsible, respected, high-placed office managers.

CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
BM 101	Keyboarding	3 / 6
BM 161	Office Administration and Management	3 / 5
BM 171	Business Mathematics	3 / 5
CTP 191	Introduction to Computers	3 / 5
ENG 101*	English and Composition I	3 / 6
GE 100	Orientation	1 / 1
HISTR 201	History of Turkish Republic I	2 / 1
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
BM 102	Applied Word Processing	3 / 5
BM 164	Office Automation	3 / 3
BM 172	Filing and Record Management	3 / 4
BM 182	Principles of Accounting	3 / 4
CTP 192	Introduction to Computer Applications	3 / 5
ENG 102*	English and Composition II	3 / 6
HISTR 202	History of Turkish Republic II	2 / 1
TURK 102	Turkish II	2 / 1

* Depending on the result of the COPE exam, students may take ELS 103 - ELS 104 - ELS 203 - ELS 204 in place of ENG 101 - ENG 102.

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
BM 200	On the Job Training	- / -
BM 201	Advanced Word Processing	3 / 4
BM 261	Microeconomics	3 / 5
BM 272	Business Writing Techniques in Turkish	3 / 4
BM 281	Organizational Behavior	3 / 5
CTP 291	Computer Applications for Business I	3 / 5

ETS 131	Business Translation I	3 / 6
	Elective	3 / 6

Spring Semester		Credits / ECTS Credits
BM 202	Reports and Audio Transcription	3 / 5
BM 262	Principles of Management	3 / 5
BM 271	Etiquette and Modern Business Manners	3 / 4
CTP 292	Computer Applications for Business II	3 / 5
ETS 132	Business Translation II	3 / 6
	Elective	3 / 6

ELECTIVE COURSES

BM 184	Standard Turkish Accounting System	3 / -
BM 185	Management Information Systems	3 / 6
BM 186	Business Statistics	3 / 6
BM 187	Macroeconomics	3 / 6
BM 188	Presentation Techniques	3 / 6
BM 189	Principles of Marketing	3 / 6
BM 190	Introduction to Business	3 / 6
BM 192	Commercial Correspondence	3 / -
BM 193	Introduction to Finance	3 / 6

COURSE DESCRIPTIONS

BM 100 Keyboarding

At the end of this course, the student will be able to type by touch (without visual assistance) on a computer keyboard, using techniques that are acceptable. This course make the students able to type letters, figures and most commonly used symbol keys and to use the basic rules of arrangement of copy on paper; to apply ten finger typing skills to production of documents both in Turkish and English. Students, who can touch type, do computer-based tasks, assignments, reports and thesis more quickly at school or home. They also can enter their thoughts and ideas straight into the computer and edit it properly. (Total course hours: 36 hours and per week depends on the department). *Credit units: 2 ECTS Credit Units: 2. Aut (E. Bil, M. E. Savun)*

BM 101 Keyboarding

At the end of this course, the student will be able to touch-typing (without visual assistance) on a computer keyboard, using techniques that are acceptable; to format copy by setting margins and tabs; to proofread and edit a selected paragraph, at speed and accuracy rates appropriate to the kind of copy. *Credit units: 3 ECTS Credit Units: 6. Aut (H. Erdem)*

BM 102 Applied Word Processing

A systematic and comprehensive program for perfecting and applying formatting skills up-to-date standards of formal correspondence. The purpose of this course is to improve basic keyboarding abilities that are essential to accurate speed production work (in order to be able to carry out various kinds of formatting techniques required in a modern office.) It involves applying keyboarding and communication skills to practical work and formatting primary personal and business documents. *Credit units: 3 ECTS Credit Units: 5, Prerequisite: BM 101 and CTP 191.*

BM 161 Office Administration and Management

This course is an information source emphasizing the administrative skills necessary for success in today's highly technological offices. It includes the major skills, attitudes, concepts and knowledge needed by administrative assistants. With the help of this course the students are preparing for a profession in which there are many opportunities to develop initiative, judgment and knowledge that will lead to opportunities for responsible positions in the business world. *Credit units: 3 ECTS Credit Units: 5. Aut (M. E. Savun)*

BM 164 Office Automation

Office Automation is interaction of people in offices using systems and technologies such as; printers, scanners, copiers and telecommunication systems (fax, teleconferencing, video-conferencing, voice mail systems) to meet their goals and examins how these technologies may be used to improve organizational communication. *Credit units: 3 ECTS Credit Units: 3.*

BM 171 Business Mathematics

Students gain familiarity with the basic concepts of Business Mathematics Topics such as, computation of averages, interpretation of ratio and percent, depreciation methods, simple and compound interest, annuities and applications, buying, selling. *Credit units: 3 ECTS Credit Units: 5. Aut (N. Aykanat)*

BM 172 Filing and Record Management
This course provides the students with the knowledge of how to set up and maintain files and records. They will learn the basic filing methods and indexing rules. They distinguish between basic filing equipment and supplies. The students identify the importance of efficient records management programs in today's business offices and also identify the "life cycle" of records; including the basic components of records management programs such as records retention, transfer and disposition. In addition, they will learn the importance of vital records and they will study the centralized and decentralized files management. *Credit units: 3 ECTS Credit Units: 4.*

BM 182 Principles of Accounting
The aim of this course is to introduce students to the basic concepts of accounting. Topics such as transaction analysis, general journal and ledger, trial balance, income statement, principles of managerial accounting and break-even analysis. *Credit units: 3 ECTS Credit Units: 4.*

BM 183 Introduction to E-Business
Credit units: 3 ECTS Credit Units: None.

BM 184 Standard Turkish Accounting System
Credit units: 3 ECTS Credit Units: None.

BM 185 Management Information Systems
The objective of the course is to introduce the students the basic concepts of Management Information Systems, structure of Management Information Systems and computer system resources; such as hardware, software and databases. *Credit units: 3 ECTS Credit Units: 6. Aut (N. Aykanat)*

BM 186 Business Statistics
The objective of the course is to introduce students to the basic concepts of statistics with some application to business. More specifically, the course first explains the methods for describing data and assessing the variability of data. The second stage covers the issues of sampling distributions, hypothesis testing, multiple regression analysis and analysis of variance. *Credit units: 3 ECTS Credit Units: 6.*

BM 187 Macroeconomics
The course of Macroeconomics introduce the students to the basic theory of gross domestic product. The students gain familiarity with the accounts included in the GDP computation, the disadvantages of GDP and the difference between real and nominal GDPs. Furthermore, the students also learn about the concept of business cycle, types of unemployment, the concept and type of inflation. The national economic is also explained through aggregated demand and supply, the potential fiscal policies used to regulate the national market, the type of national dept effecting the national economy. Finally, the concept of money, money creation and monetary policies are introduced. *Credit units: 3 ECTS Credit Units: 6.*

BM 188 Presentation Techniques
The main purpose of this lecture is to teach the effective ways of presentation. Planning the presentation, analyzing the audience, setting goals, organizing, preparing and using visual aids, delivering the presentation, answering questions, following up will cover the main frame of the lecture. *Credit units: 3 ECTS Credit Units: 6.*

BM 189 Principles of Marketing
Provides an overview of the evolution of marketing, identifies the basic characteristics of consumer and individual market, explains target marketing providing insight into the four elements of the marketing mix; product concepts, marketing channel, promotion planning and international marketing. *Credit units: 3 ECTS Credit Units: 6.*

BM 190 Introduction to Business
Designed to give an overall view to all the relevant functions of a business. Emphasizes the integrational aspects of the entire business organization and paves the way for functional area knowledge to be developed. Helps to understand and to conceptualize the nature of business, and gives the necessary orientation to the areas that will require functional specialization later on. *Credit units: 3 ECTS Credit Units: 6.*

BM 192 Commercial Correspondence
Credit units: 3 ECTS Credit Units: None.

BM 193 Introduction to Finance
The course objective is to introduce students to the basic concepts of finance. The introductory topics covered in the course are the concept of valuation and valuation of a firm's stock. In the second phase, the principles of capital investment, capital budgeting and evaluation of risky investments, required returns for projects are discussed. Finally, the requirements returns for companies, divisions, acquisitions and some concepts of capital structure are presented. *Credit units: 3 ECTS Credit Units: 6.*

BM 200 On the Job Training
The main objective of this training is for students to observe the real aspects of business life and have an opportunity to improve their skills and knowledge and to familiarize the student with the business world. During the 30 working days that constitute the on the job training period, students will be supervised by the department.

The program will be conducted during the summer months of the first year. *Credit units: None ECTS Credit Units: None. Aut (R. Ödemiş)*

BM 201 Advanced Word Processing

This course aims to improve the basic keyboarding skills by having the students use effective skill development materials. In order to give the students a professional approach on-the-job activities, they will be exposed to keyboarding problems related to executive offices. High quality typing and independent work without direct supervision are the other features of this course. *Credit units: 3 ECTS Credit Units: 4, Prerequisite: BM 101. Aut (H. Erdem)*

BM 202 Reports and Audio Transcription

This course is design to teach report writing techniques in computer aided environment. The other important feature of this course is to teach how to use a special program, like "coolpro.exe"; in transcribing audio-recorded materials. *Credit units: 3 ECTS Credit Units: 5, Prerequisite: BM 102. Aut (H. Erdem)*

BM 261 Microeconomics

The course is designed to provide a solid foundation of economic understanding in managerial decision making. The principal topics covered in this class are: economic optimization, demand analysis and demand estimation, forecasting, production, cost analysis and cost estimation, market structure, decision making under uncertainty, and capital budgeting. *Credit units: 3 ECTS Credit Units: 5.*

BM 262 Principles of Management

This is the introductory course in management. The course is designed to provide students an overview of the management function and its role in organizations and also organizational theories. By the end of the course, you will be able to better understand management styles. You will gain an in-depth understanding of co-workers and a general understanding of the business environment in which you will operate. *Credit units: 3 ECTS Credit Units: 5.*

BM 271 Etiquette and Modern Business Manners

This course is designed to acquaint the student with the good manners and etiquette rules of public places and the business world. The topics to be covered are: business and social manners of public occasions and events, everyday courtesies, male and female work relationships, executive communication, executive entertaining, seated dinners, gift giving and receiving. The course will be conducted partly in Turkish. *Credit units: 3 ECTS Credit Units: 4.*

BM 272 Business Writing Techniques in Turkish

This course will integrate the principles and practices of Business Writing in Turkish. Topics will include: general writing techniques, letter writing, principles of writing memorandums and reports, press releases, finding business information, writing resumes, applications and employment letters, and speech writing. *Credit units: 3 ECTS Credit Units: 4. Aut (E. Fındık)*

BM 281 Organizational Behavior

This course firstly aims to develop some specific analytical ability to think and to solve organizational behavior problems. Secondly, it provides insights into personal and interpersonal relationships: it aims to change the student from an individual into an efficient group member in an organization. Therefore, it includes such topics as: Organization system and environment, understanding individual behavior, communication, stress management, decision making, problem solving and group dynamics. *Credit units: 3 ECTS Credit Units: 5. Aut (R. Ödemiş)*

COMMERCE AND ADMINISTRATION

N. Fenmen (Acting Chair), İ. N. Durubal, M. Ferendeci-Özgödek, B. Fisher, S. Sevin.

Part-time: R. Atasoy, S. Kapetanovic, İ. S. Takaç, Ş. E. Ural Özkan, D. Van Loo.

Commerce and Administration is a two-year program leading to an Associate of Science degree in business administration. Students are given a strong background in business, marketing, human resource management and financial applications, and trained so that they are familiar with the software packages widely used in business.

The curriculum of the department covers business administration, production management, marketing, human resources management, economics, statistics, accounting and finance courses. Apart from the "must" courses in the curriculum, students select two elective courses in their second year. The elective courses offered by the Department aim not only at broadening the student's knowledge on certain topics, but also serve to guide the student into a deeper understanding of various options in the field of business administration.

At the end of their first year students are required to successfully complete a 30-day industrial training program. Industrial training is aimed to develop the students practical skills in business applications. During their industrial training period, students are expected not only to apply their knowledge and experience gained during the first year, but also to familiarize themselves with the actual business world, and concepts which may be new to them.

CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
CAA 123	PC Business Applications	3 / -
CAD 111	Principles of Management	3 / 4
CAD 113	Microeconomics	3 / 5
CAD 125	Business Mathematics	4 / 6
ENG 101*	English and Composition I	3 / 6
GE 100	Orientation	1 / 1
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
CAA 223	Advanced Spreadsheet Applications	3 / 6
CAD 114	Principles of Marketing	3 / 4
CAD 126	Statistics	3 / 5
CAD 128	Principles of Financial Accounting	3 / 5
CAD 231	Macroeconomics	3 / 4
ENG 102*	English and Composition II	3 / 6
TURK 102	Turkish II	2 / 1

* Depending on the result of the COPE exam, students may take ELS 103 - ELS 104 - ELS 203 - ELS 204 in place of ENG 101 - ENG 102.

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
CAD 200	Industrial Training	2 / -
CAD 211	Organizational Behavior	3 / 5
CAD 218	Marketing Management	3 / 6
CAD 225	Management Science	3 / 6
CAD 229	Principles of Managerial Accounting	3 / 6
HISTR 201	History of Turkish Republic I	2 / 1

Spring Semester		Credits / ECTS Credits
CAA 226	Elements of Finance Analysis	3 / 6
CAA 248	Legal Aspects of Business	3 / 4

CAD 212	Production Management	3 / 5
CAD 216	Human Resources Management	3 / 6
HISTR 202	History of Turkish Republic II	2 / 1

COURSE DESCRIPTIONS

CAD 111 Principles of Management
Introduction to management: concepts, principles, techniques and practices. Understanding the manager's role. The management process: planning, organizing, leading and controlling. The environment of management, social responsibility and ethics. Understanding an organization. *Credit units: 3 ECTS Credit Units: 4. Aut (R. Atasoy)*

CAD 113 Microeconomics
An analytical look at the basis of production and consumption behavior, market structures, pricing system, resource allocations, market failures. *Credit units: 3 ECTS Credit Units: 5. Aut (İ. N. Durubal)*

CAD 114 Principles of Marketing
Fundamental concepts in marketing. Strategic planning, marketing environment, consumer buyer behavior, marketing segmentation, targeting, positioning, marketing mix (4P) and global marketing. *Credit units: 3 ECTS Credit Units: 4, Prerequisite: CAD 111.*

CAD 125 Business Mathematics
Sets and real numbers. Linear equations, application of equations, inequalities, functions and graphs. Straight lines and systems of equations. Non linear functions and applications, financial mathematics, matrix algebra. Differentiation and its applications. *Credit units: 4 ECTS Credit Units: 6. Aut (B. Fisher)*

CAD 126 Statistics
Summarizing data with tabular and graphical approaches. Measures of central tendency and dispersion. Basic principles of probability. Test of hypotheses. Computer applications with statistical software packages. *Credit units: 3 ECTS Credit Units: 5, Prerequisite: CAD 125. Aut (S. Kadayıfçılar)*

CAD 128 Principles of Financial Accounting
Definition and functions of accounting. Financial statements, balance sheet, income statement. Asset, liabilities and owner's equity. Expenses and revenues. Effect of business transactions upon the B/S and I/S. The ledger, the journal. Double-Entry Accounting, recording transactions in the ledger accounting, the trial balance. Adjusting entries, closing entries. Bank reconciliation. Hands-on experience with popular accounting package software in the laboratory. *Credit units: 3 ECTS Credit Units: 5.*

CAD 200 Industrial Training
This course provides for the evaluation of the 30-day industrial training period students are required to complete during the summer break following their first year. During their industrial training period, students are expected not only to apply their knowledge and experience gained during their first year, but also to familiarize themselves with the actual business world, and concepts which may be new to them. *Credit units: 2 ECTS Credit Units: None, Prerequisite: CAD 111. Aut (N. Fenmen)*

CAD 211 Organizational Behavior
Understanding levels in OB: Individual level, group level and organization system level. Foundations of individual behavior, role of personality and emotions. The behavior of people in groups. The formal organization system. (Organization's structure, culture, work design, communication, change and development) *Credit units: 3 ECTS Credit Units: 5, Prerequisite: CAD 111. Aut (M. Ferendeci-Özgödek)*

CAD 212 Production Management
Quality management, TQM, SPC, ISO9000, capacity planning and facility location, inventory systems for independent demand, inventory systems for dependent demand (MRPII), materials and purchasing management, supply chain management. *Credit units: 3 ECTS Credit Units: 5, Prerequisite: CAD 125.*

CAD 216 Human Resources Management
The nature of human resources management. Staffing the organization. Employee training and development. Developing careers. Motivation and job design. Evaluating employee performance. Maintaining an effective and efficient work environment. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CAD 211.*

CAD 218 Marketing Management
The role of marketing in organizations and society. Marketing strategy, strategic marketing planning, implementation and decision making processes. Measuring and forecasting market opportunities. Marketing mix strategies and applications. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CAD 114 or CAD 213. Aut (M. Ferendeci-Özgödek, S. Kapetanovic)*

CAD 225 Management Science
General overview of quantitative techniques and mathematical models within the context of decision making, planning and controlling. Linear programming decision analysis. Forecasting project management, waiting line analysis network models. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CAD 111 and CAD 125. Aut (S. Kadayıfçılar)*

CAD 229 Principles of Managerial Accounting
Comprehensive study on financial and managerial accounting. Includes in-depth study of cost volume relationship. Cost volume profit, analysis of relevant cost and income analysis for decision making process. Budgeting for profit planning. Standard cost and variances analysis. Job-costing systems, process-costing systems. Activity based costing. Hands-on experience with popular accounting software packages in the laboratory. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CAD 128. Aut (S. Sevin)*

CAD 231 Macroeconomics
Analysis of concepts such as gross national product, inflation, employment, national debt, fiscal and monetary policies. Economic fluctuations. Introduction to international economics. Investment and financial intermediation, Banking System. Application of tools of macroeconomic analysis in understanding the economy of a country. *Credit units: 3 ECTS Credit Units: 4, Prerequisite: CAD 113. Aut (B. Fisher)*

CAD 233 International Marketing
Key factors that lead to globalization, world trade and regional trade agreements. Structure of multinational company. Planning for international markets via alternative entry modes; exports, licensing, joint ventures, contractual agreements, manufacturing, franchising, investment and developing international product, pricing, promotion strategies. Economic, political and cultural factors affecting international marketing. International marketing research. Organization and control in International marketing. Marketing planning for International Business. *Credit units: 3 ECTS Credit Units: 5, Prerequisite: CAD 111. Aut (D. Van Loo)*

CAD 234 Consumer Behavior
Introduction to consumer behavior: Marketers' and consumers' views, the consumer marketplace. Market segmentation. The consumer as an individual: Consumer motivation, consumer perception, consumer learning and consumer attitudes. External influences on consumer behavior: Cultural influences, social and situational influences. Consumer decision making process. *Credit units: 3 ECTS Credit Units: 5, Prerequisite: CAD 114.*

CAD 242 Business Communications
This course encourages practicing language to boosts business skills and anhence interpersonal skills through role plays of business meetings, telephone conversations, job interviews and written applications. A key aim of this course is to focus on vocabulary comprised in key course offerings and to offer a medium of discussion where the student not only practices the language, but uses his background acquired throughout key courses in the department to participate effectively in debates and discussions. *Credit units: 3 ECTS Credit Units: 5.*

COMPUTER TECHNOLOGY AND PROGRAMMING

R. Ayfer (Chair), C. Aydoğmuş, C. U. Ayfer, M. S. Azgur, T. Baycan, İ. Kalender, C. Kızılduman Yazıcı, C. Kültür, H. Özmen, M. Özsoy, L. Russell-Dağ, İ. Sözen, S. Uğurlubilek, H. Yavuz, F. Yürüten.

Vocational Specialists: E. Z. Kıraçbedel, Ö. Koray, C. Okuyucu, E. Utkulu Özdemir.

Computer Technology and Programming offers a two-year program which provides foundations of a concise computer science education through its carefully designed curriculum. The curriculum includes contemporary computing topics and ultimately earns the students an Associate of Science degree.

The curriculum emphasizes basic theory as well as practical experience in a variety of operating environments, tools and programming languages. It is designed to equip students with strong problem solving abilities, critical thinking abilities and skills for life long learning. Students who complete the program will have a thorough knowledge and experience in structured and object oriented programming in Windows and UNIX environments. Programming languages such as C, C++, Java, visual programming tools, relational database management systems, and data communications are the major topics covered during the program. Students are required to design and implement various programming projects in partial fulfillment of the curriculum.

The courses are combination of theory and laboratory practice in up to date lab facilities. Facilities including a network of personal computers in laboratories and multiple UNIX servers, all connected to the campus backbone. Instruction is supported by the department computational facilities including a network of personal computers in laboratories and multiple UNIX servers, all connected to the campus backbone.

The program specifics are designed and frequently updated to reflect changes in the IT industry. This dynamism in the curriculum adapts the students to the needs and expectations of the industry as well as prepares them to continue their academic studies leading to a BS degree in Computer Science.

The compulsory 30 days industrial training has proven to be a valuable interaction between the industry and the department, and it provides strong recruitment opportunities for the students.

CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
CTP 100**	Transferable Skills	2 / 2
CTP 101	Introduction to Programming	5 / 10
CTP 105	Programming Environment	3 / 5
CTP 107	Discrete Mathematics	3 / 6
ENG 101*	English and Composition I	3 / 6
GE 100	Orientation	1 / 1
TURK 101	Turkish I	2 / 1

Spring Semester		Credits / ECTS Credits
CTP 102	Elementary Data Structures	5 / 10
CTP 106	Business Applications	3 / 4
CTP 108	Computer Programming for Business	4 / 6
CTP 118	Computer Organization	3 / 4
ENG 102*	English and Composition II	3 / 6
TURK 102	Turkish II	2 / 1

* Depending on the result of the COPE exam, students may take ELS 103 - ELS 104 - ELS 203 - ELS 204 in place of ENG 101 - ENG 102.

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
CTP 200	Industrial Training	- / -
CTP 201	Object Oriented Programming I	5 / 10
CTP 203	Operating Systems	4 / 6
CTP 209	Systems Development	3 / 6
CTP 227	User Interface Design and Development	3 / 6
HISTR 201	History of Turkish Republic I	2 / 1

Spring Semester		Credits / ECTS Credits
CTP 202	Object Oriented Programming II	5 / 8
CTP 204	Networking Principles and Applications	3 / 5
CTP 206	Database Management Systems	4 / 6
CTP 208	Programming for the Internet	3 / 5
CTP 210	Term Project	4 / 6
HISTR 202	History of Turkish Republic II	2 / 1

COURSE DESCRIPTIONS

CTP 100 Transferable Skills
This course aims to provide the input and practice in transferrable skills such as learning skills, self-management, working collaboratively, problem solving, communication skills and information technology. The course aims to help students discover their personal strengths and weaknesses as well as guiding them to develop their life-long competencies. The course work consists of self-awareness activities and authentic tasks such as role-plays and case studies. *Credit units: 2 ECTS Credit Units: 2. Aut (C. Aydoğmuş, C. Kızılduman Yazıcı)*

CTP 101 Introduction to Programming
An introduction to programming using problem solving strategies. Theoretical principles and phases of problem solving. Basic properties of algorithms. Top down design. Structured programming techniques will be introduced using the C language. Topics include data representation, simple arithmetic expressions, basic problem solving concepts: selection and repetition, arrays, functions and modular programming, program testing and debugging. (Six hours lecture, four hours lab). *Credit units: 5 ECTS Credit Units: 10. Aut (İ. Sözen)*

CTP 102 Elementary Data Structures
Introduction to data structures. Files: text and binary files. Strings and string manipulation. Structures: Structures as function parameters, pointers to structures, arrays of structures. Dynamic memory allocation. Linked lists. Stacks. Queues. Searching, sorting and merging. Recursion. *Credit units: 5 ECTS Credit Units: 10, Prerequisite: CTP 101. Aut (L. Russell-Dağ)*

CTP 105 Programming Environment
An introduction to computers and computer applications. The course aims to familiarize students with the basic skills and terminology needed to use a computer efficiently using a lecture in lab format. Course topics include computer structure and terminology, the Internet, operating systems (Linux/Unix, DOS, Windows). Applications include word processing, presentation, spreadsheet and database applications. *Credit units: 3 ECTS Credit Units: 5. Aut (C. Aydoğmuş)*

CTP 106 Business Applications
Web page design for business. This course provides an introduction to basic web design and implementation topics to create professional looking web pages. Topics include an introduction to HTTP and CGI web protocols, principles of web design, HTML/XHTML, cascading style sheets, JavaScript basics, and the implementation of web pages using web authoring tools. *Credit units: 3 ECTS Credit Units: 4. Aut (S. Uğurlubilek)*

CTP 107 Discrete Mathematics
The aim of this course is to develop logical reasoning ability of students. Topics include elements of logic, set theory and operations on sets; DeMorgan's rules, finite and infinite. Relations and functions. Logic circuits. Induction and recursion, pigeonhole principle. Permutations, combinations and probability of discrete events. Graphs and their representation in computing. *Credit units: 3 ECTS Credit Units: 6. Aut (H. Yavuz)*

CTP 108 Computer Programming for Business
This course examines programming fundamentals of Windows desktop using up-to-date software development tools, while introducing students the important event driven features of that platform. The course utilizes integrated cases that are improved from week to week, and are based upon common business problems and processes integral to solving them. A consistent four-step design methodology (Plan/Design/Code/Run) encourages

problem-solving as students learn how to create applications. Includes data storage, form and database design basics and in-class debates related to computing business topics. *Credit units: 4 ECTS Credit Units: 6, Prerequisite: CTP 101. Aut (T. Baycan)*

CTP 118 Computer Organization
The aim of this course is to prepare students for computing and technical programming. Course topics include number theory. Definitions, operations and properties to Boolean algebra. Digital logic gates. Combinational Systems. Flip, flops. Sequential Logic. Registers, shift registers. Counters. ALU, CPU, Control Unit. *Credit units: 3 ECTS Credit Units: 4. Aut (H. Yavuz)*

CTP 191 Introduction to Computers
This course aims to provide students with the ICT skills required for success in their academic and professional lives. The course covers basic concepts of information technology, Internet and web concepts, the use of word processing software, and the creation of web pages using a basic web authoring tool. At the end of the course, students should be able to effectively search for information using Internet, library and online database search tools, prepare professional and well formatted documents, and web pages. *Credit units: 3 ECTS Credit Units: 5. Aut (S. Uğurlubilek)*

CTP 192 Introduction to Computer Applications
An introduction to computers and computer applications. The course aims to familiarize students with the basic skills and terminology needed to use common office applications. Upon successful completion of the course students will be able to use a word processing application to produce well formatted, professional documents, use presentation software to create professional, well-organized presentations, and to understand the basic concepts needed to create and modify simple databases. *Credit units: 3 ECTS Credit Units: 5, Prerequisite: CTP 191. Aut (Staff)*

CTP 200 Industrial Training
The aim is to provide students an opportunity to take part in the real business environment and understand the requirements of the industry. Students are expected not only to apply their knowledge and experience gained during their first year but also to familiarize themselves with technologies and concepts new to them. This thirty-five day training period is undertaken during the summer break following a successful completion of the first year. *Credit units: None ECTS Credit Units: None, Prerequisite: CTP 102 and CTP 108. Aut (Staff)*

CTP 201 Object Oriented Programming I
Description of object-oriented program development. Introduction of object oriented programming concepts using C++ programming language. Objects, classes, encapsulation. Hierarchy between classes, inheritance and abstract classes. Function and operator overloading. Virtual functions, virtual baseclasses and polymorphism. *Credit units: 5 ECTS Credit Units: 10, Prerequisite: CTP 102. Aut (Staff)*

CTP 202 Object Oriented Programming II
This course is designed a second course in object-oriented programming. Object-oriented concepts are further developed using the Java programming language. The course covers OOP concepts, including classes and objects, encapsulation, inheritance, polymorphism, interfaces and abstract classes. Important Java packages, classes and GUI design are also included. *Credit units: 5 ECTS Credit Units: 8, Prerequisite: CTP 201. Aut (L. Russell-Dağ)*

CTP 203 Operating Systems
The course is designed to provide the fundamentals of operating systems and an introduction to the internal operations of modern operating systems (OS). Topics include: history and basic OS concepts, process management, memory management, file systems, input/output management, operating system security and protection and support for distributed systems. Also covered is the UNIX environment and shell scripts. Lab sessions: Unix/Linux Administration. *Credit units: 4 ECTS Credit Units: 6, Prerequisite: CTP 102 and CTP 118. Aut (M. S. Azgur)*

CTP 204 Networking Principles and Applications
The course aims to provide information about the fundamentals of data communications and contemporary computer network principles and applications. Topics include: electronic communications, analog and digital signals, data communications, local and wide area networks, OSI layers, internetworking (TCP/IP, Ethernet). Designed to prepare students for more advanced topics in networking. Lab sessions: Unix/Linux networking. *Credit units: 3 ECTS Credit Units: 5, Prerequisite: CTP 203. Aut (İ. Kalender)*

CTP 206 Database Management Systems
The course includes DBMS concepts, definitions, specifications and objectives. Includes the relational data model. SQL will be introduced as a data manipulation language. Topics also include data base design considerations(ER Diagrams and normalization), concurrency control mechanisms, crash recovery concepts and an overview of current trends. During lab sessions students have hands on experience using SQL as a database tool, and experience applications created with a widely-used database package. *Credit units: 4 ECTS Credit Units: 6, Prerequisite: CTP 203. Aut (F. Yürüten)*

CTP 208 Programming for the Internet
This course is designed to introduce to the student the fundamentals of developing web-based applications. Upon completion of the course students will be able to understand HTTP and CGI protocols, to write basic PHP scripts, to write PHP scripts that use a RDBMS and develop a full featured web based database application. *Credit units: 3 ECTS Credit Units: 5, Prerequisite: CTP 227. Aut (İ. Kalender)*

CTP 209 Systems Development
The course presents a comprehensive introduction to the systems design skills in information engineering that students, as future users or systems analysts, will need to work in a highly competitive computer-integrated business environment. It provides the students with the skills to identify business problems which may be solved by technology-based solutions, and determine requirements for information systems solutions. The course includes Systems Development Life Cycle (SDLC), Systems Analysis and Design Techniques (DFDs, Logical Modeling, E-R Diagrams, Object Oriented Modeling), review of Unified Modeling Language (UML), Project Management tools (CPM, GANTT, PERT) and evaluation of engineering standards such as MIL-STD-498, IEEE/EIA 12207 and ISO 9000-2000. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CTP 108. Aut (M. S. Azgur)*

CTP 210 Term Project
Specification, analysis, design, implementation, documentation and presentation of a medium-sized software system by small teams under close supervision of a faculty advisor for each team. Teams will develop a software system, utilizing tools and techniques taught in previous courses and new ones that they will independently choose and learn during project development. *Credit units: 4 ECTS Credit Units: 6, Prerequisite: CTP 201 and CTP 209. Aut (T. Baycan, İ. Sözen)*

CTP 227 User Interface Design and Development
The course will begin with introducing the basic principles of user interface design, its significance in human-computer interaction, interface quality, evaluation strategies, understanding the user behavior and interaction schemes. Students will be developing projects throughout the semester to apply their theoretical buildup. Web based user interface technologies will be specially emphasized. The course will be completed with the introduction of web programming, server and client side scripting and their impacts on user interface design. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: CTP 106. Aut (C. Kültür)*

CTP 291 Computer Applications for Business I
Advanced features of word processing. Desktop publishing concepts. Mail merging. Inserting files, pictures, graphs in documents. Preparing index and table of contents. Switching between applications, generating new applications. Details of the print manager and control panel. Database concepts in spreadsheets. *Credit units: 3 ECTS Credit Units: 5, Prerequisite: CTP 191. Aut (M. Özsoy)*

CTP 292 Computer Applications for Business II
Fundamental concepts of a database. Data types. Creating and updating a database file. Building conditions. Indexing and sorting. Advanced desktop publishing. *Credit units: 3 ECTS Credit Units: 5, Prerequisite: CTP 192.*

VOCATIONAL SCHOOL OF TOURISM AND HOTEL SERVICES

Kamer Rodoplu, Director

The objective of the two-year program in the Vocational School of Tourism and Hotel Services is to prepare students for various positions in hotels, restaurants and travel agencies.

With the rapidly growing potential of tourism, as a leading industry in the economy, the need for well-trained staff is obvious. Success in the hotel and restaurant industry requires substantial professional knowledge, business sense and human relations skills. For this reason, the curriculum of the Vocational School of Tourism and Hotel Services aims at achieving “hands-on” experience. The wide use of laboratories (e.g. training kitchen, restaurant etc.) and the existence of a practice hotel (Bilkent Hotel and Conference Center - Ankara, rated a five-star hotel by the Ministry of Culture and Tourism) provide the students with a firm background in professional skills. Attention is also given to communication skills, foreign languages and computer applications.

A 60-day industrial training program at an establishment in the hotel or travel industry is compulsory. This takes place during the summer months after the successful completion of the first year.

ACADEMIC STAFF

Oğuz Benice, Instructor
Diplôme, Etudes Supérieures en Hôtellerie et Restauration, Ecole Hôtellière de Lausanne, Switzerland, 1992. Food and beverage operations and management.

İbrahim Boz, Instructor
M.A., Economics, Eastern Michigan University, 1992. Economics, accounting, tourism.

Jamel Ben Mohamed Chafra, Instructor
M.B.A., Bilkent University, 1996. Rooms division management, service operations management.

Ayşe Baş Collins, Assistant Professor
Ph.D., Educational Sciences, Middle East Technical University, 1999. Human resources management, senior project.

Nazende Özkaramete Coşkun, Instructor
Ph.D., Economics, Yeditepe University, 2007. Economics, mathematics.

İhsan Çetin, Instructor
Ph.D., Economics, İstanbul University, 1973. Economics.

Hacer Çınar, Instructor
B.A., Business Administration, Hacettepe University, 1984. Accounting.

Şermin Elmas, Instructor
Ph.D., Sociology, Middle East Technical University, 2002. Sociology, organizational behavior.

Yener Ergüven, Instructor
B.S., Business Administration, Ankara University, 1972. Business administration.

Cevat Ertuna, Instructor
Ph.D., Business and Economics, University of Memphis, 1999. Quantitative decision techniques, finance.

Zeliha İlhan Ertuna, Instructor
Ph.D., Finance, Old Dominion University, 2001. Finance, accounting, economics.

Eda Gürel, Assistant Professor
Ph.D., Business Administration, Hacettepe University, 2006. Marketing, world travel destinations, world geography.

Güneş Karamullaoğlu, Instructor
M.B.A., Social Sciences, Gazi University, 2000. Travel operations and management, tour development and implementation, event management.

Hendrik C. Kuchlein, Instructor
Diploma, George Brown College, Canada, 1970. Food production, international cuisines.

Nuriye Örer, Instructor
Ph.D., Dietetics and Nutrition, Hacettepe University, 1995. Nutrition, dietetics, sanitation, hygiene, health studies.

Perin Öztin, Instructor
M.B.A., Alaska Pacific University, 1987. Tourist attractions of Turkey.

Aykut Pekcan, Assistant Professor
Ph.D., Management, Ankara University, 1997. Management, accounting, senior project.

Kamer Rodoplu, Instructor
Diplôme d'Ingénieur en Génie Electrique, Institut National des Sciences Appliquées de Lyon, 1982. Hardware design and interfacing, signal processing, telecommunications and networking, Calculus.

Mustafa Siyahhan, Instructor
M.S.J., Ohio State University, 1974. Introduction to Business, Tourism Law, Principles of Marketing,

Esin Şenol, Instructor
B.S., Food Engineering, Middle East Technical University, 1989. Food sciences, cost control, health studies.

Engin Türel, Instructor
B.A., Business Administration, Ankara Academy of Economics and Commerce, 1971. Hotel operations, industrial training.

Ali Ünal, Instructor
M.B.A., Başkent University , 2003. Food and beverage service, restaurant service.

VOCATIONAL SPECIALISTS

Zeki Polatkesen
Diploma, Culinary Arts, The Institute of Culinary Education, USA, 2000.

PART-TIME ACADEMIC STAFF

Esra İsfendiyar, B.A., Administrative Sciences, Middle East Technical University, 1986.
Ayşin Paşamehmetoğlu, M.B.A., Business Administration, Atılım University, 2003.
Haluk Tüfekçioğlu, B.A., Faculty of Literature, 1984.
Elif Yeloğlu, M.B.A., EADA International, 2006.

HOSPITALITY SERVICES

A. Pekcan (Acting Chair), O. Benice, İ. Boz, J. B. M. Chafra, A. B. Collins, N. Ö. Coşkun, İ. Çetin, H. Çınar, Ş. Elmas, Y. Ergüven, C. Ertuna, Z. İ. Ertuna, E. Gürel, G. Karamullaoğlu, H. C. Kuchlein, N. Örer, P. Öztin, K. Rodoplu, M. Siyahhan, E. Şenol, E. Türel, A. Ünal.

Vocational Specialists: Z. Polatkesen.

Part-time: E. İsfendiyar, A. Paşamehmetoğlu, H. Tüfekçioğlu, E. Yeloğlu.

Hospitality Services Program

The Hospitality Services (HS) program is designed to provide students with relevant education in hotel, restaurant and travel industry, furnishing them with theoretical as well as practical knowledge applicable for the real life circumstances. Emphasis is given on hands-on experience, speaking ability of an additional foreign language and use of computer systems.

CURRICULUM

FIRST YEAR

Autumn Semester		Credits / ECTS Credits
BIM 181	PC General Applications	3 / 6
BM 100	Keyboarding	2 / 2
ELS 103*	Advanced English I	3 / 5
ENG 101*	English and Composition I	3 / 6
GE 100	Orientation	1 / 1
THS 105	Introduction to Business	3 / 5
THS 121	Business Mathematics	2 / 2
THS 131	Introduction to Tourism Industry	3 / 5
THS 161	Health Studies	1 / 1
THS 162	Behavior and Etiquette	1 / 1
TURK 101	Turkish I	2 / 1
	Second Foreign Language**	3 / 6

(Students take either ENG 101 or ELS 103)

Spring Semester		Credits / ECTS Credits
ELS 104*	Advanced English II	3 / 5
ENG 102*	English and Composition II	3 / 6
THS 110	Nutrition, Hygiene and Safety	3 / 5
THS 126	Food and Beverage Operations	3 / 5
THS 138	World Geography	3 / 5
THS 148	Front Office Operations	3 / 5
THS 150	Basic Accounting	3 / 5
TURK 102	Turkish II	2 / 1
	Second Foreign Language**	3 / 6

(Students take either ENG 102 or ELS 104)

SECOND YEAR

Autumn Semester		Credits / ECTS Credits
ELS 203*	Advanced English III	2 / -
HISTR 201	History of Turkish Republic I	2 / 1
THS 200	Summer Training	- / -
THS 221	Food Production I	2 / 4
THS 223	Food and Beverage Service	3 / 5
THS 225	Hospitality Industry Accounting	3 / 5
THS 256	Marketing	3 / 5

	Restricted Elective	3 / 5
	Second Foreign Language**	3 / 6

Spring Semester		Credits / ECTS Credits
ELS 204*	Advanced English IV	2 / -
HISTR 202	History of Turkish Republic II	2 / 1
THS 220	Food and Beverage Cost Control	3 / 5
THS 222	Food Production II	4 / 5
THS 233	Travel Agency Operations	3 / 5
THS 269	Co-Op Management Application	- / -
	Restricted Elective	3 / 5
	Second Foreign Language**	3 / 6

See note for ELS courses **

RESTRICTED ELECTIVES

BIM 282	Hospitality Industry Computerization	3 / 5
THS 210	Selected Topics in Tourism	3 / 5
THS 239	Tourism Geography of Turkey	3 / 5
THS 241	Human Resources Management	3 / 5
THS 260	Supervision	3 / 5
THS 273	Art of Pastry	3 / 5
THS 277	Major Issues in Turkish Tour.	3 / 5
THS 292	Elective II	3 / 5

** SECOND FOREIGN LANGUAGE COURSES

One of the following four-semester sequences of courses in Japanese, Chinese, Russian, German, Italian, French or Spanish can be taken to fulfill the second foreign language requirements:

Japanese : JAP 161/162/163/164
Chinese : FRL 165/166/167/168
French : FRE 161/162/163/164
German : GER 161/162/163/164
Italian : ITA 161/162/163/164
Spanish : SPA 161/162/163/164
Russian : RUS 161/162/163/164

* ENG-ELS COURSES

The students can take either ELS 103 and ELS 104 in the first year, ELS 203 and ELS 204 in the second year or ENG 101 and 102 based on their success in the COPE or equivalent exams.

COURSE DESCRIPTIONS

THS 105 Introduction to Business
Designed to give an overall view to all the relevant functions of a business. Emphasizes the integral aspects of the entire business organization and paves the way for functional area knowledge to be developed. Helps to understand and to conceptualize the nature of business, and gives the necessary orientation to the areas that will require functional specialization. *Credit units: 3 ECTS Credit Units: 5. Aut (Y. Ergüven)*

THS 110 Nutrition, Hygiene and Safety
Provides guidelines in response to today's increasing concern for adequate sanitation and health. Topics include food, nutrients, food and health interrelations, common nutritional problems and their prevention by means of proper nutritional interventions. Food safety, food service accidents and ways to protect employees are also discussed. *Credit units: 3 ECTS Credit Units: 5. Aut (N. Örer)*

THS 121 Business Mathematics
Provides mainly background knowledge of simple mathematical computation geared towards increasing student's competency in solving practical business problems. *Credit units: 2 ECTS Credit Units: 2. Aut (E. Bil)*

THS 126 Food and Beverage Operations
An introduction into the terminology, concepts and procedures in food and beverage operations, including operational functions and importance within a hotel organization. *Credit units: 3 ECTS Credit Units: 5. Aut (E. Yeloğlu)*

THS 131 Introduction to Tourism Industry
Introduces students to the different components of tourism, emphasizing terminology, concepts and procedures used throughout the travel and hospitality industry, with an overview of the organizations and major operations. *Credit units: 3 ECTS Credit Units: 5. Aut (O. Benice)*

THS 138 World Geography
Examines the development of the touristic areas of major travel destinations and attractions travelers are journeying to, and developments taking place on a world-wide basis. *Credit units: 3 ECTS Credit Units: 5. Aut (A. Paşamehmetoğlu)*

THS 148 Front Office Operations
Analyzes and discusses the various areas of the front office stressing security, communication, statistics, layout, design, front office equipment, and guest-relations skills. The course also attempts to find solutions to common operational problems of the front office such as over-booking, late charge, lost luggage, and skippers. *Credit units: 3 ECTS Credit Units: 5. Aut (H. Tüfekçioğlu)*

THS 150 Basic Accounting
Familiarizes the students within the area of identifying, recording and communicating economic events. The course particularly focuses on teaching basic accounting skills for operational purposes. *Credit units: 3 ECTS Credit Units: 5. Aut (E. İsfendiyar)*

THS 161 Health Studies
The course provides students with the knowledge and skills necessary to help domestic and international tourists whose first-aid problems have to be addressed prompt and properly. It enhances students' comprehension of theoretical and practical concepts and aspects of health issues routinely encountered in the tourism industry worldwide. *Credit units: 1 ECTS Credit Units: 1. Aut (E. Şenol)*

THS 162 Behavior and Etiquette
The purpose of this course is to provide basic knowledge and practical guidelines on everyday manners and common courtesies. It also aims at giving a perspective for proper behavior and etiquette acceptable in social and business situations. To sensitize students to the rules of protocol and dynamics of contrasting cultures is another aim of this course. *Credit units: 1 ECTS Credit Units: 1. Aut (E. Türel)*

THS 200 Summer Training
This program provides students with their first exposure to the tourism workplace. Assignments are scheduled and monitored through the school's Industrial Training Office. The main objective is to obtain practical, real-life experience. The training program, comprised of a minimum of sixty (60) work days, takes place during the summer period. *Credit units: None ECTS Credit Units: None. Aut (E. Türel)*

THS 210 Selected Topics in Tourism
The course provides students with the opportunity to reinforce their theoretical knowledge by lectures of successful professionals of tourism industry and other relevant areas; to develop their networks, to have a broader perspective of business life; to help make healthier decisions about their future targets. *Credit units: 3 ECTS Credit Units: 5. Aut (G. Karamullaoğlu)*

THS 220 Food and Beverage Cost Control
Focuses on the terminology, concepts and procedures of food and beverage planning and cost controlling. Concentrates on cost control tools and their efficient use in food and beverage industry, such as determination of food and beverage standards and sales analyses. *Credit units: 3 ECTS Credit Units: 5. Aut (E. Şenol)*

THS 221 Food Production I
Designed to give a basic knowledge and understanding of food commodities as well as cooking methods applied and food hygiene necessary. *Credit units: 2 ECTS Credit Units: 4. Aut (Staff)*

THS 222 Food Production II
Puts the theory of Food Production I into practice. Cooking of menus which will incorporate cooking methods with a wide range of different food commodities. *Credit units: 4 ECTS Credit Units: 5, Prerequisite: THM 244 or THS 221. Aut (H. C. Kuchlein)*

THS 223 Food and Beverage Service
Provides students with practical skills and knowledge for effective management of food and beverage services in outlets ranging from coffee shops to room service, banquet areas, and high check average dining rooms. Presents basic service principles while caring for special needs of guests. *Credit units: 3 ECTS Credit Units: 5. Aut (A. Ünal)*

THS 225 Hospitality Industry Accounting
Provides students with the knowledge of hospitality industry accounting under uniform system of accounts and familiarizes them with industry practices. *Credit units: 3 ECTS Credit Units: 5, Prerequisite: THS 150. Aut (J. B. M. Chafra)*

THS 228 Housekeeping Operations
Explores housekeeping supervision comprehensively and concentrates on laundry and linen operations, cleaning of public areas and servicing of guests' rooms. The course further looks into salient aspects of ground and gardens operation and property maintenance stressing energy conservation methods. *Credit units: 3 ECTS Credit Units: 5.*

THS 233 Travel Agency Operations
Focuses on travel agencies, how to establish, manage and market travel services; legal structures, management functions, office procedures are main topics to be covered. *Credit units: 3 ECTS Credit Units: 5. Aut (G. Karamullaoğlu)*

THS 239 Tourism Geography of Turkey
Discusses regional distribution of touristic activities with an emphasis on natural, historical and archaeological attractions along with their characteristics as tourism products in Turkey. *Credit units: 3 ECTS Credit Units: 5.*

THS 241 Human Resources Management
Designed to help students understand and work with human resource managers and also deal directly and successfully with human resource issues themselves. The course focuses on hiring, training and supervision of employees. *Credit units: 3 ECTS Credit Units: 5. Aut (A. B. Collins)*

THS 245 Purchasing
Covers main topics with regards to initial planning, selection of vendors, importance of a written specification, operational aspects of purchasing control such as clerical procedures, goods receiving, quality control, storing and issuing, and stock control reconciliation. It also covers subjects such as who, in which department is responsible for buying, pricing and invoicing, and the purchasing committee functions. *Credit units: 3 ECTS Credit Units: 5.*

THS 256 Marketing
Lays the groundwork for an understanding of marketing principles and reveals how those principles are applied in the marketing environment for a beginner marketing student. Various case studies one used to support the course helping to present the complex and fascinating world of marketing in a lively and enjoyable way. *Credit units: 3 ECTS Credit Units: 5. Aut (Y. Ergüven)*

THS 258 Legal Aspects of Tourism
Reviews the concept and kinds of rules with specific significance to legal rules in general and the legal structure of Turkey in particular. The tourism regulations, procedures for tourism certificates, legal aspects related to tourism organizations, investments and operations are analyzed in detail. (This course is conducted in Turkish. International students may take this course by taking a project research on a subject related to international tourism regulations. This subject will be determined by the instructor.) *Credit units: 3 ECTS Credit Units: 5.*

THS 260 Supervision
An overview of the nature and responsibilities of the supervisor. This course integrates technologies, work environment and leadership qualities. Tools for decision making, supervisory functions, scheduling, directing and controlling are analyzed through cases, exercises and simulations. *Credit units: 3 ECTS Credit Units: 5. Aut (Y. Ergüven)*

THS 269 Co-Op Management Application
An integration of hospitality work experience and class room instruction along with the practical management application opportunities in the hospitality industry. Completion of 40 work hours per semester and attainment of on-the-job training goals are required. Hospitality position to be secured prior to the start of the semester. *Credit units: None ECTS Credit Units: None. Aut (E. Türel)*

THS 273 Art of Pastry
The course introduces the preparation of pastry products using a variety of methods. Lamination, blending, creaming, foaming, and thickening. Students learn to combine these methods into new products to create savory items, and use basic finishing methods by applying glazes, filling pastrıes, creating simple souces, and presenting products for service. They will also study the fundamentals of heat transfer as applied to pastries by preparing creams, custards, soufflés, and flavored whipped creams. Students will prepare and test products. *Credit units: 3 ECTS Credit Units: 5. Aut (Staff)*

THS 277 Major Issues in Turkish Tour.
The aim of this course is to evaluate issues deemed to be significantly contemporary and influential in Turkish Tourism. those issues include, but not limited to globalization, media/technology/promotion, the internet, public policies, European Union, Eco-tourism, ethical marketing of tourism products and tourism planning. *Credit units: 3 ECTS Credit Units: 5. Aut (Staff)*

THS 292 Elective II
Relevant topics concerning Tourism, Travel, Hotel and Restaurant operations are taught with emphasis on total quality understanding. *Credit units: 3 ECTS Credit Units: 5. Aut (A. Paşamehmetoğlu)*

PHYSICAL EDUCATION UNIT

Hayri Özkan, Ed.D., Director

The mission of the Physical Education and Sports Center is to provide the environment and programs through which the students of Bilkent University can participate and attain a healthy lifestyle. By participating in quality health, physical education and sports programs the students enrich their campus lives and develop to their fullest individual capacity.

The Physical Education and Sports Center does not offer any degree in physical education. However, the students may take up to three courses for credit over and above their departmental requirements. In addition, grades will appear on transcripts and will affect their GPA and CGPA. Students may choose from a rich selection of physical education and sports courses offered every semester.

ACADEMIC STAFF

Kağan Eynak, Instructor
B.S., Physical Education and Sports, Gazi University, 1984.

Hayri Özkan, Instructor
Ed.,D., Health and Physical Education, Vanderbilt University, 1983.

Alper Uğraş, Instructor
Ed.D., Physical Education and Sports, Gazi University, 1999.

PART-TIME ACADEMIC STAFF

Engin Akgün, B.S., Ondokuz Mayıs University, 2003.
Selim Bülbül, B.S., Physical Education and Sports, Middle East Technical University, 2000.
Mehmet Genç, B.S., Physical Education and Sports, Gazi University, 1995.
Halil Karakaya, B.S., Physical Education and Sports, Middle East Technical University, 1999.
Meral Koşma, B.S., Physical Education and Sports, Gazi University, 1979.
Ömer Mihallıççık, B.S., Physical Education and Sports, Gazi University, 1979.
Hüseyin Gazi Sönmez, B.S., School of Sports Sciences and Technology, Hacettepe University, 2000.
Halim Şener, M.S., Physical Education and Sports, Gazi University, 1986.
İrfan Yıldırım, M.S., Mining Engineering, Essex University, 1983.

COURSE DESCRIPTIONS

PE 110 Beginning Tennis
This course involves analyzing and teaching basic techniques (serve, forehand, backhand, volley), rules and strategies of the game. *Credit units: 1 ECTS Credit Units: None. Aut (S. Bülbül, A. Uğraş)*

PE 120 Badminton
This course focuses on teaching basic techniques including serve, underhand and overhead shots, foot work and movement, rules and strategies of the game. *Credit units: 1 ECTS Credit Units: None. Aut (İ. Yıldırım)*

PE 125 Table Tennis
The purpose of this course is to teach basic techniques such as serve, forehand, backhand and footwork, rules and strategies of the game. *Credit units: 1 ECTS Credit Units: None.*

PE 130 Basketball
Students learn basic techniques (receiving, passing, dribbling, shooting), rules and strategies of the game. *Credit units: 1 ECTS Credit Units: None. Aut (K. Eynak)*

PE 135 Volleyball
This course is aimed at teaching the basic techniques (receiving, passing, serving, smash, block), rules and strategies of the game. *Credit units: 1 ECTS Credit Units: None. Aut (Ö. Mihallıççık)*

PE 155 Mountaineering/Orientering
Students learn basic concepts and techniques of mountain climbing, hiking and tracking. Safety, first aid, equipment, practical experience and other aspects of these activities will be covered. They will also develop an appreciation to these activities, environment and nature. *Credit units: 1 ECTS Credit Units: None.*

PE 160 Strength Training
Students learn basic concept and principles, and benefits of strength training. Major muscle groups, how strength gain occurs, techniques and methods of training will be covered. *Credit units: 1 ECTS Credit Units: None. Aut (H. Karakaya, H. G. Sönmez)*

PE 170 Turkish Folk Dancing
Introduction to famous Turkish folk dances (Antep, Adıyaman, Zeybek, Kafkas, Horon, etc.) from different regions of Turkey. Students will become aware of the cultural aspects and appreciate the traditional values of this multi-cultural society. *Credit units: 1 ECTS Credit Units: None. Aut (M. Koşma)*

PE 175 Aerobics / Step
The course focuses on the basic principles of aerobic exercises and fitness. The routines incorporate basic movements from a wide variety of dance form – folk, modern, jazz, ballet, disco – along with other whole body movements, like hopping, stepping up on a bench, arm movements, skipping, running and jumping. The dances also contain stretching and body-toning movements worked into the choreography, so as to provide a total body workout. *Credit units: 1 ECTS Credit Units: None.*

PE 180 Football (Soccer)
Students learn basic aspects of football such as; passing, dribbling, shooting, fainting techniques, rules and strategies of the game. *Credit units: 1 ECTS Credit Units: None. Aut (H. G. Sönmez)*

PE 185 Fencing
The course aims to provide information about basic movements and techniques of fencing. Rules of competition, safety precautions and proper use of equipment will be covered. Students will also develop an appreciation of the sport. *Credit units: 1 ECTS Credit Units: None.*

PE 195 Taekwondo
Students learn basic principles, techniques and movements of self defense. Fitness, strength and flexibility are improved. They will gain self confidence, respect for self and others and develop an appreciation of the sport. *Credit units: 1 ECTS Credit Units: None.*

PE 205 Orienteering
Student will develop the knowledge and competencies needed to be successful at the orienteerin. Student will develop cognitive skills needed to navigate with map and compass. They will also know and practice safety measures needed to participate in this course. *Credit units: 1 ECTS Credit Units: None. Aut (N. Fenmen, M. Genç)*

GENERAL COURSES

The following courses are not department-specific and are offered across departments and in some cases, across faculties. One of these courses, "GE 100 - Orientation" is required for all university students.

GE 100 Orientation
This course must be taken by all students in their first year at the university. It is designed to acclimate them to the university's academic and social environment. Students are required to complete a minimum number of activities to pass the course. These activities include talks by university administrators and guest speakers, workshops, concerts and tours of departments where students get detailed information about the curriculum and meet the staff. Participating in sports activities and using the university's computing facilities and the library is also part of the orientation program. The complete set of activities is provided and the required minimum indicated in the orientation handbook. *Credit units: 1 ECTS Credit Units: 1. Aut (Staff)*

GE 101 Engineering Orientation
This course is required for all the first-year students in the Engineering Faculty. It replaces the GE100 - Orientation course that is taken by the rest of the students in their first year at the university. Part of this course includes all the activities required to be completed in GE100. The course is intended to enable the smooth transition of first-year students from high school to university. It is designed to provide a medium of communication for students among themselves and with their academic coordinators in a small group setting. Through various presentations and activities, the course aims at improving the academic success of students. *Credit units: 1 ECTS Credit Units: 1. Aut (Staff)*

GE 212 Introduction to Engineering Mechanics
Introduction to mechanics of solid under tension, compression, shear, torsion and bending. Freebody diagrams, equilibrium, trusses, frames, stress and strain, Hooke's law, Mohr's circle. Equilibrium of particles and rigid bodies, moments, couples. The concept of statistics and solid mechanics with the modeling of physical systems and design of simple structure. *Credit units: 3 ECTS Credit Units: 5.*

GE 220 Environmental Science
This course provides students with the fundamental scientific knowledge to understand the natural functioning of the biosphere to relate negative environmental impacts to specific human activities and to identify more sustainable technologies. Fundamental concepts of environmental economics and management are also presented. The course draws attention to how scientific knowledge and uncertainties are used in the political decision making. *Credit units: 3 ECTS Credit Units: 5.*

GE 301 Science Technology and Society
History and philosophy of science and technology since the seventeenth century. Origins of the modern scientific method in the Western world and the consolidation of the scientific world view through the scientific and industrial revolutions. Science and religion. Social, cultural, and psychological changes induced by the advent of new technologies. Historical and contemporary critical attitudes towards technology and industrial development. Information technology and its consequences: Changes in the nature of work. How information technology influences the structure of organizations and society, management, and global economic relations. Information as property and commodity. Issues of security, privacy, reliability, and social control. Effects on human psychology, social relationships, and education. Ethical issues and professional responsibilities students may face as citizens or professionals. *Credit units: 2 ECTS Credit Units: 1. Aut (H. Özaktaş)*

GE 304 Technology Society and Professional Development Seminar
Seminar course featuring guest speakers from industry, business, government, or non-governmental organizations, as well as academicians. The seminars either contribute to students' professional or career development or perspectives; discuss current issues, trends, or challenges in technology; or are related to the social, political, cultural, ethical, legal, economic, environment and sustainability, health and safety, reliability or similar dimensions of technology and engineering. *Credit units: 1 ECTS Credit Units: 1.*

GE 308 Thermodynamics
Heat, work. 1st law of thermodynamics. Ideal gases. 2nd law of thermodynamics. Reversible and irreversible processes. Entropy and disorder. Enthalpy. Gas power cycles. Real gases. Principles of statistical thermodynamics. Conduction heat transfer. Convection heat transfer. Radiation heat transfer. *Credit units: 2 ECTS Credit Units: 3.*

GE 401 Innovative Product Design and Development I

This senior multidisciplinary course focuses on the fundamentals of design - from the conception of an idea to a marketable end product. A team of students from various departments including engineering, design, economics and business, prepare business plans, do project management, design and implement their product, as well as simulate its marketing. In the year-long process, they take into account standards, quality directives, social and environmental factors and operate in a team environment. The students also benefit from the seminars delivered by experts as well as a stock market experience they get from the virtual stock market at which the stocks of the companies owned by the student teams are traded. By the end of the first semester, concept demonstration of the end-product must be presented. *Credit units: 3 ECTS Credit Units: 6. Aut (T. Reyhan)*

GE 402 Innovative Product Design and Development II

Continuation of the senior multidisciplinary design course, GE401. In the second semester, the companies are introduced to the stock market. The working prototypes of the end products must be presented by the end of the semester. *Credit units: 3 ECTS Credit Units: 6, Prerequisite: GE 401.*

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