



TED UNIVERSITY

2020 - 2021
ACADEMIC CATALOG

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I. GENERAL INFORMATION



MESSAGE OF THE RECTOR

The TEDU Academic Catalogue is your guide to a successful and enjoyable education at our university. The catalogue gives you a complete list of the many courses we offer at TED University, as well as an explanation of the academic rules and processes that we follow. You will find the catalogue to be informative and useful throughout your intellectual journey here.

The courses that you choose will prepare you for your career, enrich your life and help you to become a well-rounded individual. But the courses alone do not constitute your education in its entirety. There is a vibrant life within and around the TEDU campus that will keep you engaged here, and over 4200 students with whom you can interact and build relationships. Our hope is that these courses along with all of the other offerings here at our elite university will expand your intellectual world and change your life for the better.

All of us within the TEDU academic family will be supporting you as you pursue your studies and shape your future. Do take advantage of these resources and make the most out of your university experience. Read the course descriptions carefully, communicate with the instructors, consult with your advisors, check with your peers about the courses and use this information to make your decisions wisely.

Personally and on behalf of my colleagues at the University, I wish you a safe, productive and enjoyable year at TEDU

Prof. H. Belgin AYVAŞIK
Rector

A BRIEF HISTORY

TED University was established by an act of the Parliament dated July 07, 2009 (legislation # 5913). The founder is the Turkish Education Association - Higher Education Foundation (TEDYÜV) which in turn was founded by the Turkish Education Association (TED).

Turkish Education Association (TED) was founded on October 31, 1928 to introduce the private enterprises drive in the modern education system of the young Turkish Republic. As stated in the second clause of its charter, the President of the Republic is the Guardian of the Turkish Education Association. TED has been a long-established civil society organization that provides scholarships to successful students with limited income, opens primary and secondary schools with foreign language as the medium of instruction, builds scientific platforms to further the efforts to bring the level of education in Turkey on a par with the contemporary world standards, creates awareness about the problems of the education system in Turkey and its possible solutions, and contributes to the formulation of Turkish educational policies.

The academic units of TED University (TEDU) are:

- Faculty of Architecture
- Faculty of Arts and Sciences
- Faculty of Economics and Administrative Sciences
- Faculty of Education
- Faculty of Engineering
- English Language School
- Graduate School

The University accepted its first students for the academic year of 2012-2013. The medium of instruction is English, so students are expected to demonstrate an acceptable level of proficiency in English or they study at the English Language School for at least one semester.

TED University will be expanding in size and sophistication to become a learning, exploring institution of 4000-4500 students, bringing to Turkish higher education area a new scope through its educational profile, quality culture, international links and top quality academic staff.

THE CAMPUS

TEDU campus is located in the heart of the city; equidistant to every neighborhood of Ankara and next to the arterial public transportation including the metro line. TEDU offers a serene and comfortable education environment with a specially designed architecture that motivates students in every aspect. Equipped with the highest technological infrastructure, TEDU assures students with the most efficient and effective technology.

The three blocks of buildings where the University started in 2012 contain 15,000 square-meters of classrooms, offices, laboratories and conference halls. By 2018, total campus area has 9 blocks on an area of 38,000 square-meters.

UNIVERSITY ADMINISTRATION AND OFFICERS

BOARD OF TRUSTEES

S. Selçuk PEHLİVANOĞLU	Chairman
M. Ertuğrul DOKUZOĞLU	Deputy Chairman
Prof. Deniz DEMİRYÜREK	Member
Prof. Öktem VARDAR	Member
Prof. Sevil ÇİFTÇİ GÜRGAN	Member
Dr. M. Sani ŞENER	Member
Aclan ACAR	Member
Ahmet ASLAN	Member
Ahmet Hakan ÖZMAN	Member
Ahmet Z. ÇÖRTOĞLU	Member
Filiz AKIN KÖKSAL	Member
Fırat ÇEÇEN	Member
Hakan ATEŞ	Member
Sunullah SALIRLI	Member

RECTOR

Prof. H. Belgin AYVAŞIK

VICE RECTORS

Prof. Oya GÜNERİ, Vice Rector for the Education

Prof. Kemal Levend PARNAS, Vice Rector for the Research

UNIVERSITY SENATE

Prof. H. Belgin AYVAŞIK	Rector
Prof. Kemal Levend PARNAS	Vice Rector
Prof. Oya GÜNERİ	Vice Rector
Prof. Ali CENGİZKAN	Dean, Faculty of Architecture
Prof. Kezban ÇELİK	Deputy Dean, Faculty of Arts and Sciences
Prof. Aslıhan SALİH	Dean, Faculty of Economics and Administrative Sciences
Prof. Yüksel KAVAK	Dean, Faculty of Education
Prof. Güney ÖZCEBE	Dean, Faculty of Engineering
Assoc. Prof. Mehmet Rüştü TANER	Director, Graduate School
Prof. Şinasi ELLİALTIOĞLU	Member, Faculty of Arts and Sciences
Prof. Berin F. GÜR	Member, Faculty of Architecture
Prof. Sibel BALCI	Member, Faculty of Education
Prof. Selin ARADAĞ ÇELEBİOĞLU	Member, Faculty of Engineering
Asst. Prof. Işıl Sevilay YILMAZ	Member, Faculty of Economics and Administrative Sciences
Levent KÜPELİ	General Secretary/Rapporteur

UNIVERSITY EXECUTIVE BOARD

Prof. H. Belgin AYVAŞIK	Rector
Prof. Ali CENGİZKAN	Dean, Faculty of Architecture
Prof. Kezban ÇELİK	Deputy Dean, Faculty of Arts and Sciences
Prof. Aslıhan SALİH	Dean, Faculty of Economics and Administrative Sciences
Prof. Yüksel KAVAK	Dean, Faculty of Education
Prof. Güney ÖZCEBE	Dean, Faculty of Engineering
Prof. Şinasi ELLİALTIOĞLU	Member
Prof. Şebnem AKİPEK ÖCAL	Member
Prof. Tolga Kurtuluş ÇAPIN	Member
Levent KÜPELİ	General Secretary/Rapporteur

DEANS

Prof. Ali CENGİZKAN	Faculty of Architecture
Prof. Kezban ÇELİK (Deputy Dean)	Faculty of Arts and Sciences
Prof. Aslıhan SALİH	Faculty of Economics and Administrative Sciences
Prof. Yüksel KAVAK	Faculty of Education
Prof. Güney ÖZCEBE	Faculty of Engineering

DIRECTORS OF ACADEMIC SERVICE DEPARTMENTS

Basic Sciences Unit	Prof. Şinasi ELLİALTIOĞLU
English Language School	Suzan KOTAN

DIRECTOR OF GRADUATE SCHOOL

Graduate School	Assoc. Prof. Mehmet Rüştü TANER
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CHAIRS OF DEPARTMENTS

Faculty of Architecture

Architecture	Prof. Namık Günay ERKAL
City and Regional Planning	Prof. Baykan GÜNAY
Industrial Design	Asst. Prof. Sedef SÜNER PLA CERDA
Interior Architecture and Environmental Design	Prof. Nur AYALP

Faculty of Arts and Sciences

English Language and Literature	Prof. Yusuf ERADAM
Mathematics	Assoc. Prof. Mehmet Onur FEN
Psychology	Assoc. Prof. İlgin GÖKLER DANIŞMAN
Sociology	Prof. Kezban ÇELİK

Faculty of Economics and Administrative Sciences

Business Administration	Assoc. Prof. İbrahim ÜNALMIŞ
Economics	Prof. Jülide YILDIRIM ÖCAL
Political Science and International Relations	Prof. Aylin ÖZMAN ERKMAN

Faculty of Education

Educational Sciences	Prof. Nilüfer Havva VOLTAN ACAR
Elementary Education	Assoc. Prof. Sühendan ER
Foreign Language Education	Prof. Belgin AYDIN
Mathematics and Science Education	Asst. Prof. Zerrin TOKER

Faculty of Engineering

Civil Engineering	Assoc. Prof. Rıza Secer Orkun KESKİN
Computer Engineering	Prof. Tolga Kurtuluş ÇAPIN
Electrical-Electronics Engineering	Prof. Erdem YAZGAN
Industrial Engineering	Assoc. Prof. Mehmet Rüştü TANER
Mechanical Engineering	Prof. Selin ARADAĞ ÇELEBİOĞLU
Software Engineering	Assoc. Prof. Tansel DÖKEROĞLU

 SECRETARY GENERAL

Levent KÜPELİ

 DIRECTORS OF ADMINISTRATIVE DEPARTMENTS

Administrative Affairs	Ahmet Zeki HOCAOĞLU
Continuing Education Center	Elçin CENGİZ
Corporate Communications	Can GÖKÇORA
Financial Affairs	Zekeriya YORULMAZ
Human Resources	Berna ŞERAN
Information Technology	Umut RODOPLU
Medical Center	Fusun ŞENER
Sports Center	Gamze AKDOĞAN BULUT
Student Affairs	Ayşegül ÖDEN
Student Counseling Center	Hamdiye Sevgin ESEMENLİ

 DIRECTORS OF OFFICES OF THE RECTORATE

Rectorate Counselor (Human Resources)	Jülide Esra AYKEN
Career Center	Pelin KALKANOĞLU
Center for Applied Data Sciences (CADS TEDU)	Asst. Prof. İnan Utku TÜRKMEN
Center for Gender Studies	Prof. Zuhale YEŞİLYURT GÜNDÜZ
Center for Social Innovation	Berivan ELİŞ
Center for Teaching and Learning	Prof. Belgin AYDIN
Directorate of Research, Technology and Innovation	Sanem YALÇINTAŞ GÜLBAŞ
Directorate of Social and Cultural Affairs	Peyman JAFARI
Documentation and Registry	Çiğdem ATAKAN OBUZ
International Programs Office	Dr. Elçin KARANA SÜRÜCÜ
Library	Merve ERYILMAZ
Trade Research Center	Prof. Nazire Nergiz DİNÇER

GOVERNANCE

The Rector, as chief officer of the University, presides over the Senate and the University Executive Board. The Rector reports to the Board of Trustees. The members of the Board of Trustees are appointed by the Board of the TED Higher Education Foundation.

The Senate is the principal academic body, comprised of the deans and three representatives elected by the three faculties. The chief executive body of the University is the University Executive Board, which consists of deans and three professors elected by the University Senate. Invited internal stakeholders attend these meetings without the power to vote.

THE UNIVERSITY VISION

TED University aims to be inspiring and unique in providing a transforming and liberating educational experience; and produce knowledge and create solutions through interaction with the town and the society.

THE UNIVERSITY MISSION

TED University carries the mission of fostering graduates that are creative, critical-minded, self-confident, well-rounded lifelong learners by using innovative teaching methods and curricula that have a proper depth-to-breadth balance required by global knowledge economies. TED University, which holds pride in being transparent, accountable and trustworthy, is and will always be a learning institution aiming at continuity and sustainable development and at contributing to the world of science by generating new knowledge through a wide range of scholarly research and creative efforts in focus areas of institutional priority.

OUR CORE VALUES

Respect for ethical values

Integrity, solidarity and mutual respect

Progressive and secular institutional position

Excellence in teaching and research

Robust and integrated quality culture

Partnership and cooperation spirit

Stakeholder participation

TED tradition

FULL-TIME ACADEMIC STAFF***Acar, Melis. Research Assistant. (FA)**

BArch: 2016 TEDU; March: 2019 METU

Adanova, Venera, Asst. Prof. (ENGIN)

BS: 2005 Manas University; MS: 2008 Middle East Technical University;

PhD: 2015 Middle East Technical University

Ahmadlouei, Hamid. Research Assistant. (ENGIN)

BS: 2010 Azad University; MS: 2014 Hacettepe University

Akaydın, Abdullah. Research Assistant. (ENGIN)

BS: 2014 Izmir University; MS: 2019 Hacettepe University

Akdoğan Emre, Elçin. Asst. Prof. (EDUC)

BS: 2005 Gazi University; MS: 2008 Gazi University; PhD: 2015 Gazi University

Akgül, Ersel. Instructor. (ELS)

BA: 2016 METU; MA: 2018 Ludwig Maximilian University of Munich

Akgüner, Cem. Assoc. Prof. (ENGIN)

BS: 1992 İstanbul Technical University; MS: 1995 Boğaziçi University;

PhD: 2007 University of Texas at Austin

Akın, Sibel. Asst. Prof. (EDUC)

BA: 2009 Hacettepe University; PhD: 2017 METU

Akipek Öcal, Şebnem. Prof. (FEAS)

BS: 1989 Ankara University; MS: 1991 University of London; PhD: 1998 Ankara University

Aksoy, Erdem. Asst. Prof. (EDUC)

BA: 2001 METU; MA: 2008 Ankara University; PhD: 2013 Ankara University

Aksoy Sheridan, Rukiye Aslıhan. Instructor. (FAS)

BS: 2000 Boğaziçi University; MS: 2003 Boğaziçi University; PhD: 2016 Bilkent University

Aktaş, Can Baran. Asst. Prof. (ENGIN)

BS: 2004 Middle East Technical University; MS: 2007 Middle East Technical University;

PhD: 2011 University of Pittsburgh

Akyüz, Selin. Asst. Prof. (FEAS)

BA: 2003 Bilkent University; MA: 2005 Hacettepe University; PhD: 2012 Bilkent University

Alaçam, Cennet. Instructor. (ELS)

BA: 2006 METU; MA: 2011 European University of Lefke

* ELS: English Language School; EDUC: Faculty of Education; ENGIN: Faculty of Engineering; FA: Faculty of Architecture; FAS: Faculty of Arts and Sciences; FEAS: Faculty of Economics and Administrative Sciences

Alhas, Zahide Hande. Instructor. (ELS)

BS: 2009 Gazi University

Alicanođlu, Aylin. Research Assistant. (FA)

BArch: 2017 TEDU

Aliyeva, Nazila. Instructor. (ELS)

BA: 2000 Western University; MA: 2002 Western University

Alkıř, Aras. Lecturer. (FEAS)

BS: 2005 Koç University; MBA: 2007 Rollins College Crummer Graduate School of Business;
PhD: 2015 Koç University Graduate School of Business

Alp, Ezgi. Research Assistant. (FEAS)

BS: 2012 Bilkent University; MS: 2016 Bilkent University

Altın, Gizem. Instructor. (ELS)

BA: 2011 Hacettepe University; MA: 2018 Bilkent University

Ar Karcı, Yađmur. Asst. Prof. (FAS)

BS: 2010 METU; PhD:2017 METU

Aracı İyiyaydın, Ayřegöl. Rese arch Assistant. (EDUC)

BS: 2007 Bođaziçi University; MA: 2012 İstanbul University; MS: 2018 METU

Aradađ Çelebiođlu, Selin. Prof. (ENGIN)

BS: 2000 Middle East Technical University; MS: 2002 Middle East Technical University;
PhD: 2006 Rutgers University

Ankan, Kutluk Bilge. Asst. Prof. (ENGIN)

BS: 1997 METU; MS: 2000 METU; PhD: 2008 METU

Ankan, Sait Metin. Asst. Prof. (ENGIN)

BS: 1968 METU; MS: 1970 METU; PhD: 1976 University of California, Berkeley

Armutlu, Can. Instructor. (FEAS)

BS: 1995 Gazi University; MBA: 2003 Bařkent University; PhD: 2008 Gazi University

Asena Salman, Burcu. Instructor. (FAS)

BA: 1998 Bilkent University; MA: 2002 Bilkent University

Aslan, İlkey. Asst. Prof. (FA)

BS: 1998 Bilkent University; MFA: 2012 Marmara University; PhD: 2017 Mimar Sinan Fine Arts University

Ařkın, Mehmet Bahadır. Research Assistant. (ENGIN)

BS: 2017 Hacettepe University

Ataç Kavurmacı, Ela. Assoc. Prof. (FA)

BSP: 2005 Gazi University; MS: 2008 Gazi University; PhD: 2014 METU

Atashi Khoei, Arsham. Research Assistant. (ENGIN)

BS: 2009 University of Kurdistan, MS: 2012 K.N. Toosi University of Technology

Atay, Bünyamin. Research Assistant. (EDUC)

BS: 2018 Hacettepe University

Avenoğlu, Bilgin. Asst. Prof. (ENGIN)

BS: 2001 Gazi University; MS: 2005 METU; PhD: 2014 METU

Ay, Emine. Instructor. (ELS)

BA: 2009 Hacettepe University

Ayalp, Nur. Assoc. Prof. (FA)

BS: 1999 Bilkent University; MFA: 2001 Bilkent University; PhD: 2018 Hacettepe University

Aycan, Başak. Research Assistant. (FA)

BCP: 2017 METU

Ayçiçek, Şeniz. Instructor. (ELS)

BA: 1991 METU

Aydan, Seda. Instructor. (ELS)

BA: 2011 METU; MA: 2014 METU

Aydın, Belgin. Prof. (EDUC)

BS: 1989 Anadolu University; MS: 1992 Bilkent University; PhD: 1999 Anadolu University

Aydın, Hale Ülkü. Instructor. (ELS)

BS: 2012 Gazi University; MS: 2015 Gazi University

Ayhan, Anıl. Instructor. (ELS)

BA: 2017 METU; MA: 2020 Bilkent University

Ayvaşık, Halise Belgin. Prof. (FAS)

BS: 1984 Hacettepe University; MS: 1990 University of Michigan; PhD: 1993 University of Mississippi

Bacaksız, Deniz. Instructor. (ELS)

BA: 2015 Hacettepe University; MA: 2019 Atılım University

Balci, Sibel. Prof. (EDUC)

BS: 2002 METU; MS: 2005 METU; PhD: 2010 METU

Barburoğlu, Yusuf. Research Assistant. (EDUC)

BS: 2018 Ankara University

Barışkın, Elif. Prof. (FAS)

BS: 1985 METU; MS: 1988 METU; PhD: 1997 Hacettepe University

Baş, Onur. Asst. Prof. (ENGIN)

BS:2004 METU; MS:2007 METU; PhD: 2015 METU

Bayram, Vedat. Asst. Prof. (ENGIN)

BS: 1997 Turkish Army Academy; MS: 2002 U.S Naval Postgraduate School; PhD: 2015 Bilkent University

Beşeli Özkoç, Heves. Asst. Prof. (FA)

BArch: 2006 METU; MArch: 2009 METU; PhD: 2015 METU

Bilicioğlu, Ayşe. Research Assistant. (EDUC)

BS: 2016 Kastamonu University; MS: 2019 Akdeniz University

Bilki, Zeynep. Asst. Prof. (EDUC)

BA: 2003 Boğaziçi University; MA: 2009 University of Iowa; PhD: 2014 University of Iowa

Bor, Emre. Research Assistant. (ENGIN)

BS: 2013 Gazi University; MS: 2016 TOBB ETU

Boynueğri, Ebru. Research Assistant. (EDUC)

BS: 2003 Çankaya University; BA: 2014 Başkent University; MA: 2018 Hacettepe University;
MS: 2018 Ankara University

Bozkurt, Bilgehan. Research Assistant. (ENGIN)

BS: 2018 İstanbul Technical University

Boztuğ Yerci, Çiçek. Asst. Prof. (ENGIN)

BS: 2006 METU; MS: 2009 University of Connecticut; 2014 Boston University

Bulca, Meriç. Instructor. (ELS)

BA: 2003 Gazi University; MA: 2006 METU

Buluç, Naile. Instructor. (ELS)

BA: 2011 METU

Can, Taner. Asst. Prof. (FAS)

BS: 2002 Hacettepe University; MS: 2004 Hacettepe University; PhD: 2011 Ankara University

Canaran, Cansu. Asst. Prof. (FA)

BSP: 1997 METU; MS: 2000 METU; PhD: 2009 METU

Canaran, Özlem. Asst. Prof. (EDUC)

BA: 2004 Hacettepe University; MA: 2014 Hacettepe University; PhD: 2017 Hacettepe University

Cengizkan, Ali. Prof. (FA)

BArch: 1978 METU; MArch: 1981 METU; PhD: 2000 METU

Cherilus, Nancy. Instructor. (ELS)

BS: 2001 Seton Hall University; MA: 2010 Seton Hall University

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BS: 2007 Boğaziçi University; MS: 2013 METU; PhD: 2018 Purdue University

Craig Beihler, Zachary Charles. Instructor. (ELS)

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Coşkuner, Utku. Research Assistant. (FA)

BArch: 2017 TOBB ETÜ

Çağlar, Cihat. Research Assistant. (FA)

BS: 2017 TOBB ETÜ

Çakıroğlu Çevik, Aylin. Asst. Prof. (FAS)

BS: 1998 Ankara University; MS: 2002 METU; PhD: 2015 METU

Çakmak Özgürel, Cansu. Instructor. (ELS)

BS: 2009 Hacettepe University; BS: 2016 Hacettepe University

Çapın, Tolga Kurtuluş. Prof. (ENGIN)

BS: 1991 Bilkent University; MS: 1993 Bilkent University; PhD: 1998 EPFL

Çelik, Gizem. Research Assistant. (FEAS)

BS: 2018 Middle East Technical University; MS: (Ongoing) İstanbul Technical University

Çelik, Kezban. Prof. (FAS)

BS: 1992 Hacettepe University; MS: 2001 METU; PhD: 2006 METU

Çelik, Sercan. Instructor. (ELS)

BA: 2011 METU; MA: 2015 METU

Çetin, Ayşegül. Instructor. (ELS)

BA: 2009 Hacettepe University; MA: 2018 METU

Çetinkaya, Bedrettin. Research Assistant. (ENGIN)

BS: 2016 METU

Dalkılıç, Nazlı Fidan. Instructor. (ELS)

BA: 2011 METU; MA: 2018 METU

Dashatan, Saeid Hosseinpour. Research Assistant. (ENGIN)

BS: 2006 Tabriz Azad University; MS: 2012 Urmia University

Davutoğlu Akbulut, Elif. Instructor. (ELS)

BS: 2007 METU; MS: 2014 Anadolu University

Deliktaş, Selda. Instructor. (ELS)

BA: 2007 Hacettepe University

Demir, Emre. Asst. Prof. (FEAS)

BS: 2007 Ankara University; MA: 2010 Ankara University; MA: 2014 University of Warwick;
PhD: 2019 METU

Demir, Şeyma Merve. Instructor. (ELS)

BA: 2012 METU

Demirci, Ece Zeliha. Asst. Prof. (ENGIN)

BS: 2007 Bilkent University; MS: 2009 Bilkent University; PhD: 2016 Bilkent University

Demirel, Emre. Instructor. (ELS)

BS: 2010 Hacettepe University; MS: 2015 METU

Demirutku, Kürşad. Asst. Prof. (EDUC)

BS: 1997 METU; MS: 2000 METU; PhD: 2007 METU

Deniz, Mert. Instructor. (ELS)

BA: 2015 Ankara University; MA: 2018 Bilkent University

Derya, Ayşe Mutlu. Asst. Prof. (FAS)

BS: Bilkent University; MS: Bilkent University & University of Massachusetts; PhD: Bilkent University

Dewan, Aylin Selin. Instructor. (ELS)

BA: 1999 METU; MA: 2005 Gazi University; PhD: 2020 METU

Diñçer, Nazire Nergiz. Prof. (FEAS)

BS: 1997 METU; MS: 2000 Bilkent University; PhD: 2005 Bilkent University

Diñçol, Nilay. Instructor. (ELS)

BA: 2006 Mersin University

Dizeci, Şehram. Asst. Prof. (ENGIN)

BS: 2005 Tabriz University; MS: 2008 METU; PhD: 2014 METU

Doğulu, Canay. Asst. Prof. (FAS)

BS: 2010 METU; MS: 2012 METU; PhD: 2017 METU

Dökerođlu, Tansel. Assoc. Prof. (ENGIN)

BS: 1991 Turkish Military Academy; MS: 2006 METU; PhD: 2014 METU

Duyul, Güneş. Research Assistant. (FA)

BArch: 2014 METU; MArch 2017 METU

Eker, Erdener Emin. Research Assistant. (FEAS)

BS: 2017 Hacettepe University; MA: 2020 Hacettepe University

Ekici, Anıl. Research Assistant. (ENGIN)

BS: 2010 METU; MS: 2013 METU

Ekinci, Fatih. Instructor. (ELS)

BA: 2000 Ankara University; MA: 2011 Çankaya University

Ellialtıođlu, Şinasi. Prof. (FAS)

BS: 1971 METU; MS: 1973 METU; PhD: 1977 University of Missouri

Emre, Senar. Instructor. (ELS)

BA: 2012 İstanbul University; MA: 2019 İstanbul University

Er, Sühendan. Assoc. Prof. (EDUC)

BS: 1990 Gazi University; MS: 2001 Gazi University; PhD: 2011 Ankara University

Eradam, Yusuf. Prof. (FAS)

BS: 1977 Hacettepe University; MS:1979 Hacettepe University; PhD: 1986 Hacettepe University

Erdaş, K. Duygu. Asst. Prof. (FEAS)

BS: 2005 Bilkent University; MA: 2010 Hacettepe University; PhD: 2016 Sabancı University

Erdem, Fuat. Instructor. (FAS)

BS: 2010 METU; PhD: 2018 METU

Erdoğan, Tolga. Asst. Prof. (EDUC)

BS: 1996 Boğaziçi University; MS: 2006 Dokuz Eylül University; PhD: 2012 Hacettepe University

Eren, Mustafa Eray. Instructor. (ELS)

BA: 2001 Hacettepe University; MA: 2019 Hacettepe University

Erkal, Namık Günay. Prof. (FA)

BArch: 1992 METU; MA: 1995 METU; PhD: 2001 METU

Eryılmaz, Ayşe Pırlı. Instructor. (ELS)

BA: 2000 Hacettepe University; MA: 2007 METU

Eryılmaz, Nevzat Ruhi. Research Assistant. (FA)

BS: 2013 İzmir University of Economics; M.S: 2019 Hacettepe University

Erzen, Esra. Instructor. (ELS)

BA: 2001 Hacettepe University

Fen, Mehmet Onur. Assoc. Prof. (FAS)

BS: 2007 METU; MS: 2008 METU; PhD: 2013 METU

Flynn, John Michael. Instructor. (ELS)

BA: 1984 Roger Williams University; MA: 1986 University of Michigan

Genç Ersoy, Berrin. Asst. Prof. (EDUC)

BS: 2007 Gazi University; MS: 2010 Osmangazi University; PhD: 2017 Anadolu University

Gençtav, Aslı. Asst. Prof. (ENGIN)

BS: 2007 METU University; MS: 2010 Bilkent University; PhD: 2018 METU

Goggin, Julia. Instructor. (ELS)

BS: 1981 University College Dublin

Golmohammadzadeh Khiabani, Hajar. Instructor. (ELS)

BS: 2014 Nabi Akram University; MA: 2018 Hacettepe University

Gödek, Neslihan Pınar. Research Assistant. (ENGIN)

BS: 2018 TED University

Gökçe, Muhsin Caner. Asst. Prof. (ENGIN)

BS: 2010 Çankaya University; MS: 2012 Ankara University; PhD: 2016 Çankaya University

Gökler Danışman, Ilgın. Assoc. Prof. (FAS)

BS: 1998 METU; MS: 2001 METU; PhD: 2008 Ankara University

Güçlüer Dindar, Serap. Instructor. (ELS)

BA: 2008 Hacettepe University; MA: 2011 İstanbul Bilgi University

Gül, Serhat. Asst. Prof. (ENGIN)

BS: 2006 Sabancı University; MS: 2007 Arizona State University; PhD: 2010 Arizona State University

Gül Erdem, Şükran. Asst. Prof. (FAS)

BS: 2012 METU; PhD: 2016 METU

Güleç, Ulaş. Asst. Prof. (ENGIN)

BS:2012 Çankaya University; MS: 2015 Çankaya University; PhD: 2018 METU

Günay, Baykan. Prof. (FA)

BCP: 1968 METU; MCP: 1971 METU; PhD: 1995 METU

Gündüz, Deniz Merve. Research Assistant. (ENGIN)

BS: 2018 TED University

Güneri, Oya. Prof. (EDUC)

BS: 1990 METU; MS: 1993 METU; PhD: 1999 METU

Güney, Renan. Instructor. (ELS)

BA: 2004 Ankara University; MA: 2010 METU

Gür, Berin F. Prof. (FA)

BArch: 1989 METU; MArch: 1991 METU; PhD: 1999 METU

Güzel, Erhan. Instructor. (ELS)

BA: 2005 METU; MA: 2012 European University of Lefke; BA: 2005 Hacettepe University

Güzeller, Gizem. Research Assistant. (EDUC)

BS: 2009 Anadolu University; MS: 2018 Hacettepe University

Haşlaman, Tülin. Assoc. Prof. (EDUC)

BS: 1984 METU; MS: 2005 Hacettepe University; PhD: 2011 Hacettepe University

Havadar. Emir Ertunç. Research Assistant. (EDUC)

BA: 2019 Hacettepe University

İçer, Ataman. Research Assistant. (FEAS)

BS: 2012 Hacettepe University; MA: 2017 Hacettepe University

İçöz Narlı, Fulya. Instructor. (ELS)

BA: 2005 Ege University; MA: 2008 Ege University

İleri, İbrahim. Research Assistant. (ENGİN)

MS: 2010 Süleyman Demirel University; BS: 2015 METU

İlgün Dibek, Münevver. Asst. Prof. (EDUC)

BS: 2010 METU; MS: 2013 METU; MS: 2015 Ankara University; PhD: 2018 Ankara University

İlhan Çelebi, Emine Gül. Asst. Prof. (EDUC)

BS: 2002 Hacettepe University; MS: 2006 Hacettepe University; PhD: 2013 Middle East Technical University

İmamoğlu, Bilge. Asst. Prof. (FA)

BArch: 2000 METU; MA: 2003 METU; PhD: 2010 TUDelft University of Technology

İnan, Derin. Asst. Prof. (FA)

BArch: 1999 Yıldız Technical University; MArch: 2001 METU; PhD: 2009 Architectural Association

İnci, Murat. Instructor. (ELS)

BA: 2009 Hacettepe University

İnce, Halil Can. Research Assistant. (FEAS)

BS: 2018 Middle East Technical University

İrğın, Pelin. Asst. Prof. (EDUC)

BA: 2006 Cumhuriyet University; M.Ed: 2011 Mersin University; PhD: 2018 Hacettepe University

Kale, Özkan. Assoc. Prof. (ENGİN)

BS: 2005 Dokuz Eylül University; MS: 2009 METU; PhD: 2014 METU

Kamacı, Yavuz. Research Assistant. (EDUC)

BS: 2018 İstanbul University

Kanat Mutluoğlu, Arzu. Instructor. (EDUC)

BA: 2012 Hacettepe University; MA: 2014 Pamukkale University; PhD: 2020 Hacettepe University

Kandemir, Ayşe Çağıl. Asst. Prof. (ENGİN)

BS: 2008 METU; MS: 2011 METU; PhD: 2016 ETH Zurich

Karaca, Mehmet. Asst. Prof. (ENGİN)

BS: 2006 İstanbul Technical University; MS: 2008 Sabancı University; PhD: 2013 Sabancı University

Karadenizli Çilingir, Mahmure Nur. Instructor. (ELS)

BA: 2006 Hacettepe University; MA: 2019 METU

Karakaya, Sırma. Research Assistant. (ENGİN)

BS: 2014 Bilkent University

Kargar Mohammadinezdah, Kamyar. Asst. Prof. (ENGİN)

BS: 2009 Tabriz University; MS: 2012 Tarbiat Modarres University; PhD: 2019 Bilkent University

Kavak, Yüksel. Prof. (EDUC)

BS: 1975 Police Academy; MS: 1980 Hacettepe University; PhD: 1986 Hacettepe University

Kaya, Metin Halis. Instructor. (ELS)

BS: 2013 METU

Kaya, Ruşen. Instructor. (FAS)

BS: 2004 Çukurova University; MS: 2019 METU

Kelahmetoğlu, Funda. Instructor. (ELS)

BA: 2013 METU; MA: 2019 METU

Keser, Emrah. Asst. Prof. (FAS)

BS: 2010 Hacettepe University; PhD: 2019 Hacettepe University

Keskin, Rıza Secer Orkun. Assoc. Prof. (ENGIN)

BS: 2000 METU; MS: 2002 METU; PhD: 2008 Cornell University

Kılıçdaroğlu, Kerem. Asst. Prof. (FEAS)

BS: 2007 Bilkent University; MS: 2010 METU; PhD: 2017 Korea University

Kınayoğlu, Gökhan. Asst. Prof. (FA)

BArch: 2004 METU; MArch: 2007 METU; PhD: 2017 Bilkent University

Kırkıcı Üner, Keriman. Instructor. (ELS)

BS: 2003 Hacettepe University; MS: 2006 Ankara University

Kırtıçoğlu, Alaittin. Research Assistant. (FAS)

BS: 2018 Mustafa Kemal University

Kızıl, Özge. Research Assistant. (FAS)

BS: 2014 METU

Kızır, Didem Gül. Research Assistant. (FEAS)

BS: 2018 Middle East Technical University

Koç, Ali. Research Assistant. (ENGIN)

BS: 2013 Hacettepe University

Koçer, Çağrım. Research Assistant. (FA)

BArch: 2016 TEDU; MArch 2019 METU

Kotan, Suzan. Instructor. (ELS)

BA: 1998 Ankara University; MA: 2010 Bilkent University

Kökpinar, Mehmet Ali. Prof. (ENGIN)

BS: 1988 METU; MS: 1991 METU; PhD: 1996 METU

Köse, Tekin. Assoc. Prof. (FEAS)

BS: 2006 METU; MS: 2008 METU; MA: 2010 University of Pittsburgh; PhD: 2014 University of Pittsburgh

Kuglin, Ayşegül. Asst. Prof. (FAS)

BS: 1999 İstanbul University; MS: 2002 Sussex University; PhD: 2007 METU

Kuşu, Emin. Asst. Prof. (ENGIN)

BS: 1996 İstanbul University; MS: 2003 Turkish Air Force Academy; PhD: 2011 Old Dominion University

Kurtgözü, Aren Emre. Asst. Prof. (FA)

B.ID: 1994 METU; MSC: 1997 Mimar Sinan University; PhD: 2001 Bilkent University

Küçükylmaz, Tayfun. Asst. Prof. (ENGIN)

BS: 2001 Bilkent University; MS: 2003 Bilkent University; PhD: 2013 Bilkent University

Lewis, Joseph Blake. Instructor. (ELS)

BA: 1999 Berry College; TEFL: 2008 Wheaton College

Lüleci Sula, Çağla. Research Assistant. (FEAS)

BS: 2010 Ege University; MA: 2013 Dokuz Eylül University

Mahmutoğulları, Ali İrfan. Asst. Prof. (ENGIN)

BS: 2011 Bilkent University; MS: 2013 Bilkent University; PhD: 2019 Bilkent University

Music, Omer. Asst. Prof. (ENGIN)

BSc: 2001 METU; MSc: 2005 METU; PhD: 2011 University of Cambridge

Müslim, Melissa. Research Assistant. (ENGIN)

BS: 2017 TED University

Naghinazhadahmadi, Parisa. Research Assistant. (ENGIN)

BS: 2007 Azad University; MS 2010 Azad University

Nal, Nezih. Instructor. (ELS)

BA: 2005 Bilkent University

Nalçakar, Elif Merve. Research Assistant. (FA)

BCP: 2015 Gazi University

Numanoğlu Genç, Aslı. Asst. Prof. (ENGIN)

BS: 1993 METU; MS: 1996 METU; PhD: 2014 METU

Ocak, Ersan. Asst. Prof. (FA)

BCP: 1993 METU; MS: 2000 METU; PhD: 2008 Bilkent University

Ocak, Esmâ Ceren. Instructor. (ELS)

BA: 2008 Bilkent University; MA: 2010 Institut European Des Hautes Etudes Internationales, France

Okay, Deniz. Research Assistant. (FAS)

BS: 2015 METU; MS: 2017 METU

Öksüz, Mehmet. Research Assistant. (ENGIN)

BS: 2014 Gaziantep University; BS: 2017 Gaziantep University

Oral Gündoğdu, Bahar. Research Assistant. (FEAS)

BS: 2012 Hacettepe University; MS: 2015 METU

Ordu, Esra. Instructor. (ELS)

BA: 2006 METU; MA: 2011 Celal Bayar University

Önen, Mutlu. Research Assistant. (FEAS)

BS: 2013 Middle East Technical University; MS: 2019 Middle East Technical University

Öneren Şendil, Çağla. Asst. Prof. (EDUC)

BS: 2007 METU; MS: 2010 METU; PhD: 2016 METU

Özaslan, Eren. Instructor. (ELS)

BA: 1998 Ankara University

Özay, Ayşe Gül. Research Assistant. (EDUC)

BS: 2017 METU; MA: 2020 METU

Özcebe, Güney. Prof. (ENGIN)

BS: 1979 METU; MS: 1981 METU; PhD: 1987 University of Toronto

Özcivanoğlu, Sonat. Research Assistant. (FA)

BArch: 2015 METU; MArch: 2018 METU

Özdemir, Anıl. Research Assistant. (FAS)

BS: 2014 METU; MS: 2017 TOBB University

Özer, Damla. Asst. Prof. (FA)

B.ID: 2001 METU; MS:2004 METU; PhD: 2017 METU

Özer, Nur Serap. Prof. (FAS)

BS: Hacettepe University; MS: University of South Florida; PhD: University of South Florida

Özgül, Tuba. Research Assistant. (EDUC)

BS: 2019 METU

Özkan, Engin. Instructor. (FAS)

BS: 2002 Ankara University; PhD: 2011 METU

Özman, Aylin. Prof. (FEAS)

BS: 1988 METU; MS: 1990 Bilkent University; PhD: 1995 Bilkent University

Özmen, Onur. Asst. Prof. (EDUC)

BA: 2002 Hacettepe University; MA: 2006 METU; PhD: 2014 METU

Öztürk, Ceren Yağmur. Instructor. (ELS)

BA: 2015 METU; MA: 2019 METU

Öztürk, Elif. Asst. Prof. (EDUC)

BS: 2007 METU; MS: 2010 METU; PhD: 2015 Texas A&M University

Palabıyık, Abdullah Furkan. Instructor. (ELS)

BA: 2013 Hacettepe University; MA: 2019 Ankara University

Pamuk, Ömer Can. Research Assistant. (ENGIN)

BS: 2013 Gazi University

Parnas, Kemal Levend. Prof. (ENGIN)

BS: 1982 METU; MS: 1985 METU; PhD: 1991 Georgia Institute of Technology

Partlak, İclal. Instructor. (ELS)

BS: 2008 Dumlupınar University; MS: 2014 Ufuk University

Pekmen Geridönmez, Bengisen. Assoc. Prof. (FAS)

BS: 2007 METU; MS: 2009 METU; PhD: 2014 METU

Peneklioğlu, Halenur. Instructor. (ELS)

BA: 2012 METU

Phillips, Wendy Laura. Instructor. (ELS)

BA: 1989 Regina University; MA: 1992 Victoria University

Polat, Gaye. Instructor. (ELS)

BA: 2009 Hacettepe University

Sabuncu, Orkunt. Asst. Prof. (ENGIN)

BS: 1999 METU; MS: 2002 METU; PhD: 2009 METU

Sak, Mehmet. Research Assistant. (EDUC)

BA: 2017 Hacettepe University; MA 2020 Hacettepe University

Salih, Aslıhan. Prof. (FEAS)

BS: 1988 METU; MBA: 1994 METU; PhD: 1995 Massachusetts at Amherst

Saranlı, Adile Gülşah. Assoc. Prof. (EDUC)

BS: 1999 Ankara University; MS: 2003 METU; PhD: 2011 Hacettepe University

Sarısu, Esra. Instructor. (ELS)

MA: 2003 Gazi University; BA: 2007 Gazi University

Sartaş, Enfal. Research Assistant. (FAS)

BS: 2018 METU

Sayıl, Melike. Prof. (FAS)

BS: 1982 Hacettepe University; MS: 1986 Hacettepe University; PhD: 1990 Hacettepe University

Selçuk, Kerem. Instructor. (ELS)

BA: 2008 Hacettepe University

Serim Yıldız, Begüm. Asst. Prof. (EDUC)

BS: 2006 METU; MS: 2010 METU; PhD: 2018 METU

Sert, Elizabett. Research Assistant. (FEAS)

BS: 2015 Hacettepe University

Seven, Gülşen. Asst. Prof. (FEAS)

BS: 2005 METU; BS (Double Major): 2006 METU; MSc: 2008 METU; PhD: 2017 Bilkent University

Seven, Zeynep Sıdıka. Research Assistant. (ENGIN)

BS: 2015 Gazi University

Seyedpour Esmailzad, Seyedahnasim. Research Assistant. (ENGIN)

BS: 2011 Tabriz University; MS: 2015 METU

Solak, Nevin. Asst. Prof. (FAS)

BS: 2004 Ege University; MS: 2007 Ege University; PhD: 2013 METU

Solmaz, Şeyda. Research Assistant. (FAS)

BS: 2013 Ankara University; MS: 2016 Ankara University

Sözen Özdoğan, Sinem. Research Assistant. (EDUC)

BS: 2011 METU; MS: 2013 METU

Sturtevant, Tony Duane. Instructor. (ELS)

BS: 1998 Portland State University; MS: 2002 Portland State University; MA: 2008 Bilkent University

Süner Pla Cerda, Sedef. Asst. Prof. (FA)

B.ID: 2009 METU; MS: 2012 METU; PhD: 2018 METU

Şahin, Batuhan. Research Assistant. (FA)

B.ID: 2018 METU

Şahin, Mehmet Taha. Research Assistant. (ENGIN)

BS: 2018 University of Turkish Aeronautical Association

Şimşek, Melike İrem. Research Assistant. (FAS)

BS: 2016 Hacettepe University; MBA: Hacettepe University

Taner, Mehmet Rüştü. Assoc. Prof. (ENGIN)

BS: 1996 METU; MS: 1998 North Carolina State University; PhD: 2001 North Carolina State University

Taş, Ahmet Taşkın. Instructor. (ELS)

BA: 2012 Kocaeli University; MA: 2012 Bilgi University

Taşçioğlu, Yiğit. Assoc. Prof. (ENGIN)

BS: 2000 METU; MS: 2001 Loughborough University; PhD: 2006 Loughborough University

Tekin Koru, Ayça. Prof. (FEAS)

BS: 1994 METU; MS: 1997 METU, 1999 Purdue University; PhD: 2001 Purdue University

Toker, Zerrin. Asst. Prof. (EDUC)

BS: 2004 METU; MS: 2008 METU; PhD: 2016 METU

Topçu, Sezin. Instructor. (ELS)

BS: 2010 Hacettepe University

Tuncer, Ertürk. Research Assistant. (ENGIN)

BS: 2014 METU; MS: 2018 METU

Turduev, Mirbek. Assoc. Prof. (ENGIN)

BS: 2006 Kyrgyz State Technical University; MS: 2010 TOBB ETU; PhD: 2015 TOBB ETU

Turhan, Gülce. Research Assistant. (ENGIN)

BS: 2018 Eskişehir Osmangazi University

Tümen, Semih. Prof. (FEAS)

BS: 2000 METU; MSc: 2006 London School of Economics; PhD: 2012 University of Chicago

Tüntaş, Duygu. Asst. Prof. (FA)

BArch: 2009 METU; MArch: 2012 METU; PhD: 2018 METU

Türkarlan, Ezgi. Research Assistant. (FAS)

BS: 2013 Ankara University; MBA: 2017 Ankara University

Türkay Coşkun, Seray. Asst. Prof. (FA)

BArch: 2008 METU; MArch: 2011 METU; PhD: 2017 METU

Uçar, Başak. Asst. Prof. (FA)

BArch: 2003 METU; MArch: 2006 METU; PhD: 2011 METU

Ul Mustafa, Naveed. Asst. Prof. (ENGIN)

BS: 2006 University of Engineering and Technology, Taxila, Pakistan;

MS: 2011 Royal Institute of Technology (KTH), Stockholm, Sweden; PhD: 2019 Bilkent University

Ulucak, Oğuzhan. Research Assistant. (ENGIN)

BS: 2017 Selçuk University

Ulusoy Alkaş, Çiğdem. Asst. Prof. (EDUC)

BS: 2007 Hacettepe University; PhD: 2017 Hacettepe University

Uzer Yıldız, Tuğba. Assoc. Prof. (FAS)

BS: 2003 METU; MS: 2007 Koç University; PhD: 2012 University of Alberta

Ülkenli, Zeki Kamil. Asst. Prof. (FA)

BCE: 1988 METU; MRP: 1991 METU; PhD: 1999 METU

Ünal, Bengi. Asst. Prof. (FAS)

BS: 2004 Boğaziçi University; MS: 2006 University of Utrecht; PhD: 2012 University of Rutgers

Ünal, Çağrı Temuçin. Asst. Prof. (FAS)

BS: 2006 Boğaziçi University; PhD: 2013 University of Rutgers

Ünal, Hamide Nur. Instructor. (ELS)

BA: 2016 Gazi University; MA: 2018 Gazi University

Ünal Gezer, Melike. Asst. Prof. (EDUC)

BA: 2005 Çukurova University; MA: 2008 California State University in Long Beach;

PhD: 2014 Texas A&M

Ünalmiş, İbrahim. Assoc. Prof. (FEAS)

BS: 1999 METU; MSc: 2005 Birmingham University; PhD: 2009 York University

Ünlü, E. Canan. Asst. Prof. (FA)

B.ID: 1988 METU; MS: 1996 METU; PhD: 2000 METU

Voltan Acar, Nilüfer Havva. Prof. (EDUC)

BS/MS: 1974 Hacettepe University; MS: 1975 Hacettepe University; 1997 M.S.W University of Utah;

PhD: 1980 Hacettepe University

Yabacı, Azize Elif. Asst. Prof. (FA)

BArch: 2009 METU; MArch: 2012 METU; PhD: 2018 METU

Yakın, Barış. Asst. Prof. (FA)

BS: 2009 Başkent University; MFA: 2012 Hacettepe University; PhD: 2019 Hacettepe University

Yalçın, Nazlı Elif. Instructor. (ELS)

BA: 2016 Bilkent University; MA: 2020 Atılım University

Yaşar, Burze. Asst. Prof. (FEAS)

BS: 1998 Marmara University; MS: 2003; Maryland University; PhD: 2014 Bilkent University

Yaşar, Sezer. Asst. Prof. (FEAS)

BS: 2007 METU; MSc: 2010 METU; PhD: 2017 Johns Hopkins University

Yavuz, Irmak. Research Assistant. (FA)

BCP: 2015 METU; MS: 2018 METU

Yazıcı, Ceyda. Asst. Prof. (FAS)

BS: 2009 METU; MS: 2011 METU; PhD: 2017 METU

Yazırılıoğlu, Lilyana. Research Assistant. (FA)

B.ID: 2018 METU

Yazgan, Erdem. Prof. (ENGIN)

BS: 1971 METU; MS: 1973 METU; PhD: 1981 Hacettepe University

Yeler, Zehra. Research Assistant. (EDUC)

BA: 2018 TED University

Yeşilyurt, Atiye Burcu. Instructor. (ELS)

BA: 2003 Hacettepe University; MA: 2010 Maltepe University

Yeşilyurt Gündüz, Zuhal. Prof. (FEAS)

BA and MA combined program: 1995 Bonn University; PhD: 2000 Bonn University

Yıldırım, Büşra. Research Assistant. (ENGIN)

BS: 2019 METU

Yıldırım Öcal, Jülide. Prof. (FEAS)

BS: 1989 METU; MS: 1990 Bilkent University; PhD: 1997 University of Manchester

Yıldız, Aykut. Asst. Prof. (ENGIN)

BS: 2007 Bilkent University; MS: 2010 Bilkent University; PhD: 2016 Bilkent University

Yıldız, Hüseyin Uğur. Asst. Prof. (ENGIN)

BS: 2009 Bilkent University; MS: 2013 TOBB University of Economics and Technology;
PhD: 2016 TOBB University of Economics and Technology

Yılmaz, Gökçe Nur. Assoc. Prof. (ENGIN)

BS: 2005 Sakarya University; PhD: 2011 University of Surrey

Yılmaz, Işıl Sevilay. Asst. Prof. (FEAS)

BS: 2001 METU; MBA: 2003 METU; PhD: 2016 Bilkent University

Yılmaz, İrem. Instructor. (ELS)

BA: 2018 Hacettepe University; MA: 2020 Hacettepe University

Yılmaz, Olcay. Asst. Prof. (EDUC)

BS: 1997 Turkish Land Forces; MS: 2011 Hacettepe University; PhD: 2016 Hacettepe University

Yılmaz, Seyit Deniz. Instructor. (ELS)

BA: 2014 Uludağ University; MA: 2017 Uludağ University

Yılmaz, Zafer. Asst. Prof. (FEAS)

BS: 1996 Turkish Military Academy; MS: 2003 METU; PhD: 2015 Turkish Military Academy

Yılmaztürk, Nergis Hazal. Research Assistant. (EDUC)

BS: 2015 Başkent University; MS: 2018 METU

Yücel, Öykü. Research Assistant. (FEAS)

BS: 2010 Bilkent University; MS: 2013 Ankara University

Yücelyiğit, Seçil. Asst. Prof. (EDUC)

BS: 1997 Hacettepe University; PhD: 2014 Ankara University

Yüncü, Onur. Asst. Prof. (FA)

BArch: 2000 METU; MArch: 2002 METU; PhD: 2008 METU

Zeybek, Sevi Gizem. Research Assistant. (FAS)

BS: 2017 METU; MS: 2020 TED University

II. ADMISSIONS



UNDERGRADUATE ADMISSION

Admissions to undergraduate programs for Turkish students are limited to those who have been centrally placed by ÖSYM following the two stage central examination. After the completion of the pre-registration process, students are expected to take an Proficiency Exam of TEDU to determine whether they become Preparatory Class or Freshman Class students. A student may be exempted from the Prep Program offered by the English Language School without taking the English Proficiency Exam only if he/she is able to submit a national or international language exam scores. Equivalent exam types, minimum scores and additional requirements are announced each year by the English Language School.

Students of Faculty of Engineering, and Faculty of Economics and Administrative Sciences are admitted to faculties rather than specific programs. They need to declare their majors at registration time after completing 30 credit-hours which normally coincides with the sophomore year.

TRANSFER STUDENTS

Students who wish to transfer to TEDU should comply with the regulations concerning transfer between Equivalent Degree Programs and Undergraduate Programs in Higher Education Institutions, Regulations on Inter-Institutional Credit Transfer via Double Major and Minor Programs; and other requirements identified by the Senate..

INTERNATIONAL STUDENTS

International applicants seeking admission to TEDU apply through an online application program by submitting the required documents announced on the University web pages. Acceptable examinations featuring of a university entrance exam (such as SAT) and diplomas that are to be taken into consideration in the application process, and the relevant minimum eligibility scores (such as GCE-A Levels, IB Diploma, and Baccaalaureate) are determined by the Senate, notified to the Higher Education Council, and announced in the University website each year together with the international student quotas for every specific department.

SPECIAL STUDENTS

The graduates or students of higher education institutions, who wish to develop their skills in a specific field are accepted to undergraduate/graduate program courses as special students. The candidates who register to take courses as special students are obliged to provide the requirements concerning English language proficiency. The applications of the special students, the courses they can follow and their total credit hours, are determined by the respective executive committee under the consultancy of the respective head of department.

The special students do not receive diploma or credits. They may receive a document of participation indicating their grades upon request. Special student application and registration dates are defined in the academic calendar. The special students pay a tuition fee for the courses they follow in line with the regulations defined by the Board of Trustees.

GRADUATE ADMISSION

Calls for application and application deadlines are announced on the Web before the beginning of each semester.

Candidates for graduate degree programs must have completed an undergraduate degree or be registered as a fourth year student in a recognized institution of higher learning. Students who do not yet have an undergraduate degree may be accepted conditionally to a graduate program (The student's official acceptance to a graduate program is contingent on the submission of a graduation document or diploma and original transcripts to the Registrar's Office by the application deadline).

Students applying to graduate programs in English must demonstrate proficiency in English. The minimum acceptable scores for English proficiency are: 80 for YDS, 79 for TOEFL. Students without these proficiency documents must successfully pass the TED University English Proficiency Exam (min75).

Admission to the Academic Deficiency Program

Students who have degrees in an area of study different from the graduate area to which they are applying can enroll in the Academic Preparatory Program. The required courses in the Academic Preparatory Program cannot replace any of the courses of the graduate program involved. Students spend a maximum of one calendar year in the Academic Preparatory Program. Continuation of graduate studies after completion of the Academic Preparatory Program is contingent on a minimum GPA of 3.00/4.00.

Admission of Special Students

Graduates or students of an institution of higher education who wish to expand their knowledge of a given subject can, with the approval of the relevant department, be admitted as special students. Special students do not enjoy the rights and privileges granted to regular students. Like regular students, special students are required to demonstrate English language proficiency but are not permitted to register in thesis classes.

Transfer Students

A student who has successfully completed at least one semester in any graduate program at TED University or at another institution of higher learning may be admitted as a transfer student. Transfer students must demonstrate proficiency in English. Transferred credits may not exceed half of the total credits of a graduate program in TED University.

TUITION AND FEES

The Board of Trustees determines the tuition fees at the beginning of each academic year. Tuition fees can be paid in two installments during registration of fall and spring semesters. The tuition fee for undergraduate programs in 2020/2021 is TRY 44,420 (including %1 VAT) for Turkish students; USD 8,416 (including %1 VAT) for international students at the Faculty of Architecture, Faculty of Arts and Sciences and Faculty of Engineering; and USD 6,548 (including %1 VAT) for international students at the Faculty of Economics and Administrative Sciences, and Faculty of Education. Tuition fees do not cover expenditures for food, books or accommodation. Tuition fee of graduate studies may vary depending on the program. Further information is available on TEDU website.

SCHOLARSHIPS

National Students:

Scholarship programs are available for undergraduate students according to the Scholarship Regulation.

International Students:

- (1) Full Tuition Waiver Scholarship which is designed to provide students with full exemption from the tuition fee,
- (2) 75%, 50%, 25% Tuition Waiver Scholarships which are designed to provide students with 75%, 50%, 25% tuition fee discount. These scholarships are offered at the time of admission to applicants depending on exam/diploma scores (National or International Curriculum) submitted for the application. These scholarships are valid for 6 years for the students who study one year prep class or for 5 years for the students who start their education directly from the first year.
- (3) Annual Achievement Awards to top ranking students in each program.

ACADEMIC POLICIES

Absence from Class

Students are expected to attend all classes and to complete all assignments and examinations for courses in which they are enrolled. If a student misses any of the mid-term quizzes it is the instructor's decision to provide, or not to provide, make-up work related to the absence; the course syllabus clearly describes the policy. Failure to attend the final exam may be balanced by taking the make-up exam given to F students.

Academic Honesty

Academic honesty is one of the most important qualities adopted at TED University. Violations of academic honesty will be subject to disciplinary action. Students are particularly warned against cheating and plagiarism as disciplinary penalty will lead to loss of their scholarship.

Cheating includes, but is not limited to, those activities where a student:

1. Has someone else take an exam or takes the exam for someone else
2. Uses unauthorized reference material during an exam.
3. Obtains or attempts to obtain contents of an exam prior to the time of that exam.
4. Copies another student's work or allows others to copy exams, assignments, projects, computer codes.

Plagiarism is the act of presenting someone else's work as one's own without acknowledging it. Exact words of a source may be quoted only within quotation marks and with full reference; similarly, tables, figures, facts, ideas, computer codes may not be taken from a source unless full credit is given.

Academic Standing

Undergraduate students are expected to keep their cumulative grade point average (GPA) above 2.00. When a student's GPA is below 2.00, the student may be placed on academic probation and may be expected to repeat F, DD / DC courses to regain successful standing depending on the combination of credits completed and his/her GPA. Students with a credit of;

50 or less and GPA of 1.60 or less,

51 to 100 and GPA of 1.70 or less,

101 or more and GPA of 1.80 or less

are not allowed to take new courses unless they repeat all F, FX, DD and DC courses.

Graduate students are expected to keep their cumulative grade point average (GPA) above 3.00.

Advising

Each student is assigned an academic advisor. It is the department's responsibility to assign the advisors and announce their names and contact information on the web page of TEDU. The academic advisors are to guide the students in making their study plans, choosing their courses and they are expected to mentor them through their academic as well as their social development. Advisors are evaluated annually by their advisees through a questionnaire.

Departments keep track of the less successful students to give them further, face-to-face guidance. Undergraduate students are advised;

- To have close contact with their advisors at all times.
- To complete their registration on time; late registration is subject to a fine announced on the web each year. Registration is absolutely not allowed after the late registration period ends.
- To keep track of the list of prerequisite courses so as not to lose one or more semesters.
- To keep the proper sequence of courses; unless there is an exceptional condition a lower numbered course may not be skipped to take a higher numbered one.

III. STUDENT SERVICES



UNIVERSITY LIBRARY

The TEDU Library is placed in the basement of Block B (B49, B51) & D (3.&4. Floor) and covers an area of 1535 m2. Additional study rooms, lounges and meeting rooms are scattered throughout the university adding up to 1300 m2. The Library supports teaching, learning, and research at the university by providing a collection of national and international resources including print books, e-books, periodicals, e-magazines, multimedia collections, and academic online databases. Additionally, information literacy trainings, general library introductions, and research techniques seminars offered by the library staff.

The Library at B Block is open from 09:00 am to 06:00 pm on weekdays and The Library at D Block from 9:00 am to 11:00 pm on weekdays and weekends.

REGISTRAR'S OFFICE

TED University students, receive information and consultancy service about academic and administrative affairs from the Registrar's Office during their undergraduate and graduate studies. The Registrar's Office also guide the students about issues concerning the course selection system administered at our university, current regulations, registration procedures and/or other administrative issues. The Office is responsible for student admission transcriptions, administration of student certificates and graduation operations.

IT SERVICES

Starting from University registration, academic and administrative services are offered to students via a single point of access, integrated student portal called MyTEDU (<https://my.tedu.edu.tr>).

Through MyTEDU Portal students can;

- Register courses and send to advisor approval
- Track personalised weekly course schedules
- Track academic status and previous courses
- View exams results
- Provide feedback for courses and instructors
- Choose major program
- Choose secondary field program
- Request academic documents
- Track financial status and pay semester fees online
- View academic course catalog and semester offered courses
- Reserve study rooms

TED University students are provided e-mails not only valid for their period of study at the university but also valid even after graduation.

Students can work on their academic research activities and courses through 293 computers provided in study rooms, library and computer labs located within the University.

Students can also access campus network and internet through 245 wi-fi access points covering all locations within the campus. TED University is also a member of "eduroam (EDUcation ROAMing)" network providing its students access to internet during mobility within the member universities both located in Turkey and abroad.

A campus card called TEDUCard is provided to students as an ID. This campus card has both debit card and e-wallet capabilities providing easy access to campus services at cafeteria, canteen, bookstore and library.

A list and description of all IT services provided to students can be reached via <https://it.tedu.edu.tr/it/ogrenciler> website. Support for IT services are provided via Help Desk available within MyTEDU Portal or by sending e-mail to help@tedu.edu.tr.

INTERNATIONAL PROGRAMS OFFICE

International Programs Office (IPO) is in charge of following and improving the internationalization and promotion strategies of TED University. In this framework, it provides services and assistance for incoming and outgoing exchange students, academic/administrative staff, and full-time international degree-seeking students.

The main activity fields of the Office are as follow:

- Going into partnerships with Universities and institutions abroad
- Conducting Erasmus+ Exchange Program
- Recruiting full-time international degree-seeking students
- Providing a smooth orientation process for international students
- Following Mentoring Program with the Center for Teaching and Learning for freshmen students.

HEALTH CENTER

The Health Center is located in rooms B06 and B04 in E Block which also contains the office of the University doctor. TEDU Health Center serves for all TEDU students, faculty and administrative staff. It offers appointment-based and/or walk in medical services at no cost.

The goal of Health Center is to provide the students and TEDU employees with physical, social and psychological support and maintain their well-being. Medical examinations, initial treatment or first aid of TEDU students and employees would be carried out at the Health Center; if necessary the patient will be referred to hospital.

FOOD SERVICES

Regular lunch is served in the cafeteria located on the ground floor; Block B to all TEDU personnel and students.

Coffee Break a spacious and fashionable coffee house and food house is located also on the ground floor (B051) and (B053) and serves snacks and drinks throughout the day. Also open buffet is provided in here. Chill-in Cafe is also spacious coffee and food house, is located Blok C. In addition, a café was built in Block D. There are also vending machines located all around the campus offering drinks and snacks.

DIRECTORATE OF SOCIAL AND CULTURAL AFFAIRS

The Directorate of Social and Cultural Affairs is concerned with the overall quality of student life at TEDU for all undergraduate and graduate students. The Directorate is also responsible to answer questions regarding the policies and procedures of the University and to guide the students by adding value to their academic life. The Director is permanently invited to University Executive Board and Senate meetings to build the bridge between the management and the students and to develop, articulate, disseminate and enforce University rules, regulations, and policies concerning students. The Directorate of Social and Cultural Affairs office is located in room B024.

CO-CURRICULAR ACTIVITIES

Student activities as part of the regular Student Clubs or organized by others are strongly encouraged at TEDU. The Directorate of Social and Cultural Affairs play an important role in managing these activities.

Students can pursue their interests while developing leadership and teamwork skills by taking part in student organizations. As of 2019, twenty four student clubs and societies are established and carry on activities in their specialized areas. These clubs are; Animal Friends, Architecture & Design, Atatürkist Thought, Cinema, Culture & Arts, Dance & Musical, Economy & Finance, EduAction, Entrepreneurship & Innovation, Equality of Opportunity for Children, Esports, Gastronomy, History, International Students, Kaizen, Logos, Maths-Up, Media, Music, Outdoor Sports, Photography, Platform of Politics, Psychology, Science & Technology, Science-Fiction and Fantasy, Sustainable Environment, Theatre and UNITED. In addition, students can join the local committees of international associations that has been established in TEDU; Erasmus Student Network (ESN), International Association of Civil Engineering Students (IACES), Institute of Electrical and Electronics Engineers (IEEE), International Association for the Exchange of Students for Technical Experience (IAESTE), Model United Nations (MUN), Needs Map and Sustainable Development Solutions Network (SDSN). Otherwise, there are two science project teams that has been established in TEDU; AlecTED and Aviation. Besides, students can participate into selection of sports teams that take place in interuniversity tournaments. As of 2019, twenty four sports teams are established in order to represent TED University in competitions held by Turkish University Sports Federation's.

STUDENT ACTIVITIES AND SPORTS

The sports activities and facilities of the University are expanding constantly to keep pace with the growing needs of the student body. TEDU Sports Center facilities include one half olympic size indoor swimming pool, indoor volleyball and basketball courts, several aerobic/step studios, fitness/conditioning room and multi-purpose rooms.

Students can join the sports teams of TED university and take part in interuniversity competitions.

STUDENT COUNSELING CENTER

The Student Counseling Center's main aim is to support the social, psychological and vocational development of students. The Center also aims to help students to become self-aware individuals who know their strengths and weaknesses and who are skilled at interpersonal communication.

Confidentiality is the fundamental issue for all counseling services offered in the Student Counseling Center. The use of the services offered in the center is completely voluntary. The counselor and the student work in rapport like a team to find the best counseling service that the student will benefit from. In addition to individual counseling, group counseling also exists. Some of the groups are population and/ or issue specific, while other groups consist of skill building and experiential learning.

CENTER FOR TEACHING AND LEARNING

TED University is determined to change the focus from teaching to learning and to replace lecturing with interactive, problem-based, practice-oriented instruction, and to enrich the learning environment in order to incorporate higher order thinking skills into undergraduate education. Regarding the institutional policy of the University, the mission of the CTL is to provide multifaceted resources to support faculty and students in their integration of innovative educational practices by promoting methods that encourage a rich learning environment that engages students in their own learning. In order to achieve this, the Center provides workshop sessions, seminars, programs, educational technology and webinar support for the faculty and the students.

CONTINUING EDUCATION CENTER

TED University which carried the high-quality university education to the heart of the city with the "We Create The Difference in Higher Education" motto, believes that education is a life-long activity that paves the way for self-realization. To this end we have established the TED University Continuing Education Center (TEDÜSEM).

Relying on the experience of the Turkish Education Association and the academic expertise of TEDU, TEDÜSEM carries its activities with the objective of educating the inquired human resources of the country, supporting and developing the capacity of the educated human resources and adding quality, knowledge and skills to the workforce for the public institutions and organizations.

TEDÜSEM aims to organize original and high-quality training and certificate programs for participants from all backgrounds who wish to develop themselves in different areas and who believe in the importance of self-development in the ever changing and growing professional life. We are determined to support the individuals in discovering themselves outside stressful business life.

TEDÜSEM also organizes original training programs aimed for civil servants and private sector employees which will contribute to the personal and institutional development, promote the relations between the business world and the academy and provides consultancy services for improving the general development of the country.

CAREER CENTER

TEDU Career Center is established in an aim to assist our students in familiarizing themselves with, and in being in contact with the business environments before graduation and easily adapting to the professional life upon graduation.

Our goal is, to assist the students by providing them information and leadership in selecting a career and/or knowledge that would direct them to the correct career path. We will help them in making career plans and consciously selecting higher education opportunities that come along, by taking their personal talents, abilities and interests into consideration.

In this aim we will;

- Develop opportunities for full-time, part-time, short term or compulsory internship programs for our students and graduates.
- Provide counselling and training in preparing CV's, developing interview techniques, and correct self expressions.
- Introduce sectoral firms by organizing career days and conversation sessions.
- Organizes Career Fairs, bringing employers, students and graduates together and providing communication opportunities for internships and employment through interview simulations.
- Evaluate job offers, prepare employment agreements and provide support in periods of adaptation to new jobs and employment companies.

DIRECTORATE OF RESEARCH, TECHNOLOGY AND INNOVATION (ATİD)

Directorate of Research Technology and Innovation (ATİD) is founded in September 2017 as a unit reporting directly to TEDU Vice Rector, responsible from research. ATİD's main mission is to maximise the social and economic impact of research activities of TEDU. In order to achieve this, ATİD contributes directly to strategic research agenda of the university, prepares policies related to research and innovation, mobilises the necessary resources to support and advance research

within TEDU, defines and implements the strategic roadmap and support services for Intellectual Property Rights management, fosters and supports entrepreneurship activities of TEDU faculty and students, conducts research development activities between university and industry and coordinates contracted research via TEDUTECH. Internal research funds that can be utilised both by TEDU researchers and students are also coordinated by ATID as essential tools to support research with TEDU's own financial resources and significant media to attract additional national and international funds to TEDU research area. ATID also acts as an umbrella structure within TEDU which embodies IstasyonTEDU and TEDUTECH.

CENTER FOR SOCIAL INNOVATION (İstasyonTEDÜ)

IstasyonTEDU, TED University Center for Social Innovation is founded in April 2016. It is a not-for-profit social incubator and an open collaborative space aiming to develop social innovation and social entrepreneurship ecosystems in Turkey. IstasyonTEDU supports social entrepreneurs through its incubation and support programs providing access to co-working space, meeting facilities, mentors, network and training opportunities. IstasyonTEDU also contributes to research and network projects in the fields of social innovation, social entrepreneurship and social finance, provides bespoke training programs, hosts/organizes community building events, and coordinates policy dialogue meetings in collaboration with other ecosystem actors in Ankara. Istasyon is open to different types of actors including students, academics, practitioners, researchers, representatives/employees or volunteers from the public sector, municipalities, private sector and civil society believing that innovative solutions are only possible by working in multidisciplinary and collective settings.

IV. ACADEMIC UNITS



TRADE RESEARCH CENTER (TEDUTRC)

TEDUTRC conducts high quality research in the field of economics, particularly in its areas of expertise: Turkish Economy and International Economics. Among TEDUTRC's main objectives are to provide policy recommendations on trade issues to policymakers, to collaborate with other centers of research excellence and to provide opportunities for young scholars working in its research areas. TEDUTRC people engage in interdisciplinary research and utilize their network to provide state of the art output.

Affiliation of TEDUTRC signals high-quality research as well as strong ties with policy-making. TEDUTRC aims to employ diverse affiliates from other universities, centers of research excellence, public, private and civil society organizations. The faculty are carrying on their research with well-known academicians from the US and the EU.

CENTER FOR GENDER STUDIES

The Center for Gender Studies aims at carrying out the necessary academic, administrative, theoretical and practical studies for a university environment, which is based on gender equality and equality in representation and has a high level of awareness and sensitivity about gender. As to achieve this, the Center conducts and supports national and international scientific research on gender, takes an interdisciplinary approach, keeps the gender issue on the agenda by incorporating all faculties, departments and administrative units, realises activities, panels, projects which combine academia and society and aims to prevent discrimination and sexual harassment based on gender and sexual orientation. Besides, TED University aims to open a Gender and/or Women's Studies Graduate Program in the near future.

TECHNOLOGY TRANSFER OFFICE (TEDUTECH)

Being a separate legal entity established under law, TEDUTECH is the technology transfer interface of TED University. It is fully owned by TED University and is responsible for the coordination of contracted research activities between university and industry and Intellectual Assets commercialization activities. TEDUTECH is also one of the grantees of TUBITAK 1514 Tech-InvesTR Venture Capital Support Programme and one of the Limited Partners of 500 Startups – Istanbul Annex VC Fund. CADS@TEDU, Center for Applied Data Sciences of TEDU, is also acting legally as a division under TEDUTECH.

CENTER FOR APPLIED DATA SCIENCES (CADS@TEDU)

Center for Applied Data Science (CADS@TEDU) is founded under TEDUTECH, the technology transfer interface of TED University, aiming to develop and carry out both research and application projects and provide training and consultancy in the field of data science. CADS@TEDU collaborates with different types of actors including students, academics, practitioners, researchers, public and private sector and civil society to provide data driven solutions to provide data driven solutions to complex problems of its stakeholders.

The Center specializes at four main areas; data governance strategy, impact assessment, advanced business analytics and artificial learning applications. CADS@TEDU also provides specialised training programmes for institutions in a wide range of fields including machine learning, advanced data analytics, data visualisation and data driven decision making. In collaboration with NGO's, civic initiatives and data science practitioners, the Center hosts and delivers bootcamps, workshops and webinars.

V. DEGREE REQUIREMENTS



DEGREE PROGRAMS

TED University grants Bachelor of Arts, Bachelor of Science and Bachelor of Architecture degrees upon completion of an eight semester program offered by its Faculties. Further information concerning the programs of study required by each department can be found in Chapter V on Academic Programs. Double major programs ending with double degrees or minor programs are made available to successful students. All students are required to choose a secondary field next to their major program. TEDU students can substitute courses from other universities if desired courses are taught in English. Master of Arts and Master of Science degrees are granted upon completion of three semesters, in accordance with the requirements of the Graduate Schools offering the degrees.

Degrees Offered

Bachelor's Degrees

Faculty of Architecture

- B.Arch. in Architecture
- B.S. in City and Regional Planning
- B.I.D. in Industrial Design
- B.F.A. in Interior Architecture and Environmental Design

Faculty of Arts and Sciences

- B.A. in English Language and Literature
- B.S. in Mathematics
- B.S. in Psychology
- B.S. in Sociology

Faculty of Economics and Administrative Sciences

- B.S. in Business Administration
- B.S. in Economics
- B.A. in Political Science and International Relations

Faculty of Education

- B.A. in Early Childhood Education
- B.A. in Primary Education
- B.A. in Guidance and Psychological Counseling
- B.A. in English Language Education
- B.S. in Elementary Mathematics Education

Faculty of Engineering

- B.S. in Civil Engineering
- B.S. in Computer Engineering
- B.S. in Electrical - Electronics Engineering
- B.S. in Industrial Engineering
- B.S. in Mechanical Engineering
- B.S. in Software Engineering

Graduate Degrees

Graduate School

- M.S. in Architecture and Urban Studies (with thesis)
- M.S. in Applied Data Science (with thesis/without thesis)
- M.S. in Civil Engineering (with thesis)
M.E. in Civil Engineering
- M.S. in Developmental Focused Clinical Child and Adolescent Psychology (with thesis)
- M.S. in Economics and Finance (with thesis/without thesis)
- M.S. in Engineering Management (with thesis)
M.E. in Engineering Management
- M.A. in English Language Education (with thesis/without thesis)
- M.S. in Interactive Computing and Information Systems (with thesis)
M.E. in Interactive Computing and Information Systems
- M.A. in Management in Educational Institutions (without thesis)
- M.S. in Mechanical Engineering (with thesis)
M.E. in Mechanical Engineering
- M.S. in Mechatronics Engineering (with thesis)
M.E. in Mechatronics Engineering
- M.S. in Migration Studies (with thesis/without thesis)
- PhD. in Clinical Psychology

* B.A: Bachelor of Arts, B.F.A: Bachelor of Fine Arts, B.S: Bachelor of Science, B.Arch: Bachelor of Architecture, B.ID: Bachelor of Industrial Design, M.A: Master of Arts, M.S: Master of Science, M.E: Master of Engineering, PhD: Doctor of Philosophy

CURRICULUM STRUCTURE

(A) General Structure

All undergraduate academic programs at TED University are limited to 138 credit hours. Departments are advised to keep their total credits between 130 and 138. Most of the courses are 3 or 4 credit hours; all elective courses must be 3 credit hours to enhance the ability of students to fit them into their programs. One semester typically carries a teaching load of 16-17 credit hours. Successful students may overload, i.e. take extra credits above the regular semester load. Courses without corresponding slots in the curriculum are taken non-credit (NC).

Courses are divided into various categories: common-core (CC.R), departmental, faculty-common (F.C), university- common (U.C), and elective courses into free (F), minor (M), common-core electives (CC.E). Department courses are mainly offered to give the essentials of the discipline; some may be required (R), others elective (E).

(B) Credits of the Courses

Face-to-face credit-hours (CRF) are used in this catalog. The credit hour of a course is determined through the lectures, labs/studios or required problem sessions, all per week. The total classroom load per week associated with a course is indicated by three digits in parenthesis (a+b+c); the first shows

the number of lectures, the middle digit indicates required problem sessions, and the last shows the number of hours of labs/ applications. The credit hours of a course are determined by $a+b/2 +c/2$. Thus (3+0+2) corresponds to four credit hours. It is understood that students are expected to study 2 hours elsewhere for every hour in class.

The European Credit Transfer System (ECTS) includes the total workload in the calculation of the credit hours. For each CRE students are expected to spend 25-30 hours per semester. For purposes of credit transfer both systems are used at TEDU, regulations being based on face-to-face credit-hours (CRF).

(C) Summary of Undergraduate Programs

Credit Distributions for Diploma Programs, Using Face-to-Face Credit-Hours (CR_F)

	Common Core		Hist./Tur. U.C.	Faculty Common F.C.	Program Required R	Program Elective E	Secondary Field SF	Free Elective F	Number of Courses	Electives		Total CR _F
	Req'd CC.R	Elect. CC.E								CR _F	%	
	min12	min21*										
EE	13	23	8	6	45	18	15	9	51	57	42%	137
CMPE	13	23	8	6	50	12	15	9	48	51	38%	136
IE	13	23	8	6	50	9	15	12	48	51	38%	136
CE	13	23	8	6	55	9	15	9	48	45	33%	138
ME	13	23	8	6	55	9	15	9	49	45	33%	138
ARCH	13	16	8	20	51	9	12	9	43	42	30%	138
CRP	13	16	8	20	51	9	12	9	43	42	30%	138
BA	13	23	8	4	44	18	15	9	46	54	41%	134
ECON	13	23	8	4	37	27	15	9	47	63	47%	136
PSIR	13	22	8	4	50	15	15	6	47	48	36%	133
PSY	13	15	8	0	49	24	15	6	45	60	46%	130
SOC	16	15	8	0	49	21	15	6	45	51	39%	130
ELL	15	15	8	0	56	15	15	6	45	51	39%	130
MATH	21	15	8	0	55	15	15	6	45	51	38%	135
GPC	12	18	8	19	67	0	12	0	50	12	9%	137
EGE	12	15	8	19	72	0	12	0	50	12	9%	138
ECE	12	15	8	19	72	0	12	0	49	12	9%	138
ELE	12	15	8	19	70	0	12	0	50	12	9%	136
EME	9	15	8	19	73	0	12	0	50	12	9%	136
ELE	12	15	8	19	70	0	12	0	50	12	9%	136
EME	9	15	8	19	73	0	12	0	50	12	9%	136

Credit Distributions of Faculty of Education Programs, Using Face-to-Face Credit Hours (2018-2019 and After)

	General Culture		Faculty		Program		Number of Courses	Electives		Total CR _F
	Genc_R	Genc_E	Educ_R	Educ_E	Program_R	Program_E		CR _F	%	
MATE	19	8	38	12	57	12	66	32	%22	146
ELEP	19	8	38	12	59	12	66	32	%22	148
ECEP	19	8	38	12	52	12	59	32	%23	141
EGEP	19	8	38	12	53	12	60	32	%23	142
PCG	19	8	34	12	62	12	69	32	%22	147

Credit Distributions for Diploma Programs, Based on European Credit Transfer System (CR_E)

	Common Core		Hist./Tur. U.C.	Faculty Common F.C.	Program Required R	Program Elective E	Secondary Field SF	Free Elective F	Number of Courses	Electives		Total Req'd CC.R
	Req'd CC.R	Elect. CC.E								CR _E	%	
EE	22	39	9	11	89	30	25	15	51	95	40%	240
CMPE	22	38	9	11	100	20	25	15	48	85	35%	240
IE	22	38	9	11	100	15	25	20	48	85	35%	240
CE	22	38	9	11	100	18	25	15	48	78	33%	240
ME	22	38	9	11	105	15	25	15	49	75	31%	240
ARCH	22	27	9	32	100	15	20	15	43	70	29%	240
CRP	22	27	9	32	100	15	20	15	43	70	29%	240
BA	22	38	9	6	89	36	25	15	46	95	40%	240
ECON	22	38	9	6	71	56	25	15	47	113	47%	240
PSIR	22	36	9	6	103	24	25	10	46	84	35%	240
PSY	22	25	9	0	101	48	25	10	45	113	47%	240
SOC	27	25	9	0	102	42	25	10	45	92	38%	240
ELL	25	25	9	0	120	26	25	10	45	86	21%	240
MATH	35	25	9	0	106	30	25	10	45	90	38%	240
GPC	20	30	9	33	128	0	20	0	50	20	8%	240
EGE	20	25	9	33	133	0	20	0	50	20	8%	240
ECE	20	25	9	33	133	0	20	0	49	20	8%	240
ELE	20	25	9	33	133	0	20	0	50	20	8%	240
EME	15	25	9	33	138	0	20	0	50	20	8%	240
ELE	20	25	9	33	133	0	20	0	50	20	8%	240
EME	15	25	9	33	138	0	20	0	50	20	8%	240

* except Faculty of Education and Architecture programs; ** prog. req'd + elective not to exceed 65

Credit Distributions of Faculty of Education Programs, Based on European Credit Transfer System (CR_E) (2018-2019 and After)

	General Culture		Faculty		Program		Number of Courses	Electives		Total CR _E
	Genc_R	Genc_E	Educ_R	Educ_E	Program_R	Program_E		CR _E	%	
MATE	30	12	64	24	86	24	66	60	25%	240
ELEP	30	12	67	24	83	24	66	60	25%	240
ECEP	30	12	69	24	85	24	59	60	25%	240
EGEP	30	12	64	24	86	24	60	60	25%	240
PCG	30	12	56	24	94	24	69	60	25%	240

SUMMER SCHOOL

Students have the opportunity to attend Summer School. By doing so they may accelerate their degree programs and receive their degrees in three and a half years, or spread their academic work across a longer period of time. This also offers students the option of taking courses of personal interest, or overcoming the danger of academic probation or repeating F courses.

VI. ACADEMIC PROGRAMS



FACULTY OF
ARCHITECTURE



FACULTY OF ARCHITECTURE

Dean's Statement

The interest fields of architecture, design and planning as disciplines were already diversified through the achievements and reforms in technological and philosophical spheres, together with social progress and culture in the 20th century, but these have evolved, multiplied and have become still highly diversified to a large extent in the 21st century to follow. The question that constantly keeps architecture I design I planning on their toes: "What is Architecture; What is Design; What is Planning?" and the list of answers this question evokes, never gets consumed, even in this global age.

TEDU Faculty of Architecture, following the acceptance of its first students into the Department of Architecture in 2012, is progressing in calm and steady steps. In September 2016, we will be enjoying to welcome of our first City and Regional Planning Department students join their classes. Our faculty welcomes all young members, who have an interest towards a wide range of subjects in the fields of design practice, design culture, design policies; concerning, creating, and thinking together with and for the future geographies, cities, rural settlements, urban spaces, dwellings, objects and artefacts. Only getting closely acquainted with the precedents of designed objects, deciphering the potential behind problems, interpreting and researching the history and culture as context, can the focus on design artefacts become a developing and life-long critical position in every aspect of design. We invite you to be students of the faculty, where you can assemble to become individuals of a society with the courage in shaping a design object with competence in deep understanding of the future, through the eyes of a designer + planner + creator + critic + intellectual + educator.

TEDU Faculty of Architecture gets distinguished from other architectural institutions for its; significant emphasis on bringing out individual endowments and traits; obligations for intra-disciplinary and inter- disciplinary (cross-disciplinary) collective work; the working environment encouraging comprehensive approaches where design thinking and ethics blend together with intellectual clarity; guidance offered for motivating management and leadership not only in problem solving but also for openly discussing the definitions, conceptions and the axioms, thus the problem itself; a journey offered for acquiring a universal critical position directed especially through local problems, local resources, ideas, expressions and theoretical approaches.

TEDU Faculty of Architecture, being a city university, triggers possible integrations between its students and their target audiences, whether be it, individuals, communities or the society; accommodating a position with a priceless value, especially for accomplishing the goals set for professional education and intellectual progression.

Join us to be part of an intellectual and creative progress that will shape the future and the limits of architectural, design and planning practice!

Prof. Ali CENGİZKAN, Dean

DEPARTMENT OF ARCHITECTURE

Chair

Prof. Namık Günay Erkal

Academic Staff

Prof. Namık Günay Erkal, Prof. Ali Cengizkan, Prof. Berin F. Gür, Asst. Prof. Azize Elif Yabacı, Asst. Prof. Başak Uçar Kırmızıgül, Asst. Prof. Bilge İmamoğlu, Asst. Prof. Derin İnan, Asst. Prof. Duygu Tüntaş, Asst. Prof. Heves Beşeli Özkoç, Asst. Prof. Seray Türkay Coşkun, Aylin Alicanoğlu*, Çağrı Koçer*, Güneş Duyul*, Melis Acar*, Sonat Özcivanoğlu*, Utku Coşkuner*.

* Research Assistant

Undergraduate Program in Architecture

The basic goal of TED University Department of Architecture is to provide an architectural education which aims to train students to become architects who are able to meet the contemporary world's increasing demand for flexible thinking and production; and who can follow technological, social and practical developments day to day. The Department of Architecture incorporates the student oriented education policy of TED University and the practice of learning by doing, which is an essential requirement of architectural education and aims to define an education environment that facilitates interdisciplinary information exchange.

With the purpose of nurturing a critical culture on the built environment and the mutual relation of architectural education with social and cultural context, the program focuses on developing skills for inquisitive research, analytical thinking, innovative problem solving, intellectual productivity and sensitivity to professional ethics. An additional aim of the program is to create awareness of sustainability and sustainable environments. Accordingly, the students are encouraged to develop innovative methods for the design and construction of a sustainable physical environment.

In this context TED University Department of Architecture, provides its students with a practice based, research-oriented experience, within an independent and unique learning and research atmosphere.

The program ensures that its students intensively engage with professional practices besides following the contemporary academic and technological advancements on their way to completing their education. For this aim, it plans to establish an environment, in light of technological advancements, which allows the students to question and experience new environments and tools. Additionally, students and researchers are encouraged to monitor contemporary academic research closely and are expected to direct studies in these fields.

Program Outcomes

By the end of this degree program, students should be able to do the following to show their understanding and creativity:

1. Interpret architectural knowledge from the perspectives of its history, theories, paradigms and conceptual frameworks, in the context of related arts within an interdisciplinary approach.
2. Integrate knowledge on planning and urban design, from the perspective of their historical background and strategies and current urban discourses.

3. Demonstrate competence in written and verbal expression of ideas and thoughts both in Turkish and English.
4. Use up-to-date information and communication technologies in thinking, producing and presentation processes.
5. Apply theoretical and practical knowledge to praxis.
6. Develop self-discipline for lifelong learning, time management, methodological study and research habits.
7. Identify and criticize the relationship between people and built environment by relating ethical issues, social factors, human behaviors and cultural diversities.
8. Develop skills for abstract, analytical and relational thinking in internalizing notions of design and design processes.
9. Generate designs and proposals employing basic architectural, environmental and universal design principles.
10. Develop an architectural project, individually and within a team integrating phases from formulation to completion, in a professional and collaborative context.
11. Evaluate current knowledge and praxis, using appropriate research methods, skilled questioning, critical thinking and ethical perspectives.
12. Develop personal creativity and skills to communicate creative ideas, perspectives and solutions.

Undergraduate Curriculum

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
ARCH 101	Basics of Design	2	8	0	6	9
ARCH 111	Architectural Communication Techniques I	2	2	0	3	5
ARCH 121	Introduction to Architecture	3	0	0	3	5
MATH 109	Basic Calculus	3	2	0	4	7
ENG 101	English for Academic Purposes	2	2	0	3	5
TOTAL		12	14	0	19	31

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
ARCH 102	Introduction to Architectural Design	2	8	0	6	10
ARCH 112	Architectural Communication Techniques II	2	2	0	3	5
CC	Common Core MATH For FA Students	3	0	0	3	5
ENG 102	Expository Writing	2	2	0	3	5
CMPE 101	Introduction to Information Technologies	2	0	2	3	5
TOTAL		11	12	2	18	30

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
ARCH 201	Architectural Design I	2	8	0	6	11
ARCH 221	History of Architecture I	3	0	0	3	5
ARCH 241	Structure and Architecture	3	0	0	3	5
CC	Natural Sciences/Social Sciences/Humanities/Art	3	0	0	3	5
TUR 101	Turkish I	2	0	0	2	2
HIST 101	History of Turkish Republic I	2	0	0	2	2
TOTAL		15	8	0	19	30

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
ARCH 202	Architectural Design II	2	8	0	6	11
ARCH 222	History of Architecture II	2	1	0	2	5
CC	Common Core*	3	0	0	3	5
CC	Common Core*	3	0	0	3	5
TUR 102	Turkish II	2	0	0	2	2
HIST 102	History of Turkish Republic II	2	0	0	2	2
TOTAL		14	9	0	18	30

Semester 5

Code	Course Title	C	P	L	Cr	ECTS
ARCH 301	Architectural Design III	2	8	0	6	11
ARCH 381	Urban Design	2	2	0	3	6
ARCH 399	Summer Practice I_ Construction Site	0	0	0	0	2
CC	Common Core*	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
TOTAL		10	10	0	15	29

Semester 6

Code	Course Title	C	P	L	Cr	ECTS
ARCH 302	Architectural Design IV	2	8	0	6	11
ARCH 372	Building Technologies in Architecture	3	0	0	3	5
ARCH	Departmental Elective	3	0	0	3	5
FREE	Free Elective	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
TOTAL		14	8	0	18	31

Semester 7

Code	Course Title	C	P	L	Cr	ECTS
ARCH 401	Architectural Design V	2	8	0	6	12
ARCH 499	Summer Practice II_Architectural Office	0	0	0	0	2
ARCH	Departmental Elective	3	0	0	3	5
FREE	Free Elective	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
TOTAL		11	8	0	15	29

Semester 8

Code	Course Title	C	P	L	Cr	ECTS
ARCH 402	Architectural Design VI	2	8	0	6	12
ARCH 462	Profession and Practice	1	0	0	1	2
ARCH-DEPT.	Departmental Elective	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
FREE	Free Elective	3	0	0	3	5
TEDU 400	Student Development Seminar	0	0	0	0	1
TOTAL		12	8	0	16	30

Totals expected for graduation		99	77	2	138	240
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Courses with Pre-requisites

Course Name	Pre-requisites
ARCH 102 Introduction to Architectural Design	ARCH 101
ARCH 112 Architectural Communication Techniques II	ARCH 111
ARCH 201 Architectural Design I	ARCH 102
ARCH 202 Architectural Design II	ARCH 201
ARCH 301 Architectural Design III	ARCH 202
ARCH 302 Architectural Design IV	ARCH 301
ARCH 372 Building Technologies in Architecture	ARCH 301
ARCH 401 Architectural Design V	ARCH 302
ARCH 402 Architectural Design VI	ARCH 401
ARCH 420 Reading and Writing About Architecture	ARCH 202; ARCH 221-222
ARCH 499 Summer Practice II_Architectural Office	ARCH 399

Undergraduate Course Descriptions

- ARCH 101** **(2+8+0) 6 Credits / 9 ECTS**
Basics of Design
(Tasarımın Temelleri)
 Introduction to basic concepts and general trait of design. Abstraction and conceptualization. Relations and design operations. Development of mental, perceptual and manual skills to study and present design ideas.
- ARCH 102** **(2+8+0) 6 Credits / 10 ECTS**
Introduction to Architectural Design
(Mimari Tasarıma Giriş)
 Design and structuring of spatial relations. Scale, formal properties, structured and experiential aspects of architectural space.
 Pre-requisite: ARCH 101
- ARCH 111** **(2+2+0) 3 Credits / 5 ECTS**
Architectural Communication Techniques I
(Mimari İletişim Teknikleri I)
 Visualization and representation techniques in different mediums. Orthographic projection, free-hand drawing, architectural photography, communication with digital mediums.
- ARCH 112** **(2+2+0) 3 Credits / 5 ECTS**
Architectural Communication Techniques II
(Mimari İletişim Teknikleri II)
 Visualization and representation techniques in different mediums. Expression and communication of design ideas, architectural elements and formal attributes. Perspective drawing, modelling techniques, communication with digital mediums.
 Pre-requisite: ARCH 111

<p>ARCH 121 Introduction to Architecture (Mimarlığa Giriş)</p> <p>Introduction to the vocabulary of design thought and design concepts in the context of arts, architecture and the built environment.</p>	<p>(3+0+0) 3 Credits / 5 ECTS</p>
<p>ARCH 201 Architectural Design I (Mimari Tasarım I)</p> <p>Architectural design process as complex structuring of spatial experiences in relation to the concept of human scale and the physical properties of the place.</p> <p>Pre-requisite: ARCH 102</p>	<p>(2+8+0) 6 Credits / 11 ECTS</p>
<p>ARCH 202 Architectural Design II (Mimari Tasarım II)</p> <p>Development of design strategies based on fundamental architectural design components such as scenario/program, site and tectonics in a relatively small scale building.</p> <p>Pre-requisite: ARCH 201</p>	<p>(2+8+0) 6 Credits / 11 ECTS</p>
<p>ARCH 221 History of Architecture I (Mimarlık Tarihi I)</p> <p>A global history of architecture survey from prehistory up to the modern age. Prominent examples of architectural edifices and cities.</p>	<p>(3+0+0) 3 Credits / 5 ECTS</p>
<p>ARCH 222 History of Architecture II (Mimarlık Tarihi II)</p> <p>Fundamental knowledge on the development of architectural thought and practices throughout the modern age. Historical process through the enlightenment, industrial age and the 20th century.</p>	<p>(2+1+0) 2 Credits / 5 ECTS</p>
<p>ARCH 241 Structure and Architecture (Yapısal Sistemler ve Mimarlık)</p> <p>Basic knowledge of structures, fundamental principles of structural behaviors, relationship between structure and architecture, analysis of simple structural systems.</p>	<p>(3+0+0) 3 Credits / 5 ECTS</p>
<p>ARCH 301 Architectural Design III (Mimari Tasarım III)</p> <p>Multi-dimensional design problems and spatial solutions in an urban context. Emphasis on the relationship between tectonic, structural and programmatic organization and the urban context.</p> <p>Pre-requisite: ARCH 202</p>	<p>(2+8+0) 6 Credits / 11 ECTS</p>

- ARCH 302** (2+8+0) 6 Credits / 11 ECTS
Architectural Design IV
(Mimari Tasarım IV)
Holistic approach to cultural, ecological, and social sustainability. Development of architectural program and integration of advanced structural and technological systems into design process. Universal Design Principles.
Pre-requisite: ARCH 301
- ARCH 312** (3+0+0) 3 Credits / 5 ECTS
Techniques of Architectural Photography
(Mimari Fotoğraflama Teknikleri)
The relation of architecture to photography. Techniques of photography. Analysis of form, color and light. Photographic composition.
- ARCH 322** (3+0+0) 3 Credits / 5 ECTS
Issues in Contemporary Architecture
(Çağdaş Mimarlık Söylemleri)
Contemporary architectural theories and practices in the world and Turkey. Significant concepts in the discursive formations of contemporary architecture and their reflections to the practice.
Pre-requisite: ARCH 121
- ARCH 326** (3+0+0) 3 Credits / 5 ECTS
Modern Architecture in Turkey
(Modern Türkiye Mimarlığı)
Significant movements in the 20th century Turkish architecture within the social and political context. Important developments in the theory and practice of the early and late Republican Architecture in Turkey.
- ARCH 345** (3+0+0) 3 Credits / 5 ECTS
Studies on Structural Systems
(Yapısal Sistemler Üzerine Çalışmalar)
The relationship of structural systems and architectural solutions in the historical context. Structural solutions in contemporary applications.
- ARCH 351** (3+0+0) 3 Credits / 5 ECTS
Landscape Design
(Peyzaj Tasarımı)
Basic principles, elements, means and techniques of landscape design, visualization and representation methods.
- ARCH 366** (3+0+0) 3 Credits / 5 ECTS
Contemporary Building Materials and Architectural Structures
(Çağdaş Yapı Malzemeleri ve Mimari Yapılar)
Contemporary building materials. Methods of application. The effects of contemporary building materials on the design and construction of architectural products.

- ARCH 372** (3+0+0) 3 Credits / 5 ECTS
Building Technologies in Architecture
(Mimarlıkta Yapı Teknolojileri)
 Building technologies. Materials used in buildings. Technologies of sustainability. Environmental forces and performances of built structures. Universal Design Principles and accessibility. Architectural detailing.
 Pre-requisite: ARCH 301
- ARCH 381** (2+2+0) 3 Credits / 6 ECTS
Urban Design
(Kentsel Tasarım)
 History of planning theories and approaches. Significant concepts and examples in the contemporary urban practice. Practice of a design problem in an urban scale in the studio environment.
- ARCH 382** (3+0+0) 3 Credits / 5 ECTS
History of City Planning and Urban Design
(Planlama Tarihi ve Kentsel Tasarım)
 Historical development of planning and urban design, urban structures and related theories. Solutions and applications specific to varying scales and methods of analysis.
- ARCH 383** (3+0+0) 3 Credits / 5 ECTS
Spatial Utopias and Urban Design
(Mekansal Ütopyalar ve Kentsel Tasarım)
 This course deals with cities, spatial entities and architecture through spatial Utopias, which are the product of hyperactive brains and developed for spaces and societies in order to establish the absolute happiness and social order to the mankind.
- ARCH 399** (0+0+0) 0 Credit / 2 ECTS
Summer Practice I - Construction Site
(Yaz Stajı I - Şantiye Stajı)
 Building construction methods and techniques. Active participation in and/or observation of construction processes. The minimum duration of the summer practice is 30 working days.
- ARCH 401** (2+8+0) 6 Credits / 12 ECTS
Architectural Design V
(Mimari Tasarım V)
 Multi-dimensional architectural and urban design problem/s. Integrative analysis of context, program, and building technologies. Advanced use of modes of representation.
 Pre-requisite: ARCH 302
- ARCH 402** (2+8+0) 6 Credits / 12 ECTS
Architectural Design VI
(Mimari Tasarım VI)
 Multi-dimensional architectural design problem. Integrative analysis of context, program, structure, and building technologies in corporation with design methodologies and architectural theories. Advanced use of modes of representation.
 Pre-requisite: ARCH 401

ARCH 420 (3+0+0) 3 Credits / 5 ECTS

Reading and Writing About Architecture
(Mimarlık Üzerine Okumak ve Yazmak)

Introduction to architectural criticism. Architecture and approaching to architectural products, definitions. The context of architecture: the City, the Street, the Block, Neighbouring architectural objects, the urban as context. Reading the works of architectural critiques; reading and writing exercises with focus on local (Ankara)/national/international cases.

ARCH 421 (3+0+0) 3 Credits / 5 ECTS

History and Theory of Architecture
(Mimarlık Tarihi ve Kuramları)

Introduction to architectural history. Theory, texts by authors who have an important role in the creation of conceptualization and interpretation of basic concepts and perspectives in architecture.

ARCH 423 (3+0+0) 3 Credits / 5 ECTS

Sustainability and the Built Environment
(Sürdürülebilirlik ve Yapılı Çevre)

Issues and Challenges for Sustainable Development. Principles of Sustainable Design. Reduction of material and energy consumption. Measuring Sustainability and Calculating the Ecological footprint of buildings. Natural Analogies and Biomimetic Design. Climatic and environmental factors shaping the Buildings. Ecological materials and construction techniques. Green Buildings Certificates.

ARCH 424 (3+0+0) 3 Credits / 5 ECTS

Modernism Studies
(Modernizm Araştırması)

Modernist theories. The relation of modernism to social and urban developments since the 18th century. The effect of modernist theories on art and architecture.

ARCH 425 (3+0+0) 3 Credits / 5 ECTS

Form and Media
(Form ve Ortamları)

Each different media, such as photography, painting, architecture, urban environment, sculpture, film, music, etc, has its specific way of representing space and time, which make its own form language. By viewing historic and contemporary examples from various media, a comparative analysis of media forms will be aimed, to help students of architecture and other media understand the creative potential of various arts and their design possibilities. Active participation in discussions, reading and research, besides lectures by the professor will constitute the program.

ARCH 426 (3+0+0) 3 Credits / 5 ECTS

Environmental Aesthetics
(Çevresel Estetik)

Concepts of 'aesthetics' and perception. Values of ecology and environmental consciousness. Somatic relations and conducts related to culture. Comprehension of environmental values as primary issues of urban and architectural practice and design.

- ARCH 427** (3+0+0) 3 Credits / 5 ECTS
Dwelling and Culture
(Barınma ve Kültür)
 This course will aim to familiarize students with architectural culture in its various forms in history and today. Through readings from architectural history and theory, as well as from philosophy and literature, values related to our forms of life and how humanity creates its habitat will be investigated. Besides class discussions, short trips to neighboring towns or settlements, to different environments will cover a portion of semester time. Active and creative participation is expected of students; these can take place as photography, drawing, projects, documentary video and writings.
- ARCH 428** (3+0+0) 3 Credits / 5 ECTS
Dwelling and Culture II
(Barınma ve Kültür II)
 Problematics of dwelling. Conceptions related to the environment and the city. How buildings are related to their context. Creative/textual capacities of the greater environment, society, politics and art.
- ARCH 430** (3+0+0) 3 Credits / 5 ECTS
Aesthetics and Criticism
(Estetik ve Eleştiri)
 Through readings and discussions of ancient and modern texts on aesthetics and form analyses the course aims to make students conscious of interpretations of art, design and formal qualities. Readings will involve texts from Plato and Aristotle up to modern writers as Heidegger. The discussions and student work will also partly involve critical analyses of art and architectural examples in the light of different interpretations of the readings.
- ARCH 431** (3+0+0) 3 Credits / 5 ECTS
Dijital Culture and Architecture
(Dijital Kültür ve Mimarlık)
 Definition and evolution of digital culture, understanding the relation between digital technologies, theories and culture, introduction to the key concepts in digital design research and practice, mapping the developments in digital culture and their impacts on the theoretical discourse and design processes in architecture.
- ARCH 432** (3+0+0) 3 Credits / 5 ECTS
MediaScapes: Communication Models in Digital Design
(MediaScapes: Dijital Tasarımda İletişim Modelleri)
 Communication models in architecture. Theoretical and historical aspects of digital design. Rethinking architectural representation and communication models in relation to digital design theories and practices. Different modes and techniques of communication in digital design.
- ARCH 434** (3+0+0) 3 Credits / 5 ECTS
Parametric Design Thinking
(Parametrik Tasarım Düşüncesi)
 An introduction to parametric design. Understanding computer-aided design's theoretical background through its applicable models. Gaining familiarity to concepts like algorithm, parameter, topology and

form. Descriptive exploration of architectural examples through parametric design tools. Generating variations of architectural examples via innovative techniques.

ARCH 451

(3+0+0) 3 Credits / 5 ECTS

**Fundamentals of Cultural Heritage Conservation
(Tarihi Alan ve Binaların Restorasyonu ve Koruması)**

Introduction to the principles of conservation of cultural heritage. Examples of conservation implementations both national and international. Problems and developments in the field of conservation in the world and Turkey.

ARCH 462

(1+0+0) 1 Credit / 2 ECTS

**Profession and Practice
(Meslek ve Uygulama)**

Processes for project and construction. Technical, theoretical and ethical considerations in architectural practice. Project and construction management and cooperation of various parties.

Pre-requisite: ARCH 302

ARCH 470

(3+0+0) 3 Credits / 3 ECTS

**Books of Architecture / Architecture of Books
(Mimarlığın Kitapları / Kitapların Mimarlığı)**

Overview of history of architectural books. Architectural materialization in the form of books. Production and reception of architectural books and spatialization of these practices. Architects as writers, designers, readers and collectors of books. Case studies of public and private libraries in the past and present.

ARCH 471

(3+0+0) 3 Credits / 5 ECTS

**Visual Culture
(Görsel Kültür)**

A critical survey on the development of contemporary visual culture and its historical background that includes the practices of visual representations, mappings and information graphics. Analysis on the operations of certain concepts, approaches, practices and ideas constituting this culture and how they engage with social, cultural and political issues.

ARCH 480

(3+0+0) 3 Credits / 5 ECTS

**Urban Design Practice
(Kentsel Tasarımın Pratiği)**

The links between city or urban design theory and practice. The place of property relations in the evolution of urban space. The difference between city design and urban design. Design processes. Appraisal of real projects by developing algorithmic analysis; implemented and not implemented. Principles of urban design briefing.

ARCH 481

(3+0+0) 3 Credits / 5 ECTS

**Reading Architectural Precedents
(Mimari Öncülleri Okumak)**

Formal analysis of exemplary buildings. Critical reading of an architectural form. Examination of formal and spatial principles of a selected building. Exploration of formal elements and relations between these elements, and transformational operations on form.

Pre-requisite: ARCH 102

ARCH 484	(3+0+0) 3 Credits / 5 ECTS
Architecture of Urban Form Through History (Tarih Boyunca Kent Formunun Mimarisi)	
Introducing key elements of urban form. Focusing on certain historical building typologies. Description and analysis of urban elements -such as streets, city squares, gardens and fortifications. Surveying the related building types through history of architecture.	
ARCH 499	(0+0+0) 0 Credit / 2 ECTS
Summer Practice II - Architectural Office (Yaz Stajı II - Mimari Ofis)	
Participation to the processes of design, development and representation of a project in a professional architectural office. The minimum duration of the summer practice is 30 work days.	
Pre-requisite: ARCH 399	

Graduate Course Descriptions

ARCH 525	(3+0+0) 3 Credits / 7,5 ECTS
Visual Culture (Görsel Kültür)	
A critical survey on the development of contemporary visual culture and its historical background. Analysis on the operations of certain concepts, approaches, practices and ideas constituting this culture and how they engage with social, cultural and political issues.	
ARCH 527	(3+0+0) 3 Credits / 7,5 ECTS
Urban Representations and Scalar Engagements (Kent Ölçekleri ve Temsiliyetleri)	
Analysis of relations between urban space and how it is inhabited, understood, imagined and encoded through different mediums of representations. Remodelling our understandings of the city by the utilization of different media as an agent for testing or representing different scales of urban engagement(s).	
ARCH 528	(3+0+0) 3 Credits / 7,5 ECTS
Communication Models in Digital and Computational Media (Sayısal ve Hesaplamalı Ortamda İletişim Modelleri)	
A foundational understanding of the digital and computational media through an investigation of theoretical sources on communication models. Surveying the intersection of art and technology and new conceptions of representation. Potential topics include; digital and computational media-communication models- representation techniques-cybernetics- artificial intelligence- human-computer interfaces- mediated human experience, interaction, and perception- emergence-information aesthetics.	
ARCH 529	(3+0+0) 3 Credits / 7,5 ECTS
Local Histories of Urban Culture (Kent Kültürü ve Yerel Tarihler)	
A hands-on research and historiography course where local/specific/minute cases of socio-spatial practices of urban culture(s) are studied throughout the semester with the aim of developing	

suggestive narratives through interpretative data. The course aims to introduce critical discussions on the methodologies of historio-graphy, as well as contributing to the knowledge on the variety and diversity of everyday practices of the city within the recent past. The cases to be studied each semester can be selected among small scale institutions, events-practices, or people, as well as locations, places or buildings/sites (e.g. "Süleyman Bağcıoğlu as a case of the working musician within the live music and entertainment scene in Ankara"; "İnek Bayramı in Mülkiye; as a case of festivity within the academic environment"; "Tavukçu Lokantası", etc.)

ARCH 531**(3+0+0) 3 Credits / 7,5 ECTS****Digital Culture and Architecture
(Dijital Kültür ve Mimarlık)**

Definition and evolution of digital culture, understanding the relation between digital technologies, theories and culture, introduction to the key concepts in digital design research and practice, mapping the developments in digital culture and their impacts on the theoretical discourse and design processes in architecture, modeling hybrid research frameworks.

ARCH 532**(3+0+0) 3 Credits / 7.5 ECTS****Mediascapes: Communication Models in Digital Design
(Mediascapes: Dijital Tasarımda İletişim Modelleri)**

Communication models in architecture. Theoretical and historical aspects of digital design. Rethinking architectural representation and communication models in relation to digital design theories and practices. Different modes and techniques of communication in digital design. Transformation of vision, imaging and cognition.

ARCH 533**(3+0+0) 3 Credits / 7,5 ECTS****Dwelling and Discourse I
(Barınma ve Söylemsellik I)**

The function of discursive formations and analysis on diverse spaces of 'dwelling' from urban to object scale; discourse as practice; discursive practice in architecture and planning; continuities and rupture in history and historiography of housing; 'panopticism', surveillance and power; utopia, heterotopia and spatial politics; architecture as power and the power of architecture; the importance of the 'site' and that of archival material. Approaches in defining and posing problems; scientific research and surveying methods and the role of discursive analysis.

ARCH 534**(3+0+0) 3 Credits / 7,5 ECTS****Dwelling and Discourse II
(Barınma ve Söylemsellik II)**

Student's personal production of a new and vibrant issue, to be tackled with as a personal project, within Foucauldian approach of "discursive formations and analysis" on the specific construct of 'dwelling', to be elaborated from urban to object scale. Final product is a presentation, paper, article, essay, exhibition, or a script, publicized in professional, distinguished scholarly media.

- ARCH 542** (3+0+0) 3 Credits / 7,5 ECTS
Mediascapes: Communication Models in Digital Design
(Mediascapes: Dijital Tasarımda İletişim Modelleri)
 Communication models in architecture. Theoretical and historical aspects of digital design. Rethinking architectural representation and communication models in relation to digital design theories and practices. Different modes and techniques of communication in digital design. Transformation of vision, imaging and cognition.
- ARCH 544** (3+0+0) 3 Credits / 7,5 ECTS
Parametric Design Thinking
(Parametrik Tasarım Düşüncesi)
 An introduction to parametric design. Understanding computer-aided design's theoretical background through its applicable models. Gaining familiarity to concepts like algorithm, parameter, topology and form. Descriptive exploration of architectural examples through parametric design tools. Generating variations of architectural examples via innovative techniques.
- ARCH 551** (3+0+0) 3 Credits / 7,5 ECTS
Fundamentals of Cultural Heritage Conservation
(Kültürel Mirası Korumanın Temelleri)
 Introduction to the principles of conservation of cultural heritage. Examples of conservation implementations both national and international. Problems and developments in the field of conservation in the world and Turkey. The impact of political, social and economic inputs on cultural heritage conservation.
- ARCH 571** (3+0+0) 3 Credits / 7,5 ECTS
Visual Culture
(Görsel Kültür)
 A critical survey on the development of contemporary visual culture and its historical background. Analysis on the operations of certain concepts, approaches, practices and ideas constituting this culture and how they engage with social, cultural and political issues.
- ARCH 581** (3+0+0) 3 Credits / 7,5 ECTS
Spatial Products, Practices and Politics [in Ankara]
(Mekânsal Ürünler, Mekânsal Pratikler ve Siyaset - Ankara Örneği)
 Spatial Products, Practices and Politics are three species of spaces that are distinct yet intimately entwined. Spatial Products refers to manufactured entities, such as buildings, public spaces, monuments, gardens and transport infrastructures as well as the vehicles set upon them. Spatial Practices describes an unwieldy cohort of professionals and amateurs whose work involves the imagining, configuring or destruction of spaces. Spatial Politics underlines the ways in which spaces (often referred to as 'territories' – occupied, contested, or otherwise) are an embedded instrument of political imagination or discourse. The course focuses on the Capital city Ankara.

ARCH 582**(3+0+0) 3 Credits / 7,5 ECTS****Rethinking Technologies****(Teknolojileri Yeniden Düşünmek)**

As electronic communication and accelerated modes of transportation shrink our planet more and more, technologies are often assumed to be the science of either salvation or human damnation. On the one hand, postmodern celebrations of contemporary technology and iDES related cultural sensibilities can be viewed. On the other hand, elegies on the death of nature and the dangers of automation and dehumanization can be portrayed. By avoiding one or the other extreme, the course intends to rethink technologies in an advanced technological age. With variety of approaches raised by the writings of Heidegger, Benjamin, Virilio, Guattari, Jean Luc Nancy, this course tries to show how the necessity to rethink technologies is at the heart of our present and future existence.

ARCH 584**(3+0+0) 3 Credits / 7,5 ECTS****Architecture of Urban Form Through History****(Tarih Boyunca Kentsel Biçimin Mimarisi)**

Key elements of urban form and related historical building typologies. Topics on urban elements -such as streets, city squares, gardens and fortifications- through history of architecture. Continuity and change in urban form.

DEPARTMENT OF CITY AND REGIONAL PLANNING

Chair

Prof. Baykan Günay

Academic Staff

Prof. Baykan Günay, Assoc. Prof. Ela Ataç, Asst. Prof. Cansu Canaran, Asst. Prof. Ersan Ocak, Asst. Prof. Zeki Kamil Ülkenli, Başak Aycan*, Elif Merve Nalçakar*, Irmak Yavuz*.

* Research Assistant

Undergraduate Program in City and Regional Planning

The Department of City and Regional Planning at TEDU considers planning as the art of intervening with the spatial structures of both the cities and regions. To accomplish this task, the understanding of economic, social, political and administrative evolutions is vital. City and region cover a wide variety of topics. City and regional, in short, spatial planners should have the capacity to command and cope with immense problems. A Pioneering Planning education, in this regard, which will redefine the planning practice and effectively perform it in controlling and shaping the urban environment, is one of the main aims of the department. From this perspective, it is essential to manage an education for city planners working in either public or private sector, to be able to break the blocked framework of construction plan and to design & develop engineering, problem definition and solution proposals beyond.

The Education Program of TEDU Department of City and Regional Planning aims its students to complete their education with a condensed relationship of contemporary academic and technological developments as well as of professional practices. According to this aim, it is essential to serve a technologically evolving instruction which allows students to criticize new concepts and tools. Nevertheless, it's also expected students and researchers to follow contemporary academic agendas and guide them.

Mutual education projects and consultancies with several sectors will have an important role to establish the dialogue and cooperation between the society - university and sector – university as well as to contribute the technological developments. It is also a priority to integrate contemporary important subjects of "sustainable product", "sustainable natural environment and material", "sustainable creative performance" as the attitudes of design to the educational process and to educate sensible planners.

Perceiving these facts, TEDU Department of City and Regional Planning, in the long run:

- Aims to educate students in the more specific fields of social, engineering and design fields,
- Transfer knowledge to the students not so much for its intrinsic value, but mostly in order to solve problems arising in practical and theoretical activities,
- Develop students' capacities of reasoning procedures so that they not only acquire knowledge, but also learn to think will constitute the basis education.

The aim of TEDU Department of City and Regional Planning is:

- Encouraging personal abilities and skills through lifelong learning praxis, which enhances methodological research, analytical and critical thinking, alternative problem solving and intellectual generativity.
- In addition to design thinking in the field of planning and projecting the future, developing policies in cooperation with stakeholders and partners, developing flexible thinking abilities in the process of developing creativity.
- Creating social, environmental and social awareness, internalizing these values in the professional field, gaining sensitivity in terms of occupational ethics and social service.
- Encouraging interdisciplinary co-operations as well as collaborations with various fields, and formulating mutual domains within these fields.
- Building skills in terms of following contemporary movements through the utilization of current communication techniques and integrating latest technologies in the process as well as developing it further.

Program Outcomes

Within this scope the students of TEDU, Department of City and Regional Planning are expected to realize:

1. Identifying the problem in the context of planning, integrating disciplinary knowledge, interdisciplinary approach, and the knowledge related to associative fields in the process of problem solving.
2. Designing different scales related to the program of planning systematically, and developing know-how in terms of material and production methods within the scope of urbanism.
3. Utilizing current knowledge and information technologies in the processes of thinking, producing, and representing.
4. Proficiency in English and in Turkish in terms of expressing oneself literally and verbally.
5. Utilizing theoretical and empirical knowledge in practice.
6. Developing self-discipline for life-long learning, time management, methodological work and research habits.
7. Developing abstract, analytical and relational thinking skills in internalizing design and planning concepts and processes.
8. Generating plans and proposals through the guidance of basic and universal principles of planning field.
9. Developing personal creativity and skills in order to convey creative thinking, perspectives and solutions.
10. Evaluating available information and applications through appropriate research methods, qualified examination, and ethical point of views.
11. Developing a planning approach or a project in a professional and participative manner individually or as a part of a group.

Having social responsibility and ethical consciousness in the planning discipline, as well as identifying and evaluating the relationship between people and built environment through social factors, human behavior, and cultural diversity.

Undergraduate Curriculum

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
CITY 101	Basic Design in Planning I	2	8	0	6	9
CITY 111	Graphic Communication Techniques in Architecture and Planning I	2	2	0	3	5
CITY 121	Introduction to the City and City Planning	3	0	0	3	5
MATH 109	Basic Calculus	3	2	0	4	7
ENG 101	English for Academic Purposes	2	2	0	3	5
TOTAL		12	14	0	19	31

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
CITY 102	Basic Design in Planning II	2	8	0	6	10
CITY 112	Graphic Communication Techniques in Architecture and Planning II	2	2	0	3	5
CC	Common Core MATH For FA Students	3	0	0	3	5
ENG 102	Expository Writing	2	2	0	3	5
CMPE 101	Introduction to Information Technologies	2	0	2	3	5
TOTAL		11	12	2	18	30

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
CITY 201	Planning Studio I	2	8	0	6	11
CITY 211	Urban Economics	2	0	0	2	5
CITY 213	Regional and Urban Geography	2	0	0	2	5
SOC 103	Introduction to Sociology	3	0	0	3	5
TUR 101	Turkish I	2	0	0	2	2
HIST 101	History of Turkish Republic I	2	0	0	2	2
TOTAL		13	8	0	17	30

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
CITY 202	Planning Studio II	2	8	0	6	11
CITY 232	The City in History	3	0	0	3	5
CC	Natural Sciences/Social Sciences/Humanities/Art	3	0	0	3	5
CC	Natural Sciences/Social Sciences/Humanities/Art	3	0	0	3	5
TUR 102	Turkish II	2	0	0	2	2
HIST 102	History of Turkish Republic II	2	0	0	2	2
TOTAL		15	8	0	19	30

Semester 5

Code	Course Title	C	P	L	Cr	ECTS
CITY 399	Summer Practise I: Research and Analysis Practise	0	0	0	0	2
CITY 301	Planning Studio III	2	8	0	6	12
CITY-DEPT.	Departmental Elective	3	0	0	3	5
CC	Natural Sciences/Social Sciences/Humanities/Art	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
TOTAL		11	8	0	15	29

Semester 6

Code	Course Title	C	P	L	Cr	ECTS
CITY 302	Planning Studio IV	2	8	0	6	11
CITY 322	Urban Circulation and Transport Planning	3	0	0	3	4
CITY 352	Planning Theory and Techniques	3	0	0	3	5
FREE	Free Elective	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
TOTAL		14	8	0	18	30

Semester 7

Code	Course Title	C	P	L	Cr	ECTS
CITY 499	Summer Practise II: Planning and Design Practise	0	0	0	0	2
CITY 401	Planning Studio V	2	8	0	6	12
CITY-DEPT.	Departmental Elective	3	0	0	3	5
FREE	Free Elective	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
TEDU 400	Student Development Seminar	0	0	0	0	1
TOTAL		11	8	0	15	30

Semester 8

Code	Course Title	C	P	L	Cr	ECTS
CITY 402	Planning Studio VI	2	8	0	6	10
CITY 412	Urban Morphology	2	1	0	2	5
CITY-DEPT.	Departmental Elective	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
F	Free Elective	3	0	0	3	5
TOTAL		13	9	0	17	30

Totals expected for graduation		100	75	2	138	240
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* Students are required to take MATH 202 Linear Algebra from the Mathematics pool and they are expected to take 4 courses (each from a different CC group) among the 5 Common Core groups (Natural Sciences/Social Sciences/Humanities/Art/Literature).

Courses with Pre-requisites

Course Name	Pre-requisites
CITY 102 Basic Design in Planning	CITY 101
CITY 112 Graphic Communication Techniques in Architecture and Planning	CITY 111
CITY 201 Planning Studio I	CITY 102
CITY 202 Planning Studio II	CITY 201
CITY 301 Planning Studio III	CITY 202
CITY 302 Planning Studio IV	CITY 301
CITY 401 Planning Studio V	CITY 302
CITY 402 Planning Studio VI	CITY 401
CITY 499 Summer Practise II: Planning and Design Practise	CITY 399

Undergraduate Course Descriptions

CITY 101 **(2+8+0) 6 Credits / 9 ECTS**

**Basic Design in Planning I
(Planlamada Temel Tasarım I)**

Abstract thinking and the ability of representing it in the second and third dimensions. Development of design skills in the concepts of order, frame of reference, balance, positive and negative values, three dimensional representation and composition. Encouraging creativity, and the perception of part-whole relations.

CITY 102 **(2+8+0) 6 Credits / 10 ECTS**

**Basic Design in Planning II
(Planlamada Temel Tasarım II)**

Using abstract basic design thinking and principles and in the frame of topographical data, practicing mass-space relations of human settlements, space organization and hierarchy, location, and circulation. Drawings and models. Problem definition, analysis and producing design options.

Pre-requisite: CITY 101

CITY 111 **(2+2+0) 3 Credits / 5 ECTS**

**Graphic Communication Techniques in Architecture and Planning I
(Planlama ve Mimarlıkta Grafik İletişim Teknikleri I)**

Visualization and representation techniques in different mediums. Orthographic projection, free-hand drawing, photography, communication with digital mediums.

CITY 112 (2+2+0) 3 Credits / 5 ECTS

Graphic Communication Techniques in Architecture and Planning II
(Planlama ve Mimarlıkta Grafik İletişim Teknikleri II)

Field surveying and analysis techniques, master plan development, activities and circulation, creation of form, site sections, housing, center, redevelopment, design of streets and ways, utility systems, landscaping, problems of pollution, climate and orientation.

Pre-requisite: CITY 111

CITY 121 (3+0+0) 3 Credits / 5 ECTS

Introduction to the City and City Planning
(Kent Olgusuna ve Kent Planlamasına Giriş)

City Planning with its major relations with other disciplines; factors that create and continuously shape human settlements, urban and rural; the shaping of urban macroform handled with relation to urban sociology and economy. Urban structure with land use and land supply, in the light of activity systems. Processes and procedures of planning, its types, plan hierarchies and land-use patterns; introductory information about urban CBD, housing settlements, recreation zones investigated in relation to accessibility. Relations-tensions between design and planning.

CITY 201 (2+8+0) 6 Credits / 11 ECTS

Planning Studio I
(Planlama İşliğı I)

Comprehensive planning of urban/regional areas of a city, analysis of its population, inner structure, demographic profile, work-force and land-use, producing future master plan, to comply with future projections to conclude the future land-use and infra-structure with the new access network.

Pre-requisite: CITY 102

CITY 202 (2+8+0) 6 Credits / 11 ECTS

Planning Studio II
(Planlama İşliğı II)

Production of application plans, relying on the "master plan" produced before. Urban center, housing zones, neighborhoods, recreation areas or their complementary wholes as entities in parallel to methods and tools already covered in the first year.

Pre-requisite: CITY 201

CITY 211 (2+0+0) 2 Credits / 5 ECTS

Urban Economics
(Kent Ekonomisi)

Introduction to principles of economics and urban economics. Market structures and urban economic actors. Agents and processes of urban supply and demand. Urban land as capital. Urban production and consumption and waste. Nature of urban spatial market(s) and their relation to local, national, international and global counterparts.

- CITY 213** (2+0+0) 2 Credits / 5 ECTS
Regional and Urban Geography
(Kentsel ve Bölgesel Coğrafya)
 Settlement systems and their hierarchy, site-decision theories, historic and modern urban forms and their corresponding urban bodies with their theoretical conceptions. Land-use and activity patterns for cities in comparison with density patterns. Connections between activity patterns and physical structure with descriptive analysis of statistical and demographical methods and surveys.
- CITY 232** (3+0+0) 3 Credits / 5 ECTS
The City in History
(Tarih İçinde Kent)
 Diversity in historiography of urban history, pre-industrial and post-industrial cities, their impact on urban form. 20th century urban developments in the West, modern architecture, modern planning policies and new urban forms, with their local adaptations in Turkey. The current trends of global city, post-modern city and the 'limitless-city'.
- CITY 301** (2+8+0) 6 Credits / 12 ECTS
Planning Studio III
(Planlama İşliđi III)
 Basic principles of structural planning. Urban form, infrastructure and accessibility (pedestrian and vehicular transport); CBDs and sub or secondary city-centers; public space allocations, open spaces and activity. Problems pertaining to each of these in current settlements, future policies and strategies. Pre-requisite: CITY 202
- CITY 302** (2+8+0) 6 Credits / 11 ECTS
Planning Studio IV
(Planlama İşliđi IV)
 Urban components defined and investigated in CRP 301; CBD, neighborhoods, urban public space, or areas instigating problems like urban transformation, urban transport nodes, design, planning strategies and alternative solutions. The alternatives, implementation strategies and their corresponding circumstances. Pre-requisite: CITY 301
- CITY 322** (3+0+0) 3 Credits / 4 ECTS
Urban Circulation and Transport Planning
(Kentsel Dolaşım ve Ulaşım Planlaması)
 Urban circulation and transportation concepts are interrelated with corresponding activities, with regard to the material road. Historic accessibility and road systems are handled with respect their contribution to the development of circulation and transportation systems. Rural and urban transport systems, the nature and agents of urban transport, the supply-demand analysis for urban transport is maintained. Urban land use, allocation of functions in urban land and corresponding activity patterns, are correlated with circulation-access patterns to convey transportation economics and its future roles and trends.

CITY 330**(3+0+0) 3 Credits / 5 ECTS****Economics of Urban and Regional Development
(Kentsel ve Bölgesel Kalkınmanın Ekonomisi)**

Concepts, theories, and analytical tools of urban and regional economic growth and development. Macroeconomic approaches to the issues in urban and regional development. Microeconomic methodologies in analyzing the role of the factors of production such as labor, physical capital, human capital, social capital, natural resources, and entrepreneurship in urban and regional economic development. Importance of institutions and governance in urban and regional development. Economic and social improvements as measures of urban and regional development-better quality infrastructures, improved community services, diverse goods and services, lower unemployment, rising average wealth, and improved quality of life. Emerging issues in urban and regional economic development.

CITY 331**(3+0+0) 3 Credits / 5 ECTS****Regional and Urban Economics
(Bölgesel ve Kentsel Ekonomi)**

Market economy and state enterprise are investigated with their reflection on production, consumption and urban management activities, with regard to capital development and the rent value of urban property as commodity. The city, its economic activities and the physical structure with its rent value that both instigate constitute the limits of the course. Economics of size and scale, economic ground, theory of centrality, theory of size and hierarchy, the theory of mega-cities to be considered as reflections of economies of urban accumulation and comparative superlatives. Revenues of urban land; absolute, relative and monopoloid urban rent theories will be under focus.

CITY 351**(3+0+0) 3 Credits / 5 ECTS****Topics of Planning Survey
(Planlamada Araştırma Konuları)**

Evolution of physical space and urbanization. Social and economic factors in city development. Administration of the city. Planning legislation. Role of physical geography in the formation of cities. Physical structure of the city. Activity structure of the city. Sectorial topics in city planning survey – Centre, Housing, Recreation.

CITY 352**(3+0+0) 3 Credits / 5 ECTS****Planning Theory and Techniques
(Planlama Kuramı ve Teknikleri)**

The development of planning theory and ideas (physical, comprehensive, structural, systems approach, advocative, participatory, market-sensitive and social-sensitive, etc.), the dichotomy of planning and design, regional and urban agents of research-analysis-alternative approaches, population and work-force prediction methods, development of algorithms. Decision-making, choice-making, game theory, strategic choice-making methods.

CITY 362**(3+0+0) 3 Credits / 5 ECTS****Sociology of Planning and Design
(Planlama Ve Tasarım Sosyolojisi)**

Social, spatial and physical approaches to the city. Core concepts and set of core writings on city planning, design, sociology and urbanization. Theoretical perspectives and empirical practices. The role of built environment in shaping social interactions. Planning and urbanization theories, urban social theories, ecological models of urban form, social space, main types of people activity in public spaces, urban way of life, place and identity, urban inequalities, community and neighborhood relations, urban renewal and redevelopment, globalization in social perspective and future cities. Collaborative and multiple ways of learning: Oral presentation, class work, reading, writing, discussions, exams and active class participation.

CITY 399**(0+0+0) 0 Credit / 2 ECTS****Summer Practise I: Research and Analysis Practise
(Yaz Stajı I: Araştırma ve Analiz Stajı)**

Research and analysis stages of field/area/site works, planning and design studies. Fundamentals of geographic information systems and computer aided design programs at diverse scales (ArchGIS, AutoCAD, Autodesk Revit, Sketchup, Adobe Photoshop, Illustrator etc). Students can realize their summer practice in planning, architecture, urban design, geographic and spatial information systems offices, worksites, or public institutions either in domestic or foreign institutions according to their professional interests. The minimum duration of the summer practice is 30 work days.

CITY 401**(2+8+0) 6 Credits / 12 ECTS****Planning Studio V
(Planlama İşliđi V)**

The principles of foundational environmental planning, sustainability, infrastructure, energy and environment. The challenges of urban-rural, energy production-consumption, and its very relation with the urban-rural, optimizations of infrastructure, the transformation of the urban and its infrastructure, sustainable urban development, the participation of social groups to planning and environmental management, with their corresponding problem definitions and future strategies and policies to overcome the problems.

Pre-requisite: CITY 302

CITY 402**(2+8+0) 6 Credits / 10 ECTS****Planning Studio VI
(Planlama İşliđi VI)**

Relying on the first semester's problem area and problem definitions, working on environmental problems (like urban-environmental form; energy production-urban form; urban development-rural preservation; infrastructure and cities; sustainable urban form) to derive design strategies and alternatives. Developing participatory governance models, using mathematical models.

Pre-requisite: CITY 401

CITY 411 (3+0+0) 3 Credits / 5 ECTS

**Construct of the City
(Kentin Kurgusu)**

Layouts, patterns, texts, stories and other narratives and constructions that give way to the making of cities; the making of urban landscape; diversity of urban spatial textures; importance of perception and cognition in the design and planning of urban space; developing scenarios pertaining to the making and sustenance of urban space.

CITY 412 (2+1+0) 2 Credits / 5 ECTS

**Urban Morphology
(Kentsel Morfoloji)**

Approaches and theories regarding the making and understanding of the physical dimensions of the urban form, urban tissues. Diverse schools of morphogenesis and morphology; the syntax of space, Spacesyntax; use of GIS in urban spatial analysis; techniques regarding the formation of the built-up and textural qualities of the city; understanding the CBD, city-centre and the fringe developments of the city.

CITY 421 (3+0+0) 3 Credits / 5 ECTS

**Natural Environment and the City
(Doğal Çevre ve Kent)**

Natural environment and design; allocation of functions and planning of the rural land; discussions regarding the tension between town-and-country, rural landscape; energy dependent-energy efficient design; ecology in environmental design; sustainable design are issues that are comprehended.

CITY 422 (3+0+0) 3 Credits / 5 ECTS

**Social Environment and the City
(Toplumsal Çevre ve Kent)**

Men-Environment Relations; the individual and the group behavior; possession and sense of belonging; territory and place as concepts; the definition of environment as micro-meso-macro scales; urban image; urban aesthetics; individual reception of the urban; participation in planning; with case studies.

CITY 430 (3+0+0) 3 Credits / 5 ECTS

**City Planning Law and Implementations
(Şehir Planlama Hukuku ve Uygulamaları)**

Basic knowledge about legal issues of city planning and those related to public administration. The language of planning law is the core intent of the course. Legislations of zoning control, zoning tools, building procedures, urban regeneration, urban design and public services. The implementational aspects of spatial planning, local case studies as well as precedents in other countries. The emergent issues and practices of judicial cases.

CITY 462**(3+0+0) 3 Credits / 5 ECTS****Models in Urban Planning****(Kent Planlamasında Modeller)**

Systems Approach and its relations with models; model formation models; urban model types; concept; prediction-making of spatial interference; model calibration; problem definition making; planning and attraction modelling comprehended.

CITY 499**(0+0+0) 0 Credit / 2 ECTS****Summer Practice II: Planning and Design Practice****(Yaz Stajı II: Planlama ve Tasarım Stajı)**

Yurt içi/yurt dışı planlama, mimarlık, kentsel tasarım ofisinde /şantiyesinde ya da bir kamu kurumunda planlama, tasarım, proje geliştirme, temsil ve sunum süreçlerine aktif olarak katılım. Bu staj kapsamında öğrencilerin, çalıştığı kurumun düzen ve organizasyonunu, proje gelişim aşamalarını, uygulama ilişkilerini izlemeleri ve bu sürece aktif olarak katılmaları beklenmektedir. Asgari staj süresi 30 iş günüdür.

Pre-requisite: CITY 399

DEPARTMENT OF INDUSTRIAL DESIGN

Chair

Asst. Prof. Sedef Süner Pla Cerda

Academic Staff

Asst. Prof. Sedef Süner Pla Cerda, Asst. Prof. Aren Emre Kurtgözü, Asst. Prof. Canan E. Ünlü, Asst. Prof. Damla Özer, Batuhan Şahin*, Lilyana Yazirlioğlu*.

* Research Assistant

Undergraduate Program in Industrial Design

The undergraduate program in Industrial Design (ID) at TEDU embraces user-centred design approach for the betterment of life, and puts emphasis on developing creative and practical problem-solving skills of students. Moreover, TEDU ID aims to improve capacity for collaboration, teamwork and co-creation processes which are essential for designers in professional life, and to develop basic skills of design process such as user-centred research, conceptual product development for defined needs, modelling, prototyping, and evaluating the end product.

TEDU ID's vision is to provide education which is interactive, research-oriented and compliant with international standards. It aims to educate industrial designers who are innovative and competitive at national and international levels, creative and entrepreneurial, sensitive to ethics and sustainability issues, and have social awareness. TEDU ID's goal is to deliver a unique, independent and research-centered environment to students.

Graduates of TEDU ID undergraduate program correspond to the necessities of various industries and collaborate dexterously within interdisciplinary teams; have knowledge and skills about contemporary issues of design such as design for sustainability, open design, user-centered design and social innovation; have the awareness of environmental, ethical, social and professional responsibilities; develop abstract, analytical and relational thinking skills; are competent in presentation techniques and have excellent visual, verbal and literary communication skills; keep abreast of social, economic and technological developments, and have prescience of future products and novel use contexts; are eager for independent and continuous learning; have motivation for observation, research, questioning and initiative, and have flexible thinking skills; have the expertise in conventional and contemporary production technologies and materials, and construct these into useful and suitable products for users with creative and planned processes.

Program Outcomes

By the end of this degree, students should be able to do the following:

1. Interpret architectural knowledge in problem definition and design processes in the context of related arts within an interdisciplinary approach, develop critical evaluation of theoretical and conceptual theories, define the design problem and propose solutions.
2. Demonstrate compatibility in product, system and process design in industrial design discipline, have appropriate knowledge of material and production methods and be able to apply knowledge.
3. Use up to date information and communication technologies in thinking, producing and presentation processes.

4. Demonstrate competence in written and verbal expression of ideas and thoughts both in Turkish and English.
5. Apply theoretical and practical knowledge to praxis.
6. Develop self-discipline for lifelong learning, time management, methodological study, and research habits.
7. Develop skills for abstract, analytical and relational thinking in internalizing notions of design and design processes.
8. Generate designs and proposals employing basic, environmental and universal design principles.
9. Develop personal creativity and skills to communicate creative ideas, perspectives and solutions.
10. Evaluate current knowledge and praxis, using appropriate research methods, skilled questioning, critical thinking and ethical perspectives.
11. Develop a product, individually and within a team integrating phases from formulation to completion, in a professional and collaborative context.
12. Identify and criticize the relationship between people and built environment by relating ethical issues, social factors, human behaviors and cultural diversities.

Undergraduate Curriculum

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
ID 101	Basics of Design	2	8	0	6	9
ID 111	Visual Communication Techniques I	2	2	0	3	5
ID 121	Introduction to Industrial Design	3	0	0	3	5
MATH 109	Basic Calculus	3	2	0	4	7
ENG 101	English for Academic Purposes	2	2	0	3	5
TOTAL		12	14	0	19	31

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
ID 102	Basics of Three Dimensional Design	2	8	0	6	10
ID 112	Visual Communication Techniques II	2	2	0	3	5
CC	Common Core MATH For FA Students	3	0	0	3	5
ENG 102	Expository Writing	2	2	0	3	5
CMPE 101	Introduction to Information Technologies	2	0	2	3	5
TOTAL		11	12	2	18	30

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
ID 201	Industrial Design I	2	8	0	6	11
ID 221	History and Theory of Design I	3	0	0	3	5
ID 241	Structure and Design	3	0	0	3	5
CC	Natural Sciences/Social Sciences/Humanities/Art	3	0	0	3	5
TUR 101	Turkish I	2	0	0	2	2
HIST 101	History of Turkish Republic I	2	0	0	2	2
TOTAL		15	8	0	19	30

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
ID 202	Industrial Design II	2	8	0	6	11
ID 272	Manufacturing: Materials and Technologies	3	0	0	3	4
CC	Natural Sciences/Social Sciences/Humanities/Art	3	0	0	3	5
CC	Natural Sciences/Social Sciences/Humanities/Art	3	0	0	3	5
TUR 102	Turkish II	2	0	0	2	2
HIST 102	History of Turkish Republic II	2	0	0	2	2
TOTAL		15	8	0	19	29

Semester 5

Code	Course Title	C	P	L	Cr	ECTS
ID 301	Industrial Design III	2	8	0	6	11
ID 381	Ergonomics and Human Factor in Design	2	2	0	3	7
ID 399	Summer Practice I: Manufacturing	0	0	0	0	2
CC	Natural Sciences/Social Sciences/Humanities/Art	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
TOTAL		10	10	0	15	30

Semester 6

Code	Course Title	C	P	L	Cr	ECTS
ID 302	Industrial Design IV	2	8	0	6	11
ID 342	History and Theory of Design II	2	0	0	2	5
ID-DEPT.	Departmental Elective	3	0	0	3	5
FREE	Free Elective	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
TOTAL		13	8	0	17	31

Semester 7

Code	Course Title	C	P	L	Cr	ECTS
ID 499	Summer Practice II: Design Office	0	0	0	0	2
ID 401	Industrial Design V	2	8	0	6	12
ID-DEPT.	Departmental Elective	3	0	0	3	5
FREE	Free Elective	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
TEDU 400	Student Development Seminar	0	0	0	0	1
TOTAL		11	8	0	15	30

Semester 8

Code	Course Title	C	P	L	Cr	ECTS
ID 402	Industrial Design VI	2	8	0	6	12
ID 462	Profession and Practice in Design	1	0	0	1	2
ID-DEPT.	Departmental Elective	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
FREE	Free Elective	3	0	0	3	5
TOTAL		12	8	0	16	29

Totals expected for graduation		99	76	2	138	240
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Courses with Pre-requisites

Course Name	Pre-requisites
ID 102 Basics of Three Dimensional Design	ID 101
ID 112 Visual Communication Techniques II	ID 111
ID 201 Industrial Design I	ID 102
ID 202 Industrial Design II	ID 201
ID 301 Industrial Design III	ID 202
ID 302 Industrial Design IV	ID 301
ID 401 Industrial Design V	ID 302
ID 402 Industrial Design VI	ID 401
ID 499 Summer Practice II: Design Office	ID 399

Undergraduate Course Descriptions

ID 101 **(2+8+0) 6 Credits / 9 ECTS**

Basics of Design
(Tasarımın Temelleri)

Basic rules and principles of design. Knowledge and skills in basic design concepts, design elements, visual thinking, presentation of thought in two dimension, organization, composition, abstraction. Elements of Design: Point, Line, Shape, Dimension, Texture, Value, Color. Principles of Design: Direction, Repetition, Harmony, Balance, Unity, Dominance, Contrast, Rating, Permeability, Movement, Rhythm, Diversity, Change,...

ID 102 **(2+8+0) 6 Credits / 10 ECTS**

Basics of Three Dimensional Design
(Üç Boyutlu Tasarımın Temelleri)

The basic design elements and principles studied in the prerequisite course (ID101 Design Principles) are applied in three-dimensional compositions with advanced exercises. Additionally, with these exercises, students work with various materials and develop their hand skills. During this semester, students begin to design functional objects that require simple form studies.

Pre-requisite: ID 101

ID 111 **(2+2+0) 3 Credits / 5 ECTS**

Visual Communication Techniques I
(Görsel İletişim Teknikleri I)

Visualization and graphic representation techniques in different media. Conventions and universal standards of technical drawing, orthographic projection, isometric drawing, free-hand sketching.

ID 112**(2+2+0) 3 Credits / 5 ECTS****Visual Communication Techniques II
(Görsel İletişim Teknikleri II)**

Visualization and graphic representation techniques in different media. Expression and communication of design ideas, design elements and formal attributes. Free-hand sketching, Perspective drawing, Introduction to 3 Dimensional modeling techniques, Introduction to communication with digital media.

Pre-requisite: ID 111

ID 121**(3+0+0) 3 Credits / 5 ECTS****Introduction to Industrial Design
(Endüstriyel Tasarıma Giriş)**

Fundamental design terminology. Design process and design thinking. Historical and organisational context of industrial design as a profession. Relationship of industrial design to other design disciplines. Career paths and emerging issues in industrial design.

ID 201**(2+8+0) 6 Credits / 11 ECTS****Industrial Design I
(Endüstriyel Tasarım I)**

Introduction to formal, structural and functional components of design. Efficiency in manufacture and use of resources. Basics of human-product interaction. Knowledge and skills in user-centred design process.

Pre-requisite: ID 102

ID 202**(2+8+0) 6 Credits / 11 ECTS****Industrial Design II
(Endüstriyel Tasarım II)**

Formal, structural and functional components of design. Efficiency in manufacture and use of resources. Building blocks of human-product interaction. Knowledge and skills in user-centred design process. Design as communication.

Pre-requisite: ID 201

ID 221**(3+0+0) 3 Credits / 5 ECTS****History and Theory of Design I
(Tasarım Tarihi ve Kuramı I)**

Introduction to design history. Analysis of the social, economic, political and technological climate of the last three centuries in which design has taken shape. In-depth examination of the impact of design and designed products upon the social experiences, daily lives and material culture of different regions and geographies.

ID 241**(3+0+0) 3 Credits / 5 ECTS****Structure and Design
(Yapısal Sistem ve Tasarım)**

Basic knowledge of structures, fundamental principles of structural behaviors. Relationship between structure, geometry and form. States of stress and deformation. Analysis of simple structural systems,

force characteristics, internal and external forces, loads, moment, equilibrium, support conditions and reactions, shear and axial forces, bending moments.

ID 272 (3+0+0) 3 Credits / 4 ECTS

Manufacturing: Materials and Technologies
(**Üretim: Malzeme ve Teknolojiler**)

Industrial manufacturing technologies and processes. Forming, finishing and joining methods. Materials and their physical, mechanical and experiential properties in relation to product design.

ID 301 (2+8+0) 6 Credits / 11 ECTS

Industrial Design III
(**Endüstriyel Tasarım III**)

Multi-dimensional design problems, service design and systems thinking. Social and ecological sustainability within the context of design practice. Advanced design communication techniques.

Pre-requisite: ID 202

ID 302 (2+8+0) 6 Credits / 11 ECTS

Industrial Design IV
(**Endüstriyel Tasarım IV**)

Design for user experience, interactive product design and product-user interfaces. Future projections in design and speculative design. Multi- dimensional design problems, service design and systems thinking. Advanced design communication techniques.

Pre-requisite: ID 301

ID 311 (2+2+0) 3 Credits / 5 ECTS

Model Making
(**Model Yapımı**)

Model making processes; industrial standards in model making; models as a decision making and presentation tool in design; equipment, tools and materials for model making.

ID 312 (2+2+0) 3 Credits / 5 ECTS

Computer Graphics and Presentation Techniques I
(**Bilgisayar Grafik ve Sunum Teknikleri I**)

Introduction to multi-media presentation techniques to deliver design ideas. Contemporary digital tools for 2D and 3D visualization in design.

ID 313 (2+2+0) 3 Credits / 5 ECTS

Computer Graphics and Presentation Techniques II
(**Bilgisayar Grafik ve Sunum Teknikleri II**)

Advanced multi-media presentation techniques to deliver dynamic design interfaces. Contemporary digital tools for 2D, 3D and 4D representation in design.

ID 314 (2+2+0) 3 Credits / 5 ECTS

Color in Design
(**Tasarımda Renk**)

Introduction to color theories; introduction to color systems; language of color; color terminology; subjective use of color; color character; psychology of color; exercises: practical applications of theoretical color knowledge.

ID 320**(2+2+0) 3 Credits / 5 ECTS****Sustainable Living and Design
(Sürdürülebilir Yaşam ve Tasarım)**

Introduction to basic concepts in sustainability field and contemporary sustainable design endeavors. Critical thinking necessary for serving to sustainable living practices. Design and system solutions for sustainable living.

ID 322**(3+0+0) 3 Credits / 5 ECTS****Contemporary Issues in Design
(Tasarımda Çağdaş Söylemler)**

Contemporary design theories and practices in the world and Turkey. Overview of current issues in art and design with reference to their social, economic, ideological, cultural and historical underpinnings. Significant and emerging concepts within the discursive formation of the discipline and their reflections on everyday global practices of designers. Experimenting with critical notions by putting current issues into short, conceptual project works.

ID 331**(3+0+0) 3 Credits / 5 ECTS****Introduction to Interior Design
(İç Mekan Tasarımına Giriş)**

Overview of the discipline of interior design; Historical background of the profession; Fundamental concepts and current issues in interior design; The notion of space in relation to its users; Space and place; Types of spaces, Gender and space; Principles, elements and processes involved in designing interiors; Color and light.

ID 332**(2+2+0) 3 Credits / 5 ECTS****Form in Arts and Design
(Sanatta ve Tasarımda Biçim)**

History of form from the aesthetics point of view. Form in different mediums; music, literature, plastic arts, and architecture. Role of form in design activity. Meaning of form in the industrial design field. Trends and tendencies of product forms throughout the industrial design history with justifications. Form-analysis and form-giving exercises.

ID 342**(2+0+0) 2 Credits / 5 ECTS****History and Theory of Design II
(Tasarım Tarihi ve Kuramı II)**

Introduction to theoretical and methodological frameworks in the field of design. Contemporary and historical issues in design discourse. Design rhetorics. Design activism & design hacking. Design anthropology. Eco-design, upcycling and environmental ethics. Experience-driven design. Design thinking, creativity and innovation. Bio-design. Anti- design. Critical and speculative design.

ID 381**(2+2+0) 3 Credits / 7 ECTS****Ergonomics and Human Factors in Design
(Tasarımda Ergonomi ve İnsan Faktörleri)**

Processes and methods of user-centred design. User-product relationships in terms of safety, usability and pleasure in use. Product and interface design in terms of human physics, human psyche and culture.

ID 399**(0+0+0) 0 Credit / 2 ECTS****Summer Practice I: Manufacturing****(Yaz Stajı I: Üretim)**

Introduction to the field of practical applications in industrial design; Observation of collaboration between different professionals in teamwork; First-hand experience of the sphere of production and related code of conduct in workshop; Thorough engagement with materials and processes in manufacturing; The role of design and designers in industrial division of labour.

ID 401**(2+8+0) 6 Credits / 12 ECTS****Industrial Design V****(Endüstriyel Tasarım V)**

Real solutions with a creative approach to current design problems of industrial companies in any size. All the projects held during the course have a complete design process from start to finish with all the components of real situations.

Pre-requisite: ID 302

ID 402**(2+8+0) 6 Credits / 12 ECTS****Industrial Design VI****(Endüstriyel Tasarım VI)**

In line with the knowledge and skills gained over the past 7 semesters of industrial design education, combination of contemporary design theories and individual design methods -with a critical and professional approach- for innovative design solutions for real-life design problems.

Pre-requisite: ID 401

ID 421**(3+0+0) 3 Credits / 5 ECTS****Theory of Design****(Tasarım Teorisi)**

The definition of theory; the meaning and significance of theory within the history of science and philosophy; the function of theory; epistemology and ontology; the foundations of design thinking; the emergence of design theory and design methods; overview of theories and theoretical frameworks imported from different disciplines; designerly ways of knowing; ethics in design; contemporary theoretical work produced within the disciplinary boundaries of design.

ID 430**(2+2+0) 3 Credits / 5 ECTS****Design For User Experience****(Kullanıcı Deneyimi İçin Tasarım)**

Introduction to user experience (UX) definitions and models. Exploration of major concepts in designing for user experience and specific user needs. Review of user-centred design and user research methods. Application of UX methodology both for insight generation and evaluation. Concept generation and low fidelity prototyping for identified needs of specific user groups.

ID 462**(1+0+0) 1 Credit / 2 ECTS****Profession and Practice in Design
(Tasarımda Meslek ve Uygulama)**

Introduction to the general concept of "business" and its features; communication skills for professional world; professional practice and conduct; trademarks, plagiarism, copyright, royalties; design and the law; associations and institutions concerned with the professional practice of industrial design.

ID 464**(3+0+0) 3 Credits / 5 ECTS****Creativity and Innovation in Design
(Tasarımda Yaratıcılık ve Yenilikçilik)**

Creativity, types of innovation, semantic innovation, social innovation, concept generation, branding, product differentiation and positioning, crossover, redesign, problem solving, consumer behavior and preferences, strategies for new product development (NPD), design as a strategic tool, case studies from Turkey and the world, consumer and market research techniques, design methods, information gathering.

ID 466**(2+2+0) 3 Credits / 5 ECTS****Contemporary Materials and Innovative Technologies
(Yeni Malzemeler ve Yenilikçi Teknolojiler)**

New materials and innovative technologies for contemporary design, production and use. Smart materials and technologies. Additive manufacturing and rapid prototyping methods. Biomaterials, biomanufacturing and circular economy.

ID 499**(0+0+0) 0 Credit / 2 ECTS****Summer Practice II: Design Office
(Yaz Stajı II: Tasarım Ofisi)**

Practical learning experience in a professional design office on the processes of product development, production and marketing; technical, theoretical and ethical considerations in design practice; design management, and cooperation with various parties. Application areas of the industrial design profession. (minimum duration of the summer practice - 30 work days).

Pre-requisite: ID 399

DEPARTMENT OF INTERIOR ARCHITECTURE AND ENVIRONMENTAL DESIGN

Chair

Assoc. Prof. Nur Ayalp

Academic Staff

Assoc. Prof. Nur Ayalp, Asst. Prof. Barış Yakın, Asst. Prof. Gökhan Kınayoğlu, Asst. Prof. İlkay Aslan, Asst. Prof. Onur Yüncü, Cihat Çağlar*, Nevzat Ruhi Eryılmaz*.

* Research Assistant

Undergraduate Program in Interior Architecture and Environmental Design

TED University Department of Interior Architecture and Environmental Design mainly focuses on to educate students' perspective in a global context. In developing global perspective students encourage to discuss the recent developments and problems in their field such as sustainability, innovative/creative design solutions for the psychology of users in different environments. Especially, new technological developments in the field of interior design are in the focus of education policy. In doing so, the Department of Interior Architecture and Environmental Design Department aims to be productive in using techniques of learning by doing.

The program focuses on the profession of interior architecture with its all dimensions. Lighting, material, acoustic, color and formal expressions of these elements in space are one of the focal points of the programme. Whereas the conceptual development in designing spaces by using these design elements is the major concern in educating students. On the other hand, psychological behaviours' of the users in an environment are another essential concern of the program. In this context, students encouraged to deal with the social and cultural dimensions of interiors architecture.

Another important concern of the program is to encourage students to work and communicate with different disciplines that are influential in designing environments. In order to gain a wider perspective in their field, the other disciplines act an essential role in developing their communicational skills. Additionally programme aims to encourage students to develop academics researches within their fields and with the other disciplines.

Generally, the programme assures that students engaged with professional practice in their field and be aware of technological developments on their way to become an expert in interior architecture. Moreover, the programme offers an intensive global perspective in the field of Interior Architecture and Environmental Design.

Program Outcomes

Interior Architecture and Environmental Design Program Outcomes;

1. Develop a three-dimensional abstract perception of spaces, create knowledge in the light of theoretical, and conceptual theories about the profession and to transfer this knowledge to interior design.

2. In order to meet the functional requirements in the context of interior design and to produce solutions to the problems, to have knowledge about the material and production methods covered by the field and to have ability to use this knowledge.
3. To be able to use up-to-date information and communication technologies to present their projects
4. Competence in expressing their ideas both in Turkish and in English.
5. To be able to put into practice the theoretical and abstract knowledge.
6. Development of self-discipline for lifelong learning, time management, methodological study and research habits.
7. Develop the ability to work and communicate with different disciplines that are effective in space design processes.
8. To be able to produce design and suggestions by using basic, environmental and universal principles of design discipline.
9. Developing personal creativity and skills to convey creative thinking, perspectives and solutions.
10. To be able to perceive the relationship between environment and people with a multi-dimensional perspective and evaluate these relationships both in the dimension of physical and psychologic.
11. To be able to develop the projects as a part of an individual or a team by integrating each stage in a professional and participatory context.
12. Identify and criticize the relationship between human and built environment, social factors and ethical consciousness in interior design, and associate it with social factors, human behavior and cultural diversity.

Undergraduate Curriculum

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
TINT 101	Studio I	2	8	0	6	9
TINT 111	Visual Communication Techniques I	2	2	0	3	5
MATH 109	Basic Calculus	3	2	0	4	7
ENG 101	English for Academic Purposes	2	2	0	3	5
TOTAL		9	14	0	16	26

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
TINT 102	Studio II	2	8	0	6	10
TINT 112	Visual Communication Techniques II	2	2	0	3	5
CC	Common Core MATH For FA Students	3	0	0	3	5
ENG 102	Expository Writing	2	2	0	3	5
CMPE 101	Introduction to Information Technologies	2	0	2	3	5
TOTAL		11	12	2	18	30

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
TINT 201	Studio III	2	8	0	6	11
TINT 221	Culture and Theory I	3	0	0	3	5
TINT 251	Construction and Materials	3	0	0	3	5
CC	Natural Sciences/Social Sciences/Humanities/Art	3	0	0	3	5
TUR 101	Turkish I	2	0	0	2	2
HIST 101	History of Turkish Republic I	2	0	0	2	2
TOTAL		15	8	0	19	30

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
TINT 202	Studio IV	2	8	0	6	11
TINT 222	Culture and Theory II	2	1	0	2	5
TINT 212	Environmental Systems and Comfort	1	0	0	1	2
CC	Natural Sciences/Social Sciences/Humanities/Art	3	0	0	3	5
CC	Natural Sciences/Social Sciences/Humanities/Art	3	0	0	3	5
TUR 102	Turkish II	2	0	0	2	2
HIST 102	History of Turkish Republic II	2	0	0	2	2
TOTAL		15	9	0	19	31

Semester 5

Code	Course Title	C	P	L	Cr	ECTS
TINT 301	Studio V	2	8	0	6	11
TINT 311	Light and Color	2	2	0	3	6
TINT 321	Culture and Theory III	3	0	0	3	5
TINT 399	Summer Practice I: Construction Site	0	0	0	0	2
CC	Natural Sciences/Social Sciences/Humanities/Art	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
TOTAL		13	10	0	18	34

Semester 6

Code	Course Title	C	P	L	Cr	ECTS
TINT 302	Studio VI	2	8	0	6	11
TINT 372	Advanced Detailing	3	0	0	3	5
TINT-DEPT.	Departmental Elective	3	0	0	3	5
FREE	Free Elective	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
TOTAL		14	8	0	18	31

Semester 7

Code	Course Title	C	P	L	Cr	ECTS
TINT 499	Summer Practice II: Design Office	0	0	0	0	2
TINT 401	Studio VII	2	8	0	6	12
TINT-DEPT.	Departmental Elective	3	0	0	3	5
FREE	Free Elective	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
TEDU 400	Student Development Seminar	0	0	0	0	1
TOTAL		11	8	0	15	30

Semester 8

Code	Course Title	C	P	L	Cr	ECTS
TINT 402	Studio VIII	2	8	0	6	12
TINT-DEPT.	Departmental Elective	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
FREE	Free Elective	3	0	0	3	5
TOTAL		11	8	0	15	27
Totals expected for graduation		99	77	2	138	240

Courses with Pre-requisites

Course Name	Pre-requisites
TINT 102 Interior Architecture Basic Design II	TINT 101
TINT 112 Technical Drawing II	TINT 111
TINT 201 Interior Design Studio I	TINT 102
TINT 202 Interior Design II	TINT 201
TINT 301 Interior Design III	TINT 202
TINT 302 Interior Design IV	TINT 301
TINT 401 Interior Design V	TINT 302
TINT 402 Interior Design VI	TINT 401
TINT 499 Summer Practice II: Design Office	TINT 399

Undergraduate Course Descriptions

TINT 101 (2+8+0) 6 Credits / 9 ECTS
Studio I
 (Stüdyo I)

The course includes two and three dimensional form-work exercises with the help of deductive and inductive methods in parallel with design principles and perception theories.

TINT 102 (2+8+0) 6 Credits / 10 ECTS
Studio II
 (Stüdyo II)

The course includes two and three dimensional form-work exercises with the help of deductive and inductive methods in parallel with design principles, colour and perception theories.

Pre-requisite: TINT 101

TINT 111 (2+2+0) 3 Credits / 5 ECTS
Visual Communication Techniques I
 (Görsel İletişim Teknikleri I)

The course includes, use of technical drawing tools and equipments, letter, line and drawing standarts according to their use, dimension, measure, scale types, geometry, basic geometric drawings, design.

- TINT 112** (2+2+0) 3 Credits / 5 ECTS
Visual Communication Techniques II
(Görsel İletişim Teknikleri II)
 The course includes, single and double escape perspective drawing, interior space perspective lectures/studies and practice, single furniture perspective lectures/studies and practice.
 Pre-requisite: TINT 111
- TINT 201** (2+8+0) 6 Credits / 11 ECTS
Studio III
(Stüdyo III)
 Interior architecture design process as complex structuring of spatial experiences in relation to the concept of human scale and the physical properties of interior divisions.
 Pre-requisite: TINT 102
- TINT 202** (2+8+0) 6 Credits / 11 ECTS
Studio IV
(Stüdyo IV)
 Development of design strategies based on fundamental interior architecture design components such as scenario/ program setting and materiality in a relatively small space.
 Pre-requisite: TINT 201
- TINT 212** (1+0+0) 1 Credit / 2 ECTS
Environmental Systems and Comfort
(Çevresel Sistemler ve Konfor)
 Technical codes in building systems. Research and project implementation of building systems in project scale. Relations between building systems; electricity, air ventilation and water systems, design solutions with the understanding building systems. Comfort conditions in interior environments. Integrated systems and sustainability.
- TINT 221** (2+0+0) 3 Credits / 5 ECTS
Culture and Theory I
(Kültür ve Kuram I)
 Fundamental knowledge on the development of interior design thought and practices throughout the history up to the 21st century. Global examples of prominent interior architecture, environmental design and theories.
- TINT 222** (2+1+0) 2 Credits / 5 ECTS
Culture and Theory II
(Kültür ve Kuram II)
 Fundamental knowledge on the development of interior design thought and practices throughout the history up to the 21st century. Global examples of prominent interior architecture, environmental design and theories.

TINT 251	(3+0+0) 3 Credits / 5 ECTS
Construction and Materials (Yapısal Sistem ve Malzeme)	
Basic knowledge on the elements and components of buildings and structures. Fundamental principles of structural behaviors. Production of construction and material drawings like staircases and reflected ceiling.	
TINT 301	(2+8+0) 6 Credits / 11 ECTS
Studio V (Stüdyo V)	
Multi-dimensional design problems concerning public and semi public interiors. Cultural, ecological, and social sustainability. Universal design principals. Pre-requisite: TINT 202	
TINT 302	(2+8+0) 6 Credits / 11 ECTS
Studio VI (Stüdyo VI)	
Multi-dimensional design problems concerning social public interior spaces. Cultural, ecological, and social sustainability. Universal design principals. Pre-requisite: TINT 301	
TINT 311	(3+0+0) 3 Credits / 5 ECTS
Model Making (Model Yapımı)	
Model making processes, industrial standards in model making, equipment, tools, materials.	
TINT 312	(3+0+0) 3 Credits / 5 ECTS
Computer Graphics and Presentation Techniques I (Bilgisayar Grafik ve Sunum Teknikleri I)	
3D modeling and advanced multi-media presentation techniques.	
TINT 313	(3+0+0) 3 Credits / 5 ECTS
Computer Graphics and Presentation Techniques II (Bilgisayar Grafik ve Sunum Teknikleri II)	
Advanced 3D modeling and advanced multi-media presentation techniques.	
TINT 314	(3+0+0) 3 Credits / 5 ECTS
Color and Light (Renk ve Işık)	
Color theory, application of color and light in design in psychological, physiological, visual, aesthetic and technical aspects.	

TINT 321 Culture and Theory III (Kültür ve Kuram III)	(3+0+0) 3 Credits / 5 ECTS
Post Modern era in interior design. Cultural changes and reflection on styles in interiors between Post Modern period and recent trends. The effects of today's new technology culture on interior, furniture and materials.	
TINT 322 Contemporary Issues in Interior Architecture (İç Mimarlıkta Çağdaş Söylemler)	(3+0+0) 3 Credits / 5 ECTS
Contemporary design theories and practices in the world and Turkey. Significant concepts in the discursive formations of the discipline and their reflections to the global practice.	
TINT 331 Introduction to Industrial Design (İç Mekan Tasarımına Giriş)	(3+0+0) 3 Credits / 5 ECTS
Introductory concepts of object design with a strong emphasis on the form, material and production. Common applications of spatial design and object design.	
TINT 332 Form in Arts, Architecture and Design (Sanat, Mimarlık ve Tasarımda Biçim)	(3+0+0) 3 Credits / 5 ECTS
Compositional, visual and cultural aspects of form in arts, architecture and design throughout history.	
TINT 372 Advanced Detailing (Üst Düzeyde Detaylandırma)	(3+0+0) 3 Credits / 5 ECTS
Building systems and materials. Modular interior systems. User-product relationships for safe and usable designs. Product and interface design in terms of human physics, human psyche and culture.	
TINT 399 Summer Practice I: Construction Site (Yaz Stajı I: Üretim)	(0+0+0) 0 Credit / 2 ECTS
Summer training on an interior architecture construction site concerning production techniques of different scales. Minimum 30 work days.	
TINT 401 Studio VII (Stüdyo VII)	(2+8+0) 6 Credits / 12 ECTS
A multi-dimensional and complex design problem concerning large interior spaces. Advanced solutions of spatial planning and layout. Standards, codes and regulations. Advanced detailing of design. Advanced use of modes of representation.	
Pre-requisite: TINT 302	

- TINT 402** (2+8+0) 6 Credits / 12 ECTS
Studio VIII
(Stüdyo VIII)
 A multi-dimensional and complex design problem concerning large interior spaces. Advanced solutions of spatial planning and layout. Standards, codes and regulations. Advanced detailing of design. Advanced use of modes of representation.
 Pre-requisite: TINT 401
- TINT 421** (3+0+0) 3 Credits / 5 ECTS
Theory of Design
(Tasarım Teorisi)
 Introduction to interior design historiography. Theory, texts by scholars who have an important role in the creation of conceptualization and interpretation of basic concepts and perspectives in interior design.
- TINT 464** (3+0+0) 3 Credits / 5 ECTS
Interior Design, Environment and Sustainability
(Ürün Tasarımı ve Performansı)
 Advanced issues in product design in relation to performance criteria. Performance analysis concerning processes of manufacturing and use.
- TINT 466** (3+0+0) 3 Credits / 5 ECTS
Contemporary Materials and Innovative Technologies
(Yeni Malzemeler ve Yenilikçi Teknolojiler)
 New materials and innovative technologies for contemporary production, use and recycling processes.
- TINT 499** (0+0+0) 0 Credit / 2 ECTS
Summer Practice II: Design Office
(Yaz Stajı II: Tasarım Ofisi)
 Summer training in a professional interior architecture/ architecture/ design office. The minimum duration of the summer practice is 30 work days.
 Pre-requisite: TINT 399

FACULTY OF
ARTS AND SCIENCES



FACULTY OF ARTS AND SCIENCES

Dean's Statement

Our faculty consists of four departments including 25 very qualified full time faculty members having a variety of research interests. They are all active scientists in their laboratories and in their fields. In addition to being efficient researchers, they also use innovative and active teaching methods with the aim of educating graduates attuned to the core values of the university.

Aside from being a traditional Faculty of Arts and Sciences, we provide a wide range of courses to all students of the university in an attempt to help them increase their intellectual flexibility, gain different perspectives, develop creative, critical and analytical thinking skills, express themselves competently in their verbal and written work, engage in team work and become skilled problem-solvers.

The English Language and Literature Department provides a curriculum for their students that will help them understand various literatures written in English and comparatively investigate current cultures. The program aims to train students for the next century who are able to understand both today's and future's world, to adjust themselves to the rapidly changing and complex conditions of the current system and to ultimately change and transform the world.

Graduates of the Mathematics Department gain a strong theoretical knowledge of mathematics as well as the necessary skills for its applications into other disciplines. Students educated under the high standards of TEDU can easily pursue their graduate studies and also can work in various public and private sectors with these skills.

Psychology students learn to ask complex and detailed questions with their acquired mental dexterity, to identify where and how to find answers to those questions, and to analyze their research results without losing sight of the big picture. These skills are consistent with the dynamic and interdisciplinary nature of the field of Psychology.

Sociology students will be able to enrich their education combining the theories and fieldwork of Sociological Sciences in a natural learning environment, due to the advantage of being in a city university located in the heart of Ankara. Sociology graduates will have sociological vision and be sensitive to social problems, and be able to think creatively and critically.

To be a student in one of our programs means to take part in a vivid and gratifying adventure including continuous learning, searching, discussing and spreading the knowledge via different mediums.

If you wish to experience this adventure and are considering one of our programs, we highly recommend familiarizing yourself with our departments, faculty members and programs by browsing our web pages.

Prof. Kezban Çelik, Deputy Dean

DEPARTMENT OF ENGLISH LANGUAGE AND LITERATURE

Chair

Prof. Yusuf Eradam

Academic Staff

Prof. Yusuf Eradam, Asst. Prof. Ayşegül Kuglin, Asst. Prof. Taner Can, Melike İrem Şimşek*.

* Research Assistant

Undergraduate Program in English Language and Literature

The aim of the department is to provide students with the knowledge, skills and competencies necessary to conduct interdisciplinary academic studies and research in the field of English literature and culture and to share their findings on national and international professional and social platforms.

In this context, the TED University English Language and Literature program aims to educate individuals who can follow the changing global dynamics with an ecological consciousness that is achieved from the literary and cultural texts they study and develop their research and studies by focusing on solving environmental and social problems.

Program Outcomes

Graduates of the English Language and Literature Department:

1. Are sufficiently knowledgeable about the English language, literature and culture.
2. Are sufficiently knowledgeable about literary genres, theories, concepts and terms.
3. Have the theoretical knowledge necessary to examine the canon and contemporary texts of English literature in the context of historical, social, cultural, economic, political and ecological backgrounds.
4. Have theoretical and practical knowledge about the systematic structure, functioning and transformations of the English language.
5. Are able to use analytical strategies in the process of independent thinking and evaluate the information they receive in order to produce new ideas and projects in critical and creative processes.
6. Can collect information and data through individual and / or group work on topics related to English language, literature and culture by using current information technology and research methods and techniques and share this information and data in national and international education and training environments and other professional settings.
7. Can examine literary and cultural texts in an interdisciplinary approach within the framework of contemporary theories.
8. Have the knowledge and skills necessary to teach subjects in English language, literature and culture in national and international settings.
9. Can competently translate texts from English to Turkish and Turkish to English by developing translation strategies for different types of texts.
10. Can perform independent research using problematical, creative and analytical thinking skills, solve problems, and express results using effective methods in national and international professional and social settings.

11. Adopt basic universal values and develop a non-prejudiced, respectful and open-minded attitude towards different languages, religions, gender and cultural identities.
12. Can impart the knowledge, communication skills, critical standpoint and flexibility acquired through the study of culture and literature to their professional and social lives.
13. Gain the ability to conduct scientific research, evaluate resources and write academic articles at the undergraduate level.

Undergraduate Curriculum

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
ENG 111	Advanced English for Academic Purposes	3	0	0	3	5
CMPE 101	Introduction to Information Technologies	2	0	2	3	5
CC	Sci/Soc/Hum/Lit/Art	3	0	0	3	5
CC	Sci/Soc/Hum/Lit/Art	3	0	0	3	5
TUR 101	Turkish I	2	0	0	2	2
MATH 103	Mathematics for Education Majors	3	0	0	3	5
TOTAL		16	2	2	17	27

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
ELL 102	Introduction to Literature	3	0	0	3	7
ENG 112	Advanced Writing	3	0	0	3	5
CC	Sci/Soc/Hum/Lit/Art	3	0	0	3	5
CC	Sci/Soc/Hum/Lit/Art	3	0	0	3	5
CC	Sci/Soc/Hum/Lit/Art	3	0	0	3	5
TUR 102	Turkish II	2	0	0	2	2
TOTAL		17	0	0	17	29

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
ELL 201	Survey of English Literature I	3	0	0	3	7
ELL 203	Mythology	3	0	0	3	8
ELL 205	Translation I	3	0	0	3	8
ELL 207	Research Methods in Literature	3	0	0	3	5
HIST 101	History of Turkish Republic I	2	0	0	2	2
TOTAL		14	0	0	14	30

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
ELL 202	Survey of English Literature II	3	0	0	3	8
ELL 204	Introduction to Fiction	3	0	0	3	7
ELL 206	Translation II	3	0	0	3	8
ELL-DEPT.	Departmental Elective	3	0	0	3	5
HIST 102	History of Turkish Republic II	2	0	0	2	2
TOTAL		14	0	0	14	30

Semester 5

Code	Course Title	C	P	L	Cr	ECTS
ELL 301	19th Century English Novel	3	0	0	3	6
ELL 303	19th Century English and American Poetry	3	0	0	3	5
ELL-DEPT.	Departmental Elective	3	0	0	3	5
ELL-DEPT.	Departmental Elective	3	0	0	3	5
ED	Secondary Field	3	0	0	3	5
FREE	Free Elective	3	0	0	3	5
TOTAL		18	0	0	18	31

Semester 6

Code	Course Title	C	P	L	Cr	ECTS
ELL 302	Shakespeare I	3	0	0	3	6
ELL 304	Modern and Contemporary English Poetry	3	0	0	3	5
ELL-DEPT.	Departmental Elective	3	0	0	3	5
ELL-DEPT.	Departmental Elective	3	0	0	3	5
ED	Secondary Field	3	0	0	3	5
FREE	Free Elective	3	0	0	3	5
TOTAL		18	0	0	18	31

Semester 7

Code	Course Title	C	P	L	Cr	ECTS
ELL 401	Contemporary Drama	3	0	0	3	5
ELL 403	Literary Theory	3	0	0	3	6
ELL 405	Literary Translation	3	0	0	3	7
ELL 407	Modern and Contemporary Novel	3	0	0	3	6
ED	Secondary Field	3	0	0	3	5
TEDU 400	Student Development Seminar	0	0	0	0	1
TOTAL		15	0	0	15	30

Semester 8

Code	Course Title	C	P	L	Cr	ECTS
ELL 402	Shakespeare II	3	0	0	3	6
ELL 404	Adaptations from the Page to the Screen	3	0	0	3	6
ELL 406	Graduation Project	3	4	0	5	10
ED	Secondary Field	3	0	0	3	5
ED	Secondary Field	3	0	0	3	5
TOTAL		15	2	0	17	32

Totals expected for graduation		126	4	2	130	240
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Courses with Pre-requisites

Course Name	Pre-requisites
ELL 102 Introduction to Literature	
ELL 201 Survey of English Literature I	
ELL 202 Survey of English Literature II	
ELL 203 Mythology	
ELL 204 Introduction to Fiction	
ELL 205 Translation I	
ELL 206 Translation II	
ELL 207 Research Methods in Literature	
ELL 208 Epics and Heroes	
ELL 210 Highlights of the American Literary Trad	
ELL 212 Introduction to Cultural Studies	
ELL 301 19th Century English Novel	ELL 204
ELL 302 Shakespeare I	
ELL 303 19th Century English and American Poetry	
ELL 304 Modern and Contemporary English Poetry	
ELL 305 Science Fiction and Fantasy Literature	
ELL 306 Violence and War Literature	
ELL 307 The Outsider in Literature	
ELL 308 Comparative Literature	
ELL 309 Utopias/Dystopias	
ELL 310 Journey in Literature and Film	
ELL 311 Gender Studies	
ELL 312 Gothic	
ELL 313 Green Literature	
ELL 401 Contemporary Drama	
ELL 402 Shakespeare II	ELL 201 and ELL 202
ELL 403 Literary Theory	
ELL 404 Adaptations from the Page to the Screen	
ELL 405 Literary Translation	ELL 205 and ELL 206
ELL 406 Graduation Project	ENG 111 and ENG 112
ELL 407 Modern and Contemporary Novel	ELL 204

Undergraduate Course Descriptions

- ELL 102** (3+0+0) 3 Credits / 7 ECTS
Introduction to Literature
(Edebiyata Giriş)
 Introduction to the main forms, principles and terms of literature. The main literary forms: poetry, drama, the short story and the novel, and concepts necessary for the study and evaluation of literary works throughout the undergraduate programme.
 Pre-requisites: None
- ELL 201** (3+0+0) 3 Credits / 7 ECTS
Survey of English Literature I
(İngiliz Edebiyatına Giriş I)
 Introduction to the main forms, principles and terms of literature. The main literary forms: poetry, drama, the short story and the novel, and concepts necessary for the study and evaluation of literary works throughout the undergraduate programme.
 Pre-requisites: None
- ELL 202** (3+0+0) 3 Credits / 8 ECTS
Survey of English Literature II
(İngiliz Edebiyatına Giriş II)
 The chronological study of English literature from the 19th century until the present. The English literary tradition in the context of various periods of history.
 Pre-requisites: None
- ELL 203** (3+0+0) 3 Credits / 8 ECTS
Mythology
(Mitoloji)
 The main characteristics and concepts of Greek and Roman as well as Christian and Norse mythology. Interpretations and transformations of these concepts in Western, especially English literature.
 Pre-requisites: None
- ELL 204** (3+0+0) 3 Credits / 7 ECTS
Introduction to Fiction
(Roman ve Öyküye Giriş)
 Close reading, interpretation and evaluation of selected works of fiction, with attention to their historical contexts, narrative elements, and critical theory.
 Pre-requisites: None
- ELL 205** (3+0+0) 3 Credits / 8 ECTS
Translation I
(Çeviri I)
 Close reading, interpretation and evaluation of selected works of fiction, with attention to their historical contexts, narrative elements, and critical theory.
 Pre-requisites: None

ELL 206 (3+0+0) 3 Credits / 8 ECTS

**Translation II
(Çeviri II)**

Development of students' translation skills through various in-class activities.

Pre-requisites: None

ELL 207 (3+0+3) 3 Credits / 5 ECTS

**Research Methods in Literature
(Edebiyatta Araştırma Yöntemleri)**

Methods and resources used for research in literary studies. Bibliographical and electronic resources. Central methodological issues within the field of literature studies. Diversity of methods and theories that characterizes literary criticism. Developing research questions and assessing the applicability and relevance of different research methods.

Pre-requisites: None

ELL 208 (3+0+0) 3 Credits / 5 ECTS

**Epics and Heroes
(Destanlar ve Kahramanlar)**

A groundwork in the epic genre and an in-depth study of the literary hero in different literary forms and through the ages, beginning with the heroes of the epic tales of antiquity.

Pre-requisites: None

ELL 210 (3+0+0) 3 Credits / 5 ECTS

**Highlights of the American Literary Trad
(Amerikan Edebiyatı Geleneğinden Seçmeler)**

American literary tradition from the beginnings to today. Pioneers, diaries. Puritanism. Basic ideas of American foundation and revolution. The formation of American identity and self. 19th century American Renaissance, transcendentalism and civil disobedience. American Modernists, the Beat Generation. Sample readings of early poetry, stories, essays and novels.

Pre-requisites: None

ELL 212 (3+0+0) 3 Credits / 6 ECTS

**Introduction to Cultural Studies
(Kültür İncelemelerine Giriş)**

Critical approaches in the field of cultural studies and their use in the analysis of selected literary texts and cultural products.

Pre-requisites: None

ELL 301 (3+0+0) 3 Credits / 6 ECTS

**19th Century English Novel
(19. Yüzyıl İngiliz Romanı)**

The study of works of the most important English novelists of the 19th century with a critical eye within the context of the social and cultural values and changes of the period.

Pre-requisite: ELL 204

- ELL 302** (3+0+0) 3 Credits / 6 ECTS
Shakespeare I
(Shakespeare I)
 A selection of Shakespeare's histories and comedies, the study of his dramatic and characterization techniques.
 Pre-requisites: None
- ELL 303** (3+0+0) 3 Credits / 5 ECTS
19th Century English and American Poetry
(19. Yüzyıl İngiliz ve Amerikan Şiiri)
 Introduction of the basic themes and issues of the British romantics and the American transcendentalists. Their ideas, form and style. The characteristic features of the period of their productions and other facts forming the poems. Readings of the poems with ecological, environmental consciousness.
 Pre-requisites: None
- ELL 304** (3+0+0) 3 Credits / 5 ECTS
Modern and Contemporary English Poetry
(Modern ve Çağdaş İngiliz Şiiri)
 Outstanding examples of poetry written in English from Britain, the USA and other English-speaking countries. Mainly modernist and post- modernist movements. Influence of world wars. Post-war movements. Symbolism, Confessional poetry etc.
 Pre-requisites: None
 Co-requisites: None
- ELL 305** (3+0+0) 3 Credits / 5 ECTS
Science Fiction and Fantasy Literature
(Bilim Kurgu ve Fantastik Edebiyat)
 Analysis of selected works of science fiction and fantasy literature in the framework of related genre theories.
 Pre-requisites: None
 Co-requisites: None
- ELL 306** (3+0+0) 3 Credits / 5 ECTS
Violence and War Literature
(Şiddet ve Savaş Edebiyatı)
 Study of experiences and effects of war through close reading and theories of memory and trauma in a historical context.
 Pre-requisites: None
 Co-requisites: None

ELL 307**(3+0+0) 3 Credits / 6 ECTS****The Outsider in Literature
(Edebiyatta Ayrıksı Kişiler)**

Sample readings from world literature in English. Character centered literary works and readers' reflections on everyday life. Analysis of people labelled as "outsiders, strangers, misfits, outcasts etc." Discourse of hatred. Narrative techniques of awareness-raising against othering and antagonism.

Pre-requisites: None

Co-requisites: None

ELL 308**(3+0+0) 3 Credits / 6 ECTS****Comparative Literature
(Karşılaştırmalı Edebiyat)**

New literary and cultural approaches and ideas. Comparative analyses of English literary works and works from Western and Turkish literature in the framework of specific literary concepts, characters, styles and techniques.

Pre-requisites: None

Co-requisites: None

ELL 309**(3+0+0) 3 Credits / 5 ECTS****Utopias/Dystopias
(Ütopyalar/Distopyalar)**

Positive and negative fictional portrayals of societies. Study of examples of utopias and dystopias within the framework of their historical context and modern viewpoints, from the social and philosophical point of view.

Pre-requisites: None

Co-requisites: None

ELL 310**(3+0+0) 3 Credits / 5 ECTS****Journey in Literature and Film
(Edebiyatta ve Sinemada Yolculuk)**

The mythical journey of the hero. The road as a metaphor for life. Archetypal pattern in examples of literature and film. Change, metamorphosis and the formation of identity, culture and memory.

Pre-requisites: None

Co-requisites: None

ELL 311**(3+0+0) 3 Credits / 6 ECTS****Gender Studies
(Cinsiyet Araştırmaları)**

The concept of gender, the main ideas regarding this concept in history, literature and philosophy. Analysis of texts questioning the relationships of women with culture and society as well as examples of social gender inequality in areas like the media and law.

Pre-requisites: None

Co-requisites: None

- ELL 312** (3+0+0) 3 Credits / 5 ECTS
Gothic
(Gotik)
 The Gothic in Western and English literature. Basic characteristics and examples of the Gothic, from the beginnings in the 18th and 19th centuries to the various forms visible in different genres and periods to the present.
 Pre-requisites: None
 Co-requisites: None
- ELL 313** (3+0+0) 3 Credits / 5 ECTS
Green Literature
(Yeşil Edebiyat)
 Introduction to the literary theory known as green literature or ecocriticism. Analysis of selected works of fiction from an ecocritical perspective.
 Pre-requisites: None
 Co-requisites: None
- ELL 401** (3+0+0) 3 Credits / 5 ECTS
Contemporary Drama
(Çağdaş Tiyatro)
 Comparative study and analysis of the innovations brought to the stage by the 20th and the 21st century examples of the British and American theatre. Expressionistic drama, realistic examples, absurd, in yer face movement, fantastic drama and dark comedy.
 Pre-requisites: None
 Co-requisites: None
- ELL 402** (3+0+0) 3 Credits / 6 ECTS
Shakespeare II
(Shakespeare II)
 The study of Shakespeare's most important tragedies. In-depth analyses of his dramatic technique.
 Pre-requisites: ELL 201 and ELL 202
 Co-requisites: None
- ELL 403** (3+0+0) 3 Credits / 6 ECTS
Literary Theory
(Yazınsal Eleştiri Kuramları)
 A survey of contemporary literary theories and their application to literary texts. Awareness of literary theory and its role in the interpretation of literary texts.
 Pre-requisites: None
 Co-requisites: None

ELL 404**(3+0+0) 3 Credits / 6 ECTS****Adaptations from the Page to the Screen
(Sayfadan Beyazperdeye Uyarlamalar)**

Analysis and comparison of the narrative techniques of novels and stories and their film versions. Comparative and contrastive analysis of both works. Reasons behind the differences. Verbal and visual approaches and narrative techniques in both mediums.

Pre-requisites: None

Co-requisites: None

ELL 405**(3+0+0) 3 Credits / 7 ECTS****Literary Translation
(Yazınsal Çeviri)**

Source language English translated into target language Turkish, and vice versa. Learners' awareness raised to the form and style, to the semantic and linguistic subtleties of the source and target languages. In-class discussions of translations of poems, from short-stories, novels and examples of non-fiction. Students' decision-making and alternative translations.

Pre-requisites: ELL 205 and ELL 206

Co-requisites: None

ELL 406**(3+0+0) 3 Credits / 8 ECTS****Graduation Project
(Mezuniyet Projesi)**

A list of topics for the students. Topic selected. Every step monitored by the supervising professor. Research completed. Results and outcomes of research discussed by the student and professor. Student's argumentation of his/her idea. Writing of a well-organized academic essay completed.

Pre-requisites: ENG 111 and ENG 112

Co-requisites: None

ELL 407**(3+0+0) 3 Credits / 6 ECTS****Modern and Contemporary Novel
(Modern ve Çağdaş Roman)**

In-depth analyses of the works of the most important English novelists of the 20th within the context of the literary genres and traditions as well as the social and cultural changes of the period.

Pre-requisite: ELL 204

Co-requisites: None

DEPARTMENT OF MATHEMATICS

Chair

Assoc. Prof. Mehmet Onur Fen

Academic Staff

Assoc. Prof. Mehmet Onur Fen, Assoc. Prof. Bengisen Pekmen Geridönmez, Asst. Prof. Ayşe Mutlu Derya, Asst. Prof. Ceyda Yazıcı, Asst. Prof. Şükran Gül Erdem, Dr. Engin Özkan, Dr. Fuat Erdem, Ruşen Kaya, Alaittin Kırtışoğlu*, Anıl Özdemir*, Ezgi Türkaslan*, Şeyda Solmaz*, Berrin Şentürk**, Elif Medetoğulları**, Levent Aybak**, Osman Tuncay Başkaya**, Sheikh Muhammad Ali**.

* Research Assistant

** Part Time

Undergraduate Program in Mathematics

Today, mathematics plays an important role in understanding and developing various fields of science. It is almost impossible to deliver solutions in many disciplines, particularly in engineering sciences, without using mathematical models and approaches. Mathematics is an indispensable part of the theoretical and practical backgrounds of various fields that will come into prominence in the near future, such as computational sciences, artificial intelligence, system analysis and data science.

Our graduates will have the potential of contributing to academic and hypothetic studies in the light of theoretical knowledge acquired during undergraduate studies. In addition to this, they will have knowledge about different disciplines in which mathematics is utilised thanks to application skills that they will acquire.

The aim of the TED University Department of Mathematics is to provide an innovative interdisciplinary program in parallel with the developments in the modern world, without compromising the quality of mathematics education. Student-centered approach to teaching, modern teaching methods that encourage participation, secondary field that broadens students' perspectives are only some of the distinctive qualities of our department.

Program Outcomes

Students graduating from TEDU Department of Mathematics will:

1. Have basic knowledge of mathematics.
2. Have the ability of mathematical thinking and causal reasoning.
3. Be able to follow scientific and popular publications on mathematics.
4. Have the ability to apply theoretical knowledge on mathematics into practice.
5. Be able to follow recent developments on mathematics at least in one foreign language.
6. Have the skills necessary to use computer software as required by mathematics.
7. Have the understanding of relationship of mathematics with other fields.
8. Have the ability to suggest mathematical approaches for individual or social issues.
9. Aim to improve their professional competence continuously and engage in life-long learning.

10. Have the ability to express their suggestions in written form or verbally for the problems in their field.
11. Act ethically.
12. Be sensitive to social and environmental matters with social responsibility.
13. Have the ability to cooperate with colleagues and other related people on research projects and studies in their field.

Undergraduate Curriculum

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
MATH 105	Fundamentals of Mathematics	3	0	0	3	5
MATH 113	Calculus I	3	1	1	4	7
ENG 101	English for Academic Purposes	2	2	0	3	5
CMPE 101	Introduction to Information Technologies	2	0	2	3	5
PHYS 105	Physics I	3	0	2	4	6
TUR 101	Turkish I	2	0	0	2	2
TOTAL		15	3	5	19	30

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
MATH 108	Discrete Mathematics	3	0	0	3	5
MATH 114	Calculus II	3	1	1	4	7
ENG 102	Expository Writing	2	2	0	3	5
CMPE 112	Fundamentals of Programming I	1	0	4	3	6
TUR 102	Turkish II	2	0	0	2	2
CC	Sci/Soc/Hum/Lit/Art	3	0	0	3	5
TOTAL		14	3	5	18	30

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
MATH 207	Analytic Geometry	3	0	0	3	6
MATH 211	Advanced Calculus I	4	0	0	4	7
MATH 221	Linear Algebra I	3	0	0	3	6
HIST 101	History of Turkish Republic I	2	0	0	2	2
CC	Sci/Soc/Hum/Lit/Art	3	0	0	3	5
CC	Sci/Soc/Hum/Lit/Art	3	0	0	3	5
TOTAL		18	0	0	18	31

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
MATH 212	Advanced Calculus II	4	0	0	4	7
MATH 222	Linear Algebra II	3	0	0	3	6
MATH 242	Differential Equations	3	0	0	3	6
HIST 102	History of Turkish Republic II	2	0	0	2	2
CC	Sci/Soc/Hum/Lit/Art	3	0	0	3	5
CC	Sci/Soc/Hum/Lit/Art	3	0	0	3	5
TOTAL		18	0	0	18	31

Semester 5

Code	Course Title	C	P	L	Cr	ECTS
MATH 313	Real Analysis	4	0	0	4	7
MATH 321	Abstract Algebra I	3	1	0	3	7
MATH 331	Data Analytics	3	0	0	3	6
FREE	Free Elective	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
TOTAL		16	1	0	16	30

Semester 6

Code	Course Title	C	P	L	Cr	ECTS
MATH 314	Complex Analysis	4	0	0	4	7
MATH 322	Abstract Algebra II	3	1	0	3	7
MATH 352	Numerical Methods	3	0	0	3	6
SF	Secondary Field	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
TOTAL		16	1	0	16	30

Semester 7

Code	Course Title	C	P	L	Cr	ECTS
MATH 409	History of Mathematics	3	0	0	3	6
MATH 491	Senior Project	3	0	0	3	6
MATH-DEPT.	Departmental Elective	3	0	0	3	6
MATH-DEPT.	Departmental Elective	3	0	0	3	6
SF	Secondary Field	3	0	0	3	5
TEDU 400	Student Development Seminar	0	0	0	0	1
TOTAL		15	0	0	15	30

Semester 8

Code	Course Title	C	P	L	Cr	ECTS
MATH-DEPT.	Departmental Elective	3	0	0	3	6
MATH-DEPT.	Departmental Elective	3	0	0	3	6
MATH-DEPT.	Departmental Elective	3	0	0	3	6
FREE	Free Elective	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
TOTAL		15	0	0	15	28

Totals expected for graduation		127	8	10	135	240
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Courses with Pre-requisites

Course Name	Pre-requisites
MATH 102 Multivariable Calculus	MATH 101
MATH 112 Introduction to Multivariable Calculus	MATH 101 or MATH 111
MATH 114 Calculus II	MATH 113
MATH 203 Linear Algebra and Differential Equations	MATH 101
MATH 204 Vector and Complex Calculus	MATH 101 or MATH 111
MATH 210 Numerical Methods in Engineering	MATH 101 and MATH 203
MATH 211 Advanced Calculus I	MATH 114
MATH 212 Advanced Calculus II	MATH 211
MATH 222 Linear Algebra II	MATH 221
MATH 230 Introduction to Probability Theory	MATH 101 or MATH 111
MATH 232 Introduction to Statistics	MATH 230
MATH 240 Introduction to Probability and Statistics for Engineers	MATH 101
MATH 242 Differential Equations	MATH 114
MATH 313 Real Analysis	MATH 212
MATH 314 Complex Analysis	MATH 212
MATH 322 Abstract Algebra II	MATH 321
MATH 331 Data Analytics	MATH 101 or MATH 111 or MATH 205 or MATH 113
MATH 352 Numerical Methods	MATH 222 and MATH 242
MATH 408 Game Theory	MATH 212 and MATH 222
MATH 411 Introduction to Functional Analysis	MATH 313
MATH 435 Probability Theory	MATH 212
MATH 441 Partial Differential Equations	MATH 212 and MATH 242
MATH 448 Dynamical Systems	MATH 222 and MATH 242
MATH 450 Numerical Solutions of Differential Equations	MATH 242
MATH 462 Differential Geometry	MATH 212
MATH 464 Introduction to Algebraic Geometry	MATH 322
MATH 471 Topology	MATH 211

Undergraduate Course Descriptions

- MATH 100** (2+1+0) 0 Credit / 0 ECTS
Pre-Calculus
(Ön-Analiz)
 This course is designed primarily for students who intend to take MATH 111 for EGE and GPC. Topics include fundamentals. Functions. Graphs of functions. Polynomial functions and their graphs. Complex numbers. Rational functions. Exponential functions. Trigonometric functions of real numbers.
- MATH 101** (3+2+0) 4 Credits / 7 ECTS
Calculus of one variable
(Tek Değişkenli Analiz)
 The concepts of Limit and Continuity, The Derivative, Applications of the Derivative, The Integration, Techniques of Integration, Applications of the Integral.
- MATH 102** (3+2+0) 4 Credits / 7 ECTS
Multivariable Calculus
(Çok Değişkenli Analiz)
 Sequences, Series, Taylor Series, Vectors in R^2 and R^3 , Dot and Cross Products, Lines and Planes in R^3 , Functions of Several Variables, Their Limits and Continuity, Partial Derivatives, Directional Derivatives, Maximum-minimum problems, Lagrange Multipliers, Double Integrals, Triple Integrals, Vector-Valued Functions and, Their Limits, Continuity and Derivatives, Vector Fields, Line Integrals, Green's Theorem.
- MATH 103** (3+0+0) 3 Credits / 5 ECTS
Mathematics for Education Majors
(Eğitim Bölümleri için Matematik)
 Logic. Relations and Functions. Matrices and determinants. Inverse of a matrix, matrix polynomials, Cayley-Hamilton theorem. Systems of linear equations, parametric solutions. Counting: principle of inclusion exclusion, Dirichlet's pigeonhole principle. Mathematical induction, recursive relations. Permutations, combinations. Discrete probability. Graphs.
- MATH 104** (3+0+0) 3 Credits / 5 ECTS
Mathematics II
(Matematik II)
 Analytic Geometry in R^2 and R^3 . Functions of one and several variables: Limit, continuity and differentiation. Chain rule, implicit differentiation. Differential calculus, optimization, Lagrange multipliers. The definite integral. The indefinite integral. Logarithmic and exponential functions. Techniques of integration: Integration by substitution, integration by parts, by partial fractions.
- MATH 105** (3+0+0) 3 Credits / 5 ECTS
Fundamentals of Mathematics
(Matematiğin Temelleri)
 Symbolic logic. Set theory. Cartesian product. Relations. Functions. Injective, surjective and bijective functions. Composition of functions. Equipotent sets. Countability of sets. More about relations: equivalence relations, equivalence classes and partitions. Quotient sets. Order relations: Partial order, Total order, Well ordering. Mathematical induction and recursive definitions of functions.

- MATH 106** (3+0+0) 3 Credits / 5 ECTS
Discrete Mathematics
(Ayrık Matematik)
 Set Theory, Fundamentals of logic, Introduction to mathematical proof techniques, Fundamental principles of counting, Discrete probability, The Pigeonhole principle, Relations and Functions, Introduction to graph theory.
- MATH 108** (3+0+0) 3 Credits / 5 ECTS
Discrete Mathematics
(Ayrık Matematik)
 Basic counting: The sum and product rules, the pigeonhole principle, generalized permutations and combinations. The binomial theorem. Discrete probability. Inclusion-exclusion. Recurrence relations. Introduction to graphs and trees.
- MATH 109** (3+2+0) 4 Credits / 7 ECTS
Basic Calculus
(Temel Analiz)
 Plane Geometry, The concepts of Limit and Continuity, Derivative, Applications of Derivative, Integration, The Application of Integration as an Area of a Planar Region, Vectors and Geometry of Space.
- MATH 111** (3+2+0) 4 Credits / 7 ECTS
Introduction to Calculus of One Variable
(Tek Değişkenli Analize Giriş)
 Functions and Their Graphs. Combining Functions. Trigonometry. Concept of Limit. Continuity. Exponential and Logarithmic Functions. Derivative. Rules for Differentiation. Chain Rule. Related Rates. The Mean Value Theorem. Maxima and Minima of Functions. Graphing Functions. L'Hopital's Rule. Integration. Rules for Integration. The Fundamental Theorem of Calculus. Integration by Substitution. Calculation of Area.
- MATH 112** (3+2+0) 4 Credits / 7 ECTS
Introduction to Multivariable Calculus
(Çok Değişkenli Analize Giriş)
 Techniques of Integration, Infinite Sums, Vectors in Plane and 3-Space, Lines and Planes in Space, Functions of Several Variables and Their Limits and Continuity, Partial Derivatives, Max-Mix Problems, Lagrange Multipliers, Double Integrals over Rectangular and More General Regions.
- MATH 113** (3+1+1) 4 Credits / 7 ECTS
Calculus I
(Analiz I)
 Functions, Limit and Derivative of Single Variable Function, Basic Theorems of Differential Calculus: Intermediate Value, Extreme Value, and the Mean Value Theorems, Graph Sketching and Problems of Extrema.

- MATH 114** (3+1+1) 4 Credits / 7 ECTS
Calculus II
(Analiz II)
 The Riemann Integral, Mean Value Theorem for Integrals, Fundamental Theorem of Calculus, Techniques to Evaluate Anti-Derivative. Various Geometric and Physical Applications, Sequences, Improper Integrals, Infinite Series, Power Series and Taylor's Series.
- MATH 202** (3+0+0) 3 Credits / 5 ECTS
Linear Algebra
(Lineer Cebir)
 Systems of Linear Equations, Matrices, Determinants, Euclidean and General Vector Spaces, Eigenvalues and Eigenvectors, Inner Product Spaces.
- MATH 203** (3+0+0) 3 Credits / 5 ECTS
Linear Algebra and Differential Equations
(Lineer Cebir ve Türevsel Denklemler)
 Systems of linear equations. Elimination methods, matrices and matrix operations. Vector spaces, basis and dimension. Determinants. First-order differential equations. Linear equations and systems of first-order linear equations. Boundary value problems. Laplace transform. Second and nth order linear differential equations.
- MATH 204** (3+0+0) 3 Credits / 5 ECTS
Vector and Complex Calculus
(Vektör ve Kompleks Analiz)
 Vector Calculus: Vectors basics, vector fields. Vector differential calculus, gradient, curl, divergence. Vector integral calculus, line, surface and volume integrals, Stokes and Divergence theorems. Complex Calculus: Complex algebra. Complex analytic functions. Contour integration. Cauchy's theorem. Taylor and Laurent series. Singularities. Residue calculus. Fourier analysis. Laplace transforms.
- MATH 207** (3+0+0) 3 Credits / 6 ECTS
Analytic Geometry
(Analitik Geometri)
 Fundamental principles of Analytic geometry. Cartesian coordinates in plane and space. Lines in the plane. Review of trigonometry and polar coordinates. Rotation and translation in the plane. Vectors in plane and space. Lines and planes in 3-space. Basics about conics. Basic surfaces in space, cylinders, surface of revolutions, quadric surfaces. Cylindrical and spherical coordinates.
- MATH 210** (0+0+4) 2 Credits / 4 ECTS
Numerical Methods in Engineering
(Mühendislikte Sayısal Yöntemler)
 Numerical solution techniques for mathematical problems in engineering. Computer programming for solution of engineering problems. Numerical root finding. Numerical linear algebra. Numerical integration and differentiation. Solution techniques of ordinary differential equations.

- MATH 211** (4+0+0) 4 Credits / 7 ECTS
Advanced Calculus I
 (İleri Analiz I)
 Introductory Topology of \mathbb{R} , \mathbb{R}^2 and \mathbb{R}^3 . Functions of several variables. Limits and continuity. Partial derivative. Directional derivatives. Gradients. Differentials and the tangent plane. The mean Value, the implicit and the inverse function theorems. Extreme values. Divergence and curl.
- MATH 212** (4+0+0) 4 Credits / 7 ECTS
Advanced Calculus II
 (İleri Analiz II)
 Double Integral as Iterated integrals, polar coordinates, Improper Double Integrals. General Change of Variables in Double Integrals. Triple Integrals: Cylindrical and Spherical coordinates in Triple Integrals. Line Integrals. Proof of the General Change of Variables Formula in Double Integrals. Surface Integrals. Divergence and Stokes' Theorems.
- MATH 221** (3+0+0) 3 Credits / 6 ECTS
Linear Algebra I
 (Lineer Cebir I)
 Matrices and Linear Equations, Determinants, Vector Spaces, Linear Transformations.
- MATH 222** (3+0+0) 3 Credits / 6 ECTS
Linear Algebra II
 (Lineer Cebir II)
 Eigenvalues and Eigenvectors, Elementary Canonical Forms, The Rational and Jordan Forms, Inner Product Spaces, Operators on Inner Product Spaces, Bilinear Forms.
- MATH 230** (3+0+0) 3 Credits / 6 ECTS
Introduction to Probability Theory
 (Olasılık Teorisine Giriş)
 Basic topics in probability theory. Conditional probability. Random variables. Discrete, continuous probability distributions. Mathematical expectation. Moment generating functions.
- MATH 232** (3+0+0) 3 Credits / 6 ECTS
Introduction to Statistics
 (İstatistik'e Giriş)
 Descriptive statistics. Statistical estimation. Hypothesis testing. Simple and multiple linear regressions. Correlation analysis. Elementary design of experiments.
- MATH 233** (3+1+0) 3 Credits / 5 ECTS
Statistics for Social Sciences
 (Sosyal Bilimler için İstatistik)
 Basic concepts in statistics. Organizing data. Descriptive statistics. Probability calculations and distributions. Practices in statistic package programs. Testing hypotheses.

- MATH 240** (3+0+0) 3 Credits / 6 ECTS
Introduction to Probability and Statistics for Engineering
 (Mühendislik için Olasılık ve İstatistğe Giriş)
 Basic concepts of probability, Discrete and continuous random variables, their probability distributions, expected value, variance. Discrete probability distributions, Jointly distributed and independent Random Variables. Covariance and correlation. Sampling, estimation. Hypothesis Testing, Regression and ANOVA.
- MATH 242** (3+0+0) 3 Credits / 6 ECTS
Differential Equations
 (Diferansiyel Denklemler)
 First order ordinary differential equations. Initial value problems. Existence and uniqueness of solutions. Separable, linear, homogeneous, and exact differential equations. Bernoulli and Riccati differential equations. Higher order ordinary differential equations. Reduction of order. Method of undetermined coefficients. Variation of parameters. Series solutions. The Laplace transform. Systems of linear differential equations.
- MATH 313** (4+0+0) 4 Credits / 7 ECTS
Real Analysis
 (Reel Analiz)
 Cauchy sequences, metric spaces, open and closed sets, completeness, continuity, compactness, uniform convergence, connectedness, Banach Fixed Point Theorem, Baire's Theorem.
- MATH 314** (4+0+0) 4 Credits / 7 ECTS
Complex Analysis
 (Kompleks Analiz)
 Algebra of Complex numbers; Polar and spherical representations; Functions of Complex variable: Limits, continuity, analyticity; Cauchy- Riemann equations; Elementary complex functions: mapping by elementary functions; linear fractional transformations; Line integral; Cauchy's theorem: Cauchy integral formula; Laurent series; Residue Theorem; Improper integrals.
- MATH 321** (3+1+0) 3 Credits / 7 ECTS
Abstract Algebra I
 (Soyut Cebir I)
 Permutation groups and abstract groups. Quotient groups and the Isomorphism Theorems. Sylow's Theorem. Direct and Semidirect Product Recognition Theorems. Symmetric groups. Classical linear groups. The Chinese Remainder Theorem, primitive roots, and the Structure Theorem for Finitely-Generated Abelian Groups.
- MATH 322** (3+1+0) 3 Credits / 7 ECTS
Abstract Algebra II
 (Soyut Cebir II)
 Rings and modules. Quotient rings and polynomial rings. Field Extensions. Euclidean domains, principal ideal domains, unique factorization domains. Finitely generated modules of principal ideal domains. Galois groups. The Fundamental Theorem of Galois Theory.

- MATH 331** (3+0+0) 3 Credits / 6 ECTS
Data Analytics
(Veri Analizi)
 Introduction to R programming, Data structures. Data manipulation. Descriptive statistics. Data visualization, graphs and plots. Basic functions. Introduction to mathematical modeling.
- MATH 352** (3+0+0) 3 Credits / 6 ECTS
Numerical Methods
(Sayısal Yöntemler)
 Introduction: conditioning, stability; Systems of Linear Equations; Linear Least Squares; Eigenvalue Problems; Nonlinear Equations; Interpolation; Numerical Integration and Differentiation.
- MATH 401** (3+0+0) 3 Credits / 6 ECTS
Graph Theory
(Çizge Teorisi)
 The types of graphs and basic definitions, Path and loops. Enumeration. Connectivity. Traversability. Planar graphs. Euler Formula, dual graph. Coloring. Matrices of graphs. Graphs and groups.
- MATH 402** (3+0+0) 3 Credits / 6 ECTS
Number Theory
(Sayılar Teorisi)
 The division algorithm, The greatest common divisor, The Euclidean algorithm, The fundamental theorem of arithmetic, Primes and their distribution. Basic properties of congruences, Divisibility tests, Linear congruence, Chinese remainder theorem, Fermat's and Wilson's Theorem, The greatest integer function, Euler's phi-function, Euler's Theorem, Applications to cryptography, Primitive roots, Reciprocity law.
- MATH 408** (3+0+0) 3 Credits / 6 ECTS
Game Theory
(Oyun Teorisi)
 Selected topics in the theory of games: Zero-sum games, Normal form games, Dominant and non-dominant strategies, Mixed strategies, Nash equilibrium, Extensive form games, Subgame perfect equilibrium, Cooperative games, Core, Convex games, Shapley value, Nucleolus.
- MATH 409** (3+0+0) 3 Credits / 6 ECTS
History of Mathematics
(Matematik Tarihi)
 Babylonian mathematics, Ancient Egyptian mathematics, Mesopotamia mathematics, Ancient Greek mathematics, Ancient Chinese mathematics, Arabic mathematics, Renaissance math, 17 century math, 18 century math, 19 century math.
- MATH 411** (3+0+0) 3 Credits / 6 ECTS
Introduction to Functional Analysis
(Fonksiyonel Analize Giriş)
 Metric spaces, normed spaces, Banach spaces, completeness, compactness, linear operators, linear functionals, Hahn Banach Theorem, basic concepts and theorems of functional analysis.

- MATH 435** (3+0+0) 3 Credits / 6 ECTS
Probability Theory
(Olasılık Teorisi)
 Axiomatic construction of probability theory, properties of probability, conditional probability, independence. Discrete and continuous random variables. Conditional expectation. Transformations of random variables. Generating and characteristics functions. Convergence of random variables. Sums of independent random variables, central limit theorem.
- MATH 441** (3+0+0) 3 Credits / 6 ECTS
Partial Differential Equations
(Kısmi Türevli Denklemler)
 First order partial differential equations; Cauchy problem; Charpit's method; Second order partial differential equations; Normal forms; Laplace, Poisson, Wave, and Heat equations; Separation Variables; Fourier series.
- MATH 448** (3+0+0) 3 Credits / 6 ECTS
Dynamical Systems
(Dinamik Sistemler)
 Linear systems. Exponential operators. Canonical forms. Stable, unstable, and center subspaces. The maximal interval of existence. Linearization. Stability. Lyapunov functions. The Poincaré-Bendixson theory. Introduction to chaotic dynamical systems.
- MATH 450** (3+0+0) 3 Credits / 6 ECTS
Numerical Solutions of Differential Equations
(Diferansiyel Denklemlerin Sayısal Çözümleri)
 Numerical Solutions of ODEs: Initial Value Problems (linear multistep methods, Runge-Kutta methods); Boundary Value Problems for ODEs; Numerical Solutions of PDEs (hyperbolic, parabolic, elliptic PDEs): the shooting method, finite difference methods, finite element method (optional).
- MATH 462** (3+0+0) 3 Credits / 6 ECTS
Differential Geometry
(Diferansiyel Geometri)
 Euclidean spaces and differential forms, frames, calculus on surfaces. Shape operators. Geodesics. Gaussian and mean curvatures.
- MATH 464** (3+0+0) 3 Credits / 6 ECTS
Introduction to Algebraic Geometry
(Cebirsel Geometriye Giriş)
 Plane curves, conics and cubics. Affine varieties, Hilbert basis theorem, Zarisky topology, Hilbert's Nullstellensatz. Coordinate rings, morphisms. Projective varieties, birational morphism. Smoothness, dimension and the tangent space.

MATH 471**(3+0+0) 3 Credits / 6 ECTS****Topology
(Topoloji)**

Topological spaces; basis, subbasis, subspaces. Closed sets, limit points. Hausdorff Spaces. Continuous functions, homeomorphisms. Product topology. Connected spaces, components, path connectedness, path components. Compactness. Regular and normal spaces. Urysohn's Lemma, Tietze Extension Theorem.

MATH 491**(3+0+0) 3 Credits / 6 ECTS****Senior Project
(Bitirme Projesi)**

Design and development of a project for a mathematics problem under the supervision of an academic advisor; submission of the results in the form of a project report and oral presentation.

DEPARTMENT OF PSYCHOLOGY

Chair

Assoc. Prof. Ilgın Gökler Danışman

Academic Staff

Assoc. Prof. Ilgın Gökler Danışman, Prof. Elif Barışkın, Prof. Halise Belgin Ayvaşık, Prof. Melike Sayıl, Prof. Nur Serap Özer, Assoc. Prof. Tuğba Uzer Yıldız, Asst. Prof. Bengi Ünal, Asst. Prof. Çağrı Temuçin Ünal, Asst. Prof. Emrah Keser, Asst. Prof. Nevin Solak, Asst. Prof. Yağmur Ar Karcı, Deniz Okay*, Sevi Gizem Zeybek*.

* Research Assistant

Undergraduate Program in Psychology

Psychology, as a science, has been changed dramatically in the past few decades evolving into a complex discipline with a broad range of sub disciplines and specialties. However, understanding of psychology and psychologist has not changed so much in public mostly referring and restricted to clinical psychologist whose specialization is on mental health problems and psychotherapy. Therefore the definition of psychology is now more important than ever. "Psychology is the study of the mental states and processes in order to understand the basic mechanisms and functions of perception, cognition, emotion, and behavior both at individual and social levels." Since psychology covers a broad set of subjects that overlap with a number of disciplines from biological to social it is an interdisciplinary and integrated science.

Our program incorporates this new integrated and interdisciplinary science vision of psychology that enhance our research and instructional potential as well as opportunities that we offer to our students. In our curriculum, psychology students gain an advance understanding of subfields and also a strong scientific and research basis and related skills that prepare them both for practicing their knowledge and skills in a variety of professional contexts and for their graduate work in psychology and other related disciplines.

Program Outcomes

Students graduating from TEDU Department of Psychology will:

1. Have basic knowledge of psychological concepts, theories and methods in a comparative way and use this knowledge at different levels
2. Compare and contrast the psychology with other disciplines including identifying the potential contribution and limitation of psychology to interdisciplinary collaboration
3. Demonstrate psychological literacy in interpersonal and social problems
4. Be able to use analytical, critical and innovative thinking both to generate and interpret questions and hypothesis from psychological knowledge base
5. Achieve the knowledge in line with his/her purpose using the printed and electronic sources and evaluate both reliability of sources and suitability of information.

6. Take responsibility and initiative to create improvements and to generate solutions to the problems in professional domain.
7. Have basic measurement, assessment and interview skills to function in professional domain
8. Design and conduct basic psychology research in its all steps (data collection, data analysis, reporting etc.)
9. Keep curiosity and interest in his/her professional development and engage in life-long learning
10. Follow psychology literature and be able to share it using written and verbal communication skills both in Turkish and in English
11. Treat others with civility respecting for differences of individual (age, gender, ethnic identity, religion and sexual orientation) and cultural.
12. Be able to use required softwares, techniques and instruments in education, measurement, assessment and data analysis.
13. Be attentive to social and scientific values and professional codes of ethical conduct in all of his/her academic and professional activities.

Undergraduate Curriculum

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
MATH 111	Introduction to Calculus of one Variable	3	2	0	4	7
ENG 101	English for Academic Purposes	2	2	0	3	5
CMPE 101	Introduction to IT	2	2	2	3	5
CC-E	Sci/Soc/Hum/Lit/Art	3	0	0	3	5
CC-E	Sci/Soc/Hum/Lit/Art	2	2	0	3	5
TUR 101	Turkish I	2	0	0	2	2
HIST101	History of Turkish Republic I	2	0	0	2	2
TOTAL		16	8	2	20	31

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
CC-E	CC Elective	3	0	0	3	5
ENG 102	Expository Writing	2	2	0	3	5
PSY 102	General Psychology	3	0	0	3	6
CC-E	Sci/Soc/Hum/Lit/Art	3	0	0	3	5
CC-E	Sci/Soc/Hum/Lit/Art	3	0	0	3	5
TUR 102	Turkish II	2	0	0	2	2
HIST 102	History of Turkish Republic II	2	0	0	2	2
TOTAL		18	2	0	19	30

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
MATH 233	Statistics for Social Sciences	3	1	0	3	5
PSY 203	Research Methods I	2	2	0	3	7
PSY 221	Life-Span Development I	3	0	0	3	6
PSY 217	Experimental Psychology	3	0	0	3	6
PSY	Departmental Elective Courses	3	0	0	3	6
TOTAL		15	3	0	15	30

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
PSY 206	Applied Research and Data Analysis	2	2	0	3	6
PSY 204	Research Methods II	2	2	0	3	7
PSY 222	Life-Span Development II	3	0	0	3	6
PSY 232	Social Psychology	3	0	0	3	6
PSY 312	Biopsychology	3	0	0	3	6
TOTAL		13	4	0	15	31

Semester 5

Code	Course Title	C	P	L	Cr	ECTS
PSY 341	Theories of Personality	3	0	0	3	7
PSY 310	Cognitive Psychology	3	0	0	3	6
PSY	Departmental Elective Courses	3	0	0	3	6
F	Free Elective	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
TOTAL		17	0	0	15	29

Semester 6

Code	Course Title	C	P	L	Cr	ECTS
PSY 342	Psychopathology	3	0	0	3	6
PSY 308	Testing and Measurement in Psychology	2	2	0	3	7
PSY	Departmental Elective Courses	3	0	0	3	6
F	Free Elective	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
TOTAL		14	2	0	15	29

Semester 7

Code	Course Title	C	P	L	Cr	ECTS
PSY 460	Ethics in Psychology	2	2	0	3	6
PSY	Departmental Elective Courses	3	0	0	3	6
PSY	Departmental Elective Courses	3	0	0	3	6
PSY	Departmental Elective Courses	3	0	0	3	6
SF	Secondary Field	3	0	0	3	5
TEDU 400	Student Developmental Seminar	0	0	0	0	1
TOTAL		14	2	0	15	30

Semester 8

Code	Course Title	C	P	L	Cr	ECTS
PSY 402	Graduation Paper and Seminar	3	2	0	4	8
PSY	Departmental Elective Courses	3	0	0	3	6
PSY	Departmental Elective Courses	3	0	0	3	6
SF	Secondary Field	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
TOTAL		15	2	0	16	30

Totals expected for graduation		122	16	2	130	240
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Courses with Pre-requisites

Course Name	Pre-requisites
PSY 202 History of Psychology	PSY 102
PSY 203 Research Methods I	PSY 102 or PSY 104
PSY 204 Research Methods II	PSY 203
PSY 206 Applied Research and Data Analysis	MATH 233
PSY 207 Effective Writing in Psychology	ENG 102
PSY 217 Experimental Psychology	PSY 102 or PSY 104
PSY 221 Life-Span Development I	PSY 102 or PSY 104
PSY 222 Life-Span Development II	PSY 221
PSY 232 Social Psychology	PSY 102 or PSY 104
PSY 240 Traumatic Stress	PSY 102 or PSY 104
PSY 300 Qualitative Research	PSY 204
PSY 308 Testing and Measurement in Psychology	PSY 102 or PSY 104
PSY 312 Biopsychology	PSY 102
PSY 313 Evolutionary Psychology	PSY 102
PSY 315 Psychopharmacology	PSY 102 and PSY 312
PSY 316 Learning and Behaviour	PSY 102
PSY 317 Sensation and Perception	PSY 102
PSY 331 Industrial and Organizational Psychology	PSY 102 or PSY 104
PSY 333 Intergroup Relations	PSY 232 or PSY 104
PSY 334 Motivation and Emotion	PSY 102 and PSY 104
PSY 337 Psychological, Social, & Cultural Aspects of Disabilities	PSY 102 or PSY 104
PSY 342 Psychopathology	PSY 102
PSY 341 Theories of Personality	PSY 102 or PSY 104
PSY 460 Ethics in Psychology	PSY 102 or PSY 104
PSY 402 Graduation Paper and Seminar	PSY 204 and PSY 206
PSY 210 Selected Topics in Cognition	PSY 102 or PSY 104
PSY 200 Selected Topics in Psychology	PSY 102 or PSY 104
PSY 314 Human Memory	PSY 102 or PSY 104
PSY 323 Adolescent Development	PSY 102 or PSY 104
PSY 332 Group Psychology	PSY 102 or PSY 104
PSY 303 Health Psychology	PSY 102 or PSY 104
PSY 340 Family Systems	PSY 102 or PSY 104
PSY 343 Clinical Psychology	PSY 102
PSY 400 Independent Study Consent of the Course Instructor	PSY 102 or PSY 104
PSY 401 Introduction to Traffic Psychology	PSY 102 or PSY 104
PSY 404 Forensic Psychology	PSY 102 or PSY 104
PSY 412 Special Topics in Autobiographical Memory	PSY 102 or PSY 104
PSY 413 Current Topics in Cognitive Psychology	PSY 102
PSY 421 Cognitive Development	PSY 102 or PSY 221
PSY 424 Parenting and Child Development	PSY 102 or PSY 104
PSY 431 Self and Culture	PSY 102 or PSY 104
PSY 432 Applied Social Psychology	PSY 232
PSY 434 Human Motivation	PSY 102 or PSY 104
PSY 442 Developmental Psychopathology	PSY 102
PSY 445 Selected Topics in Clinical Psychology	PSY 102

PSY 446 Interview Techniques	PSY 102
PSY 447 Clinical Testing and Assessment	PSY 102
PSY 448 Trauma Psychology	PSY 102 or PSY 104

Undergraduate Course Descriptions

PSY 102 General Psychology (Genel Psikoloji)	(3+0+0) 3 Credits / 6 ECTS
An overview of human behavior and mind including the nervous system, consciousness, learning, memory, development, emotion, psychopathology, society, and culture.	
Pre-requisites: None	
PSY 104 Psychology (Psikoloji)	(3+0+0) 3 Credits / 5 ECTS
Definition of psychology and major areas of psychology (social, clinical, educational psychology, etc.); biological foundations of psychology; sensation and perception; growth and development; learning; memory; intelligence; personality and personality theories; abnormal behaviors; motivation; emotions; social influences on individuals.	
Pre-requisites: None	
(This course is offered as non-departmental elective)	
PSY 200 Selected Topics in Psychology (Psikolojide Seçme Konular)	(3+0+0) 3 Credits / 6 ECTS
To introduce the students contemporary study or application fields of Psychology.	
Pre-requisite: PSY 102 or PSY 104	
PSY 202 History of Psychology (Psikoloji Tarihi)	(3+0+0) 3 Credits / 6 ECTS
Philosophical roots of psychology as a scientific discipline. Social and economic factors influencing paradigm shifts in psychology. General aspects of psychophysics, structuralism, functionalism, behaviorism, Gestalt psychology, psychoanalysis, cognitive psychology, and biological psychology. Minorities in psychology. Future prospects of psychology as a scientific discipline.	
Pre-requisite: PSY 102	
PSY 203 Research Methods I (Araştırma Yöntemleri I)	(2+2+0) 3 Credits / 7 ECTS
Theoretical knowledge of research methods and techniques in psychology, hypothesizing and sampling.	
Pre-requisite: PSY 102 or PSY 104	

- PSY 204** (2+2+0) 3 Credits / 7 ECTS
Research Methods II
(Araştırma Yöntemleri II)
 Correlational and experimental designs. Issues related to control, reliability and validity in designing research. Basic issues in analyzing research results. Writing a research report.
 Pre-requisite: PSY 203
- PSY 206** (2+2+0) 3 Credits / 6 ECTS
Applied Research and Data Analysis
(Uygulamalı Araştırma ve Veri Analizi)
 Describing and exploring data with R, multiple comparisons tests (factorial, multivariate, and repeated-measures ANOVA), correlation and linear regression, multiple linear regression, logistic regression.
 Pre-requisite: MATH 233
- PSY 207** (3+0+0) 3 Credits / 6 ECTS
Effective Writing in Psychology
(Psikolojide Etkili Yazım)
 Writing in psychology. Formulating ideas. Assessing sources. Reading and summarizing journal articles. Organizing papers. Elements of style. Communicating statistics. Preparing APA format papers. Poster and oral presentations.
 Pre-requisite: ENG 102
- PSY 217** (3+0+0) 3 Credits / 6 ECTS
Experimental Psychology
(Deneysel Psikoloji)
 An introduction to theoretical and experimental issues associated with sensory and perceptual experience. Theories and research, including behavioral and cognitive perspectives, and such topics as classical conditioning, operant conditioning, and social learning.
 Pre-requisite: PSY 102 or PSY 104
- PSY 221** (3+0+0) 3 Credits / 6 ECTS
Life-Span Development I
(Yaşam Boyu Gelişim I)
 Principles and theories of life-span development. Physical, cognitive and socio-emotional development from prenatal period to adolescence with current research findings.
 Pre-requisite: PSY 102 or PSY 104
- PSY 222** (3+0+0) 3 Credits / 6 ECTS
Life-Span Development II
(Yaşam Boyu Gelişim II)
 Physical, cognitive and socio-emotional development from adolescence to death based on life-span perspective.
 Pre-requisite: PSY 221

- PSY 232** (3+0+0) 3 Credits / 6 ECTS
Social Psychology
(Sosyal Psikoloji)
 The major topics and theoretical approaches of social psychology; persuasion and influence, attraction, friendship and helping others, aggression, attitude, motivation and prejudice.
 Pre-requisite: PSY 102 or PSY 104
- PSY 240** (3+0+0) 3 Credits / 6 ECTS
Traumatic Stress
(Travmatik Stres)
 Introduction to the field of "trauma psychology". Causes and consequences of traumatic stress. Psychosocial impacts of traumatic incidents such as natural or human-caused disasters, violence and abuse and life-threatening illnesses. Psychosocial interventions following disasters.
 Pre-requisite: PSY 102 or PSY 104
- PSY 300** (3+0+0) 3 Credits / 6 ECTS
Qualitative Research
(Nitel Araştırma)
 Introduction to qualitative research. Ten fundamentals of qualitative research. Planning and designing qualitative research. Interactive data collection with interviews and focus groups. Textual data collection with surveys, stories, diaries, and secondary sources. Preparing audio data for analysis. Different analytic methods for qualitative analysis. Familiarisation and data coding as first analytic steps. Identifying, analyzing, and interpreting patterns across data. Quality criteria and techniques for qualitative research. Writing and communicating qualitative research.
 Pre-requisite: PSY 204
- PSY 303** (3+0+0) 3 Credits / 6 ECTS
Health Psychology
(Sağlık Psikolojisi)
 Examine how biological, psychological, and social factors interact with and affect promoting good health and preventing illness, how effectively people cope with and reduce stress and pain, and recovery, rehabilitation, and psychosocial adjustment of patients with serious health problems.
 Pre-requisite: PSY 102 or PSY 104
- PSY 308** (2+2+0) 3 Credits / 7 ECTS
Testing and Measurement in Psychology
(Psikolojide Test ve Ölçme)
 The basic concepts related with measurement and testing and applications with certain measurement tools.
 Pre-requisite: PSY 102 or PSY 104
- PSY 310** (3+0+0) 3 Credits / 6 ECTS
Cognitive Psychology
(Bilişsel Psikoloji)
 Cognitive processes in humans. Historical review of developments that led to the emergence of cognitive psychology. Perception, attention and basic memory processes. Practical aspects of memory. Language and thinking.
 Pre-requisite: PSY 102 or PSY 104

PSY 312**(3+0+0) 3 Credits / 9 ECTS****Biopsychology
(Biyopsikoloji)**

Scope of biopsychology. Gross anatomy of the nervous system. Anatomy and physiology of neurons. Glial cells. Nervous system development. Neurobiological mechanisms of behavioral, cognitive, and emotional functions. Neurobiology of psychiatric disorders.

Pre-requisite: PSY 102

PSY 313**(3+0+0) 3 Credits / 6 ECTS****Evolutionary Psychology
(Evrimsel Psikoloji)**

Historical foundations, principals and research approaches of evolutionary psychology. Evolutionary psychological explanations for key psychological concepts such as cognition, emotion, bonding, parenting, group behavior, abnormal behaviors and culture from a comparative perspective. Proximate and ultimate causes underlying behaviors and cognitive skills..

Pre-requisite: PSY 102

PSY 314**(3+0+0) 3 Credits / 6 ECTS****Human Memory
(İnsan Belleği)**

Basic processes in human memory. Topics include interference theory, the short-term/long term memory distinction, semantic memory, working memory, sensory memory, autobiographical memory, amnesia, and implicit memory.

Pre-requisite: PSY 102 or PSY 104

PSY 315**(3+0+0) 3 Credits / 6 ECTS****Psychopharmacology
(Psikofarmakoloji)**

Principles of pharmacology. Endogenous neuroactive substances produced in the body and in the brain. Chemicals that are used in a therapeutic context to treat psychological disorders. Chemicals with psychotropic effects. Abused chemicals.

Pre-requisite: PSY 102 and PSY 312

PSY 316**(3+0+0) 3 Credits / 6 ECTS****Learning and Behavior
(Öğrenme ve Davranış)**

Animal learning and behavior. Non-associative and associative learning. Classical and instrumental conditioning. Cognitive maps. Comparative cognition versus cognitive ethology. Animal cognition.

Pre-requisite: PSY 102

PSY 317**(3+0+0) 3 Credits / 6 ECTS****Sensation and Perception
(Duyum ve Algı)**

Human visual and perceptual system. Visual stimuli and structure of the eye. Organization of human visual system. Lightness and darkness perception. Colour perception. Perception of geometry. Distance and depth perception. Motion perception.

Pre-requisite: PSY 102

- PSY 331** (3+0+0) 3 Credits / 6 ECTS
Industrial and Organizational Psychology
(Endüstri ve Örgüt Psikolojisi)
 Definition and history of I/O Psychology, job analysis, job performance, job satisfaction and personnel selection.
 Pre-requisite: PSY 102 or PSY 104
- PSY 333** (3+0+0) 3 Credits / 6 ECTS
Intergroup Relations
(Gruplar Arası İlişkiler)
 Providing an overview of the extant literature on intergroup relations; identifying broad range of topics, including various approaches on stereotyping, prejudice, discrimination, inequality, collective action, and intergroup conflict; applying intergroup concepts on social problems.
 Pre-requisite: PSY 232 or PSY 104
- PSY 334** (3+0+0) 3 Credits / 6 ECTS
Motivation and Emotion
(Motivasyon ve Duygu)
 An overview of modern motivational theories and how they explain human cognition, affect, and behavior. Pre-requisites: PSY 102, PSY 104
- PSY 337** (3+0+0) 3 Credits / 6 ECTS
Psychological, Social & Cultural Aspects of Disabilities
(Engelin Psikolojik Sosyal ve Kültürel Yönleri)
 Psychological, sociological, and cultural perspectives in relation to the disability issue. Topics are theories and models related to disability, attitudes, adjustment, gender or sexuality with real life examples and case studies.
 Pre-requisite: PSY 102 or PSY 104
- PSY 338** (3+0+0) 3 Credits / 6 ECTS
Close Relationships
(Yakın İlişkiler)
 Culture and relationships. Evolution and relationships. Neuroscience and relationships. Prosocial behavior, social support, child maltreatment, relational mobility, relational models, grief, perceived partner responsiveness, attachment. Core relationship principles.
 Pre-requisite: PSY 232
- PSY 340** (3+0+0) 3 Credits / 6 ECTS
Family Systems
(Aile Sistemleri)
 Understanding of the family systems from a psychological framework with a particular focus on Systems Approach and Family Development Theory. Basic concepts and assumptions of Family Systems Theory. Stages of the family life cycle and patterns, processes and dynamics in each of these stages.
 Pre-requisite: PSY 102 or PSY 104

PSY 341	(3+0+0) 3 Credits / 7 ECTS
Theories of Personality (Kişilik Kuramları)	
Major personality theories, including psychoanalytic and learning theorists, trait theorists, social-learning theorists and humanists. Measurement and assessment of personality.	
Pre-requisite: PSY 102 or PSY 104	
PSY 342	(3+0+0) 3 Credits / 6 ECTS
Psychopathology (Psikopatoloji)	
Distinguishes between normal behavior and psychological disorders such as stress disorders, anxiety problems and depression, schizophrenia, and addictive behaviors. Causes and treatments of psychological problems and disorders.	
Pre-requisite: PSY 102	
PSY 343	(3+0+0) 3 Credits / 6 ECTS
Clinical Psychology (Klinik Psikoloji)	
Assessment of psychopathology, and approaches to the treatment of abnormal behavior. Emphasis is on current theory, research, issues in, and the role of clinical psychology in contemporary society.	
Pre-requisite: PSY 102	
PSY 400	(3+0+0) 3 Credits / 6 ECTS
Independent Study (Bireysel Çalışma)	
Conducting a research project by applying following steps: literature review, forming hypothesis, designing the proposed study, analyzing its results and writing a formal paper.	
Pre-requisite: PSY 102 or 104, Consent of the Course Instructor.	
PSY 401	(3+0+0) 3 Credits / 6 ECTS
Introduction to Traffic Psychology (Trafik Psikolojisine Giriş)	
Cognitive processes such as perception, attention, learning, memory, decision making and action control which are drawn upon when driving and how these processes are used and influenced in driving skill.	
Pre-requisite: PSY 102 or PSY 104	
PSY 402	(3+2+0) 4 Credits / 8 ECTS
Graduation Paper and Seminar (Mezuniyet Projesi ve Seminer)	
Undertake an independent research. Gain and demonstrate proficiency in a strand of literature chosen by the student in collaboration with an advisor. Writing an analytical research paper. Presentation in written and oral form.	
Pre-requisites: PSY 204 and MATH 232	

- PSY 404** (3+0+0) 3 Credits / 6 ECTS
Forensic Psychology
(Adli Psikoloji)
 Understanding of the roles and responsibilities of mental health professionals within the justice system. Potential ethical challenges, as well as limits of privilege and confidentiality, police psychology and interrogation, decision making; and eyewitness testimony and false memories.
 Pre-requisite: PSY 102 or PSY 104
- PSY 412** (3+0+0) 3 Credits / 6 ECTS
Special Topics in Autobiographical Memory
(Otobiyografik Bellekte Özel Konular)
 A detailed study of major theories in the area of autobiographical memory. Topics covered include functions of autobiographical memory, retrieval processes in autobiographical memory, memory and trauma, culture and autobiographical memory.
 Pre-requisite: PSY 102 or PSY 104
- PSY 413** (3+0+0) 3 Credits / 6 ECTS
Current Topics in Cognitive Psychology
(Bilişsel Psikolojide Çağdaş Konular)
 A topical course which focuses on issues in cognitive psychology such as memory, judgment and decision making.
 Pre-requisite: PSY 102
- PSY 421** (3+0+0) 3 Credits / 6 ECTS
Cognitive Development
(Bilişsel Gelişim)
 Basic concepts, theories, and experimental methods of cognitive development; critical experiments on developmental changes in perception, representation and memory.
 Pre-requisites: PSY 102 and PSY 221
- PSY 424** (3+0+0) 3 Credits / 6 ECTS
Parenting and Child Development
(Ana Babalık ve Çocuk Gelişimi)
 Theoretical approaches to parenting, parent-child relations and the effects of parental behaviors in different developmental stages and cultural contexts.
 Pre-requisite: PSY 102 or PSY 104
- PSY 431** (3+0+0) 3 Credits / 6 ECTS
Self and Culture
(Benlik ve Kültür)
 Influential theories of self-formation and functioning especially with respect to how the theories handle social interaction, culture and communication.
 Pre-requisite: PSY 102 or PSY 104

- PSY 432** (2+2+0) 3 Credits / 6 ECTS
Applied Social Psychology
(Uygulamalı Sosyal Psikoloji)
 Applied social psychology. Social psychological theory. Research methods in applied social psychology. Design and evaluation of interventions. Applying social psychology to different arenas of life. Applying social psychology to one's own life. Planning and assessing an intervention study that addresses a social issue.
 Pre-requisite: PSY 232
- PSY 434** (3+0+0) 3 Credits / 6 ECTS
Human Motivation
(İnsanda Motivasyon)
 Social-personality approaches to motivation with particular focus on goal-based and need-based theories.
 Pre-requisite: PSY 102 or PSY104
- PSY 442** (3+0+0) 3 Credits / 6 ECTS
Developmental Psychopathology
(Gelişimsel Psikopatoloji)
 Examination of emotional and behavioral problems during the life span with an emphasize on childhood and adolescence using a developmentally orientated perspective as a theoretical framework.
 Pre-requisite: PSY 102
- PSY 445** (3+0+0) 3 Credits / 6 ECTS
Selected Topics in Clinical Psychology
(Klinik Psikolojide Seçme Konular)
 A topical course which focuses on issues in clinical psychology.
 Pre-requisite: PSY 102
- PSY 446** (2+2+0) 3 Credits / 6 ECTS
Interview Techniques
(Görüşme Teknikleri)
 The basic elements of interview process used in psychology, especially in clinical psychology.
 Pre-requisite: PSY 102
- PSY 447** (2+2+0) 3 Credits / 6 ECTS
Clinical Testing and Assessment
(Klinik Testler ve Değerlendirme)
 A basic understanding of test instrument utilization in psychology practice and ethical testing standards. Designed to help familiarize students with the types of tests used, their usefulness and how to interpret the test results.
 Pre-requisite: PSY 102

PSY 448**(3+0+0) 3 Credits / 6 ECTS****Trauma Psychology
(Travma Psikolojisi)**

Introduction to "trauma psychology" as a rapidly developing field. Causes and consequences of traumatic stress following various types of traumatic incidents such as natural or human-caused disasters, violence and abuse and life-threatening illnesses.

Pre-requisite: PSY 102 or PSY 104

PSY 460**(2+2+0) 3 Credits / 6 ECTS****Ethics in Psychology
(Psikolojide Etik)**

Examination and discussion the value of empirical evidence, tolerance of ambiguity, ethical behaviors and standards. Principles and regulations in the fields of psychology and acquisition of ethical behavior in clinical and research settings.

Pre-requisite: PSY 102 or PSY 104

DEPARTMENT OF SOCIOLOGY

Chair

Prof. Kezban Çelik

Academic Staff

Prof. Kezban Çelik, Asst. Prof. Aylin Çakıroğlu Çevik, Asst. Prof. Gülçin Con Wright, Özge Kızıl*.

* Research Assistant

** Part Time

Undergraduate Program in Sociology

Sociology, in its most classical terms, is the science of society. It takes group behaviours, social structures (like gender, race and ethnicity), social institutions (such as education, religion and economics) as its object of study. Apart from these macro structures, seemingly the most mundane, personal or unimportant issues can also be sociology's objects of study, as they cannot be exempted from the social. Sociology always asks the "how" and "why" questions about these research topics. It shows that the most simple, basic and natural phenomena are actually socially constructed. Perhaps, these are times that we need sociology the most; because, everyday people witness in their everyday life increasing global conflicts, economic inequalities and environmental degradation. Sociology is an important discipline to understand and explain these macro changes, and possible changes that they create on individuals, groups and societies that experience them.

21st century labour market is changing very quickly in terms of being increasingly competitive, global and technologically driven. In this sense, expectations of the market from individuals has been expanding and varying. In this environment, the skills expected from individuals include creativity, innovative thinking, team-work and cooperation, communication skills, critical thinking, analytical problem solving, and advanced writing-presentation skills. TEDU Sociology, with English as its language of instruction and the equal importance it lays on theory and method, its liberal arts approach which offers students a wide range of courses from different disciplines, opportunity to pursue a secondary field and/or participate in the Erasmus Programme, is very capable of helping you acquire and develop skills in these areas.

Program Outcomes

Students graduating from TEDU Department of Sociology will:

1. Have basic knowledge of sociological concepts, theories and methods in a comparative way and use this knowledge at different levels.
2. Have knowledge and applications of sociological methods and applications.
3. Identify the sociology of science among other branches of science and its relations with other disciplines, and recognize mutual contributions and limitations.
4. Provides interdisciplinary knowledge of national and global issues that concern different societies.
5. From sociology knowledge accumulation can produce questions and hypotheses through analytical, critical and creative thinking, evaluate research findings.

6. Achieve the knowledge in line with his/her purpose using the printed and electronic sources and evaluate both reliability of sources and suitability of information.
7. Take responsibility and initiative to create improvements and to generate solutions to the problems in professional domain.
8. Have basic measurement, assessment and interview skills to function in professional domain.
9. Learn, analyze and explain the bases of qualitative and quantitative data collection methods.
10. Keep curiosity and interest in his/her professional development and engage in lifelong learning.
11. Follow sociology literature and be able to share it using written and verbal communication skills both in Turkish and in English.
12. Treat others with civility respecting for differences of individual (age, gender, ethnic identity, religion and sexual orientation) and cultural.
13. Be able to use required software, techniques and instruments in educational, measurement, assessment and data analysis.
14. Be attentive to social and scientific values and professional codes of ethical conduct in all of his/her academic and professional activities.

Undergraduate Curriculum

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
MATH 111	Introduction to Calculus of One Variable	3	2	0	4	7
ENG 101	English for Academic Purposes	2	2	0	3	5
CMPE 101	Introduction to IT	2	0	2	3	5
SOC 101	Introduction to Sociology I	3	0	0	3	5
CC-E	Sci/Soc/Hum/Lit/Art	3	0	0	3	5
TUR 101	Turkish I	2	0	0	2	2
TOTAL		15	8	2	18	29

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
CC-E	Sci/Soc/Hum/Lit/Art	3	0	0	3	5
ENG 102	Expository Writing	2	2	0	3	5
SOC 104	Introduction to Sociology II	3	0	0	3	6
CC-E	Sci/Soc/Hum/Lit/Art	3	0	0	3	5
CC-E	Sci/Soc/Hum/Lit/Art	3	0	0	3	5
TUR 102	Turkish II	2	0	0	2	2
TOTAL		16	2	0	17	28

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
PHIL 104	Philosophy and Ethics	3	0	0	3	5
SOC 201	Research Methods I	2	2	0	3	7
SOC 203	Sociological Theories I: Classics	3	0	0	3	6
CC-E	Sci/Soc/Hum/Lit/Art	3	0	0	3	5
HIST101	History of Turkish Republic I	2	0	0	2	2
TOTAL		13	2	0	14	25

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
MATH 233	Statistic for Social Sciences	3	0	0	3	5
SOC 202	Research Methods II	2	2	0	3	8
SOC 204	Sociological Theories II: Classics	3	0	0	3	6
SOC	Departmental Elective	3	0	0	3	6
HIST 102	History of Turkish Republic II	2	0	0	2	2
TOTAL		13	2	0	14	27

Semester 5

Code	Course Title	C	P	L	Cr	ECTS
SOC 301	Sociological Theories: Contemporary	3	0	0	3	6
SOC 303	Urban Sociology	3	0	0	3	6
SOC	Departmental Elective	3	0	0	3	6
SOC	Departmental Elective	3	0	0	3	6
F	Free Elective	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
TOTAL		18	0	0	18	34

Semester 6

Code	Course Title	C	P	L	Cr	ECTS
SOC 302	Development of Sociology in Turkey	3	0	0	3	6
SOC 304	Demography and Society	2	2	0	3	6
SOC	Departmental Elective	3	0	0	3	6
SOC	Departmental Elective	3	0	0	3	6
SF	Secondary Field	3	0	0	3	5
F	Free Elective	3	0	0	3	5
TOTAL		17	2	0	18	34

Semester 7

Code	Course Title	C	P	L	Cr	ECTS
SOC 401	Graduation Project and Seminar I	3	2	0	4	8
SOC 403	Social Inequality and Mobility	3	0	0	3	6
SOC 405	Advanced Qualitative Data Analysis	3	0	0	3	6
SOC	Departmental Elective	3	0	0	3	6
SF	Secondary Field	3	0	0	3	5
TEDU 400	Student Development Seminar	0	0	0	0	1
TOTAL		15	2	0	16	32

Semester 8

Code	Course Title	C	P	L	Cr	ECTS
SOC 402	Graduation Project and Seminar II	3	2	0	3	9
SOC 404	Sociology of Work	2	2	0	3	6
SOC	Departmental Elective	3	0	0	3	6
SF	Secondary Field	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
TOTAL		14	4	0	15	31

Totals expected for graduation		121	19	2	130	240
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Courses with Pre-requisites

Course Name	Pre-requisites
SOC 104 Introduction to Sociology II	SOC 101
SOC 201 Research Methods I	SOC 101, SOC 104
SOC 202 Research Methods II	SOC 201
SOC 203 Sociological Theories I: Classics	SOC 101, SOC 104
SOC 204 Sociological Theories II: Classics	SOC 101, SOC 104
SOC 207 Qualitative Data Analysis	SOC 101, SOC 104
SOC 210 Sociology of Family	SOC 101 and SOC 104 or SOC 103
SOC 211 Sociology of Education	SOC 101 and SOC 104 or SOC 103
SOC 212 Religion and Society	SOC 101 or SOC 103
SOC 220 New Media and Communication Studies	SOC 101 or SOC 103
SOC 221 Economics and Society	SOC 101 or SOC 103
SOC 222 Migration in a Globalized World	SOC 101 or SOC 103
SOC 223 New Social Movements	SOC 101 or SOC 103
SOC 224 Social Anthropology	SOC 101, SOC 104
SOC 301 Sociological Theories: Contemporary	SOC 203
SOC 302 Development of Sociology in Turkey	SOC 101, SOC 104
SOC 303 Urban Sociology	SOC 104
SOC 304 Demography and Society	SOC 101, SOC 104
SOC 310 Welfare and Social Policy	SOC 101 and SOC 104 or SOC 103
SOC 311 Youth Sociology	SOC 101 and SOC 104 or SOC 103
SOC 312 Sociology of Secularity	SOC 212
SOC 320 Cultural Turn and Consumption	SOC 101 and SOC 104 or SOC 103
SOC 321 Sociology of Old Age	SOC 101 and SOC 104 or SOC 103
SOC 322 Globalization and Multiculturalism	SOC 201 and SOC 203 or SOC 103
SOC 323 Social Change	SOC 101, SOC 104
SOC 401 Graduation Project and Seminar I	SOC 304, SOC 301
SOC 402 Graduation Project and Seminar II	SOC 201, SOC 203
SOC 403 Social Inequality and Mobility	SOC 203, SOC 204
SOC 404 Sociology of Work	SOC 104, SOC 203
SOC 405 Advanced Qualitative Data Analysis	SOC 201, SOC 207, SOC 202
SOC 410 Poverty, New Poverty and The Precariat	SOC 101 and SOC 104 or SOC 103
SOC 411 Labour, Employment and Gender	SOC 103, SOC 104
SOC 413 Medicalisation and Health Sociology	SOC 103, SOC 104
SOC 414 The Social Structure of Turkey	SOC 103, SOC 104
SOC 415 Urban Ethnography	SOC 304
SOC 420 Current Issues and Problems in Sociology	SOC 301
SOC 421 Power, Inequality and Social Classes	SOC 103, SOC 104
SOC 422 Race and Ethnicity	SOC 103
SOC 423 Gender and Sexuality	SOC 104

Undergraduate Course Descriptions

SOC 101

(3+0+0) 3 Credits / 5 ECTS

**Introduction to Sociology I
(Sosyolojiye Giriş I)**

An introduction to the organizing themes and ideas, empirical concerns, and analytical approaches of the discipline of sociology.

Pre-requisites: None

SOC 104

(3+0+0) 3 Credits / 5 ECTS

**Introduction to Sociology II
(Sosyolojiye Giriş II)**

The course focuses on both classical and contemporary views of modern society, on the nature of community, and on inequality, with special attention to class, race, and gender.

Pre-requisite: SOC 101

SOC 201

(2+2+0) 3 Credits / 7 ECTS

**Research Methods I
(Araştırma Yöntemleri I)**

This course aims at providing the student with the basic tools of conducting research and writing papers in sociology. Throughout this course, students will gain experience by carrying out their own quantitative and qualitative research project.

Pre-requisites: SOC 101, SOC 103

SOC 202

(2+2+0) 3 Credits / 8 ECTS

**Research Methods II
(Araştırma Yöntemleri II)**

This course aims at providing the student with the basic tools of conducting research and writing papers in sociology. Throughout this course, students will gain experience by carrying out their own quantitative and qualitative research project.

Pre-requisite: SOC 201

SOC 203

(3+0+0) 3 Credits / 6 ECTS

**Sociological Theories I: Classics
(Sosyoloji Teorileri: Klasik I)**

An introduction to the study of the development of sociology as a discipline in the 19th and early 20th centuries.

Pre-requisites: SOC 101, SOC 103

SOC 204

(3+0+0) 3 Credits / 6 ECTS

**Sociological Theories II: Classics
(Sosyoloji Teorileri: Klasik II)**

A survey of the ideas of the major sociological theories of the 20th century, including Functionalism, Conflict Theory, Symbolic Interactionism, Ethnomethodology, Neo Marxism, Structuralism and Postmodernism.

Pre-requisites: SOC 101, SOC 103

- SOC 207** (3+0+0) 3 Credits / 6 ECTS
Qualitative Data Analysis
 (Niceliksel Veri Analizi)
 Hypothesis testing. Simple and multiple linear regressions. Correlation analysis. Elementary design of experiments.
 Pre-requisites: SOC 101, SOC 104
- SOC 210** (3+0+0) 3 Credits / 6 ECTS
Sociology of Family
 (Aile Sosyolojisi)
 This course examines the family as a social institution: the structure and types of family; economic, social and reproductive functions of the family; changing role of the family and social change; sexual division of labor within family; domestic labor; reproduction; patriarchy; child labor; kinship.
 Pre-requisites: SOC 101, SOC 104 or SOC 103
- SOC 211** (3+0+0) 3 Credits / 6 ECTS
Sociology of Education
 (Eğitim Sosyolojisi)
 This course introduces students to the sociology of education: the role of education in reinforcing or challenging social inequality, the effects of class, race/ethnicity and gender on educational experiences, the organization of educational institutions.
 Pre-requisites: SOC 101, SOC 104 or SOC 103
- SOC 212** (3+0+0) 3 Credits / 6 ECTS
Religion and Society
 (Din ve Toplum)
 This course introduces students to the sociology of religion: the different conceptualizations and definitions of religion, theoretical approaches to the role and function of religion in society, the relationship between religion and belief, secularization, ritual and modernity.
 Pre-requisite: SOC 101 or SOC 103
- SOC 220** (3+0+0) 3 Credits / 6 ECTS
New Media and Communication Studies
 (Yeni Medya ve İletişim Çalışmaları)
 This course provides an examination of mass communication theories with an emphasis on new social media. It includes discussions on the mass media of communication and their role as social institutions; content, audience and the effect of mass media, the functions of communications and new media in the formation of public opinion, social and cultural values.
 Pre-requisite: SOC 101 or SOC 103
- SOC 221** (3+0+0) 3 Credits / 6 ECTS
Economics and Society
 (İktisat ve Toplum)
 This course provides an introduction to economic sociology. It examines economy as a social process and provides an analysis of how the interplay of economy and society can help us to understand questions of efficiency, questions of fairness, and questions of democracy.
 Pre-requisite: SOC 101 or SOC 103

SOC 222**(3+0+0) 3 Credits / 6 ECTS****Migration in a Globalized World
(Küreselleşen Dünyada Göç)**

This course covers the different forms, causes and consequences of international migration, with a particular attention to the impact of globalization including, the regulation of international migration by authorities at different levels, immigrant incorporation, assimilation in various social fields, including the labour market, education, politics and religion.

Pre-requisite: SOC 101 or SOC 103

SOC 223**(3+0+0) 3 Credits / 6 ECTS****New Social Movements
(Yeni Toplumsal Hareketler)**

This course provides an examination of social movements and collective actions; theoretical perspectives in the analysis of social movements and collective actions, collective behaviour; resource mobilization; political process; and new social movements; feminist, environmental, anti-nuclear, anti-globalization movements.

Pre-requisite: SOC 101 or SOC 103

SOC 224**(2+2+0) 3 Credits / 6 ECTS****Social Anthropology
(Sosyal Antropoloji)**

This course examines some of the central conceptual and methodological issues in social anthropology. Theories of culture and social structure; examination of major human institutions (kinship, economic, political and religious) in cross-cultural perspective.

Pre-requisites: SOC 101, SOC 104

SOC 301**(3+0+0) 3 Credits / 6 ECTS****Sociological Theories: Contemporary Sociology
(Sosyoloji Teorileri: Çağdaş)**

This course aims to acquaint students with the main schools of modern sociological theory. Students will scrutinize salient concepts and key thinkers. They will learn how sociological theory is relevant to understanding modern life.

Pre-requisite: SOC 203

SOC 302**(2+2+0) 3 Credits / 6 ECTS****Development of Sociology in Turkey
(Türkiye'de Sosyolojinin Gelişimi)**

A survey of the development of sociological thinking in Turkey from the late 19th to the early 21st centuries: Major figures and texts; main theoretical perspectives, topics, themes, and problems; major traditions, orientations, and politics in the development of sociological thought in Turkey.

Pre-requisites: SOC 101, SOC 104

- SOC 303** (3+0+0) 3 Credits / 6 ECTS
Urban Sociology
(Kent Sosyolojisi)
 This course offers an introduction to a wide range of topics associated with urban sociology. Sociologists study social organization and culture of cities and their surrounding regions.
 Prerequisites: SOC 101, SOC 104
- SOC 304** (3+0+0) 3 Credits / 6 ECTS
Demography and Society
(Demografi ve Toplum)
 This course focuses on the examination of major studies on the social causes and consequences of demographic processes.
 Pre-requisite: SOC 104
- SOC 310** (3+0+0) 3 Credits / 6 ECTS
Welfare and Social Policy
(Refah ve Sosyal Politika)
 This course surveys the history, theory and application of welfare services and social policy services. Social policy and its effect on welfare and equality is examined with respect to ethnicity, gender, religion and education.
 Pre-requisites: SOC 101, SOC 104 or SOC 103
- SOC 311** (3+0+0) 3 Credits / 6 ECTS
Youth Sociology
(Gençlik Sosyolojisi)
 This course will explore the social and cultural construction of youth in contemporary societies. Major themes will include: cultural and legal socialization of youth, crime and deviance, health and sexuality, employment and educational outcomes, and political behavior/civic engagement.
 Pre-requisites: SOC 101, SOC 104 or SOC 103
- SOC 312** (3+0+0) 3 Credits / 6 ECTS
Sociology of Secularity
(Sekülerlik Sosyolojisi)
 This course examines secularity, different manifestations of secularity; secular social and political movements, secularization, the meaning of secularity, everyday life and secularity, gender, ethnicity and secularity.
 Pre-requisite: SOC 212
- SOC 320** (3+0+0) 3 Credits / 6 ECTS
Cultural Turn and Consumption
(Kültürel Dönüş ve Tüketim)
 An examination of sociology of consumption in light of the cultural turn, with emphasis on the micro- interactions of everyday life and larger-scale social patterns and trends. Consumption and economic and political systems, social categorization, group membership, identity, stratification and social status. Pre-requisites: SOC 101, SOC 104 or SOC 103

- SOC 321** (3+0+0) 3 Credits / 6 ECTS
Sociology of Old Age
(Yaşlılık Sosyolojisi)
This course examines aging from a sociological perspective covering the prominent sociological theories in the field of aging. The social construction of old age and experiences of ageing, discrimination against the old, old age and gender.
Pre-requisites: SOC 101, SOC 104, or SOC 103
- SOC 322** (3+0+0) 3 Credits / 6 ECTS
Globalization and Multiculturalism
(Küreselleşme ve Çok Kültürlülük)
This course examines the main concepts and issues regarding globalization and multiculturalism, including culture, ethnic identity, national grouping, multicultural civic society, nation state and globalization, citizenship and multiculturalism, essentialism and multiculturalism, gender and multiculturalism.
Pre-requisites: SOC 101, SOC 104 or SOC 103
- SOC 323** (3+0+0) 3 Credits / 6 ECTS
Social Change
(Toplumsal Değişme)
Examination of the content and context of major theories of social change and development. Evaluation of the relevance of these theories to historical experience in different world regions.
Pre-requisites: SOC 304, SOC 301
- SOC 401** (3+2+0) 4 Credits / 8 ECTS
Graduation Project and Seminar I
(Araştırma Projesi ve Seminer I)
The project will be based in a research context chosen by the student within which the project is developed, executed and evaluated. Students will become familiar with current trends in qualitative research methodologies.
Pre-requisites: SOC 201, SOC 203
- SOC 402** (3+2+0) 3 Credits / 8 ECTS
Graduation Project and Seminar II
(Araştırma Projesi ve Seminer II)
The project will be based in a research context chosen by the student within which the project is developed, executed and evaluated. Students will become familiar with current trends in qualitative research methodologies.
Pre-requisites: SOC 201, SOC 203
- SOC 403** (3+0+0) 3 Credits / 6 ECTS
Social Inequality and Mobility
(Toplumsal Eşitsizlikler ve Hareketlilik)
This course reviews contemporary approaches to understanding social inequality and mobility and the processes by which it comes to be seen as legitimate, natural, or desirable.
Pre-requisites: SOC 203, SOC 204

- SOC 404** (2+2+0) 3 Credits / 6 ECTS
Sociology of Work
(Çalışma Sosyolojisi)
 A social structural approach to the study of organizations emphasizing such issues as the role of technology in determining organizational structure; interrelations between size, complexity and formalization in organizational networks; impact of large-scale organizations on the structure of modern societies.
 Pre-requisites: SOC 104, SOC 203
- SOC 405** (3+0+0) 3 Credits / 6 ECTS
Advanced Qualitative Data Analysis
(İleri Niteliksel Veri Analizi)
 The course provides an introduction to the use of qualitative data analysis, an overview of the basic functions of qualitative (such as Maxqda) technique and program and how it can be utilized in qualitative social research.
 Pre-requisites: SOC 201, SOC 207, SOC 202
- SOC 410** (3+0+0) 3 Credits / 6 ECTS
Poverty, New Poverty and The Precariat
(Yoksulluk, Yeni Yoksulluk ve Prekarya)
 This course examines poverty from a sociological perspective in light of the recent developments in the field; the emergence of the precariat and conceptualizations of new poverty.
 Pre-requisites: SOC 101, SOC 104, or SOC 103
- SOC 411** (3+0+0) 3 Credits / 6 ECTS
Labour, Employment and Gender
(Emek, Çalışma ve Toplumsal Cinsiyet)
 This course provides sociological perspectives on the effects of gender on labour, work and employment. With an emphasis on gender, it introduces theoretical perspectives on inequality; social class at work; women in the labour market; gender and its relation to race and ethnicity, occupational segregation; immigrant employment; trade unions.
 Pre-requisites: SOC 101, SOC 104, or SOC 103
- SOC 413** (2+2+0) 3 Credits / 6 ECTS
Medicalisation and Health Sociology
(Medikalizasyon ve Sağlık Sosyolojisi)
 An examination of the sociology of health and medicalization. Key thematic areas of inquiry include: medicine as an institution; power; the social, political and cultural parameters that shape health and illness experiences and health inequalities; mental health/illness, disability, gender and reproductive technologies, pharmaceuticals.
 Pre-requisites: SOC 103, SOC 104

SOC 414 (3+0+0) 3 Credits / 6 ECTS

**The Social Structure of Turkey
(Türkiye'nin Toplumsal Yapısı)**

This course provides an analysis of Turkey's social structure with an emphasis on current issues related to social and cultural change in Turkey, and their relationship to world-wide phenomena.

Pre-requisites: SOC 103, SOC 104

SOC 415 (3+0+0) 3 Credits / 6 ECTS

**Urban Ethnography
(Kent Etnografisi)**

The course considers the role of ethnography on how we understand cities. We will look in detail at different types of ethnography and compare with other means of representing the city. Specific themes will cover the urban flâneur and ethnographer, street ethnography, culture of poverty and marginality; infrastructure and mobility; violence and slums.

Pre-requisites: SOC 304

SOC 420 (3+0+0) 3 Credits / 6 ECTS

**Current Issues and Problems in Sociology
(Sosyolojide Güncel Konular ve Sorunlar)**

This course examines some of the most prominent issues and problems in sociology.

Pre-requisite: SOC 301

SOC 421 (3+0+0) 3 Credits / 6 ECTS

**Power, Inequality and Social Classes
(Güç, Eşitsizlik ve Toplumsal Sınıflar)**

This course focuses on power, inequality and their relation to social classes. The goals of the course are to understand how inequality is conceptualized and measured in the social sciences, to understand the structure of inequality and to understand the forces that both produce and inhibit intergenerational social mobility.

Pre-requisites: SOC 103, SOC 104

SOC 422 (3+0+0) 3 Credits / 6 ECTS

**Race and Ethnicity
(İrk ve Etnisite)**

The course examines major topics, theoretical definitions/debates and approaches in the field of race and ethnicity, including the formation and dynamics of ethnic groups, the social construction of race in the contemporary World, the relationship of race and ethnicity with nations, state, class, minority groups, gender, power, and politics.

Pre-requisite: SOC 103

SOC 423 (2+2+0) 3 Credits / 6 ECTS

**Gender and Sexuality
(Toplumsal Cinsiyet ve Cinsellik)**

This course examines gender and sexuality in relation to modern societies, including our rapidly changing attitudes towards sex and our understanding of masculine, feminine and intersex identities, by relating the study of gender and sexuality to religion, class, ethnicity and family.

Pre-requisite: SOC 104

FACULTY OF
ECONOMICS AND
ADMINISTRATIVE SCIENCES



FACULTY OF ECONOMICS AND ADMINISTRATIVE SCIENCES

Dean's Statement

At Faculty of Economics and Administrative Sciences (FEAS), you'll gain deep knowledge about individuals, organizations, societies, and cultures to help solve the most pressing issues of the day. The Faculty houses three undergraduate programs, Business Administration, Economics, Political Science and International Relations to help you focus on your interests. Whatever program you choose, you'll become a critical thinker, with a holistic perspective challenging the status quo.

The medium of instruction in all degree programs at FEAS is English. In line with the pedagogical goals of TED University, all programs incorporate interactive learning methods into their educational strategy. The employment of active learning techniques will bring about a significant shift in the learning process through enhanced student participation.

We invite you to passionate debates with your classmates and professors; unconventional classes that change the way you think; variety of multidisciplinary secondary fields you can choose and opportunities to encounter real-world issues and develop and propose cutting-edge solutions. This is what it means to study as an undergraduate at FEAS in TED University. You'll receive a dynamic, well-rounded education that will prepare you for a career and for life.

This catalog will help you to explore our programs, courses through which you will get a better idea about our teaching philosophy.

Prof. Aslıhan SALIH, Dean

DEPARTMENT OF BUSINESS ADMINISTRATION

Chair

Assoc. Prof. İbrahim Ünalmiş

Academic Staff

Prof. Aslıhan Salih, Assoc. Prof. İbrahim Ünalmiş, Prof. Şebnem Akipek Öcal, Asst. Prof. Burze Yaşar, Asst. Prof. Işıl Sevilay Yılmaz, Asst. Prof. Kıymet Duygu Erdaş, Asst. Prof. Zafer Yılmaz, Dr. Aras Alkış, Dr. Can Armutlu, Ezgi Alp*, Gizem Çelik*, Mutlu Önen*, Öykü Yücel*.

* Research Assistant

Undergraduate Program in Business Administration

TED University Business Administration Department provides students with skills necessary to evaluate and respond to economic, political, ethical, legal and regulatory aspects of an increasingly changing global business climate together with a sound business education built on strong theoretical foundations.

Students of the department develop a deep understanding of the complexity and multiplicity of management processes in competitive environments through their education based on a strong social sciences foundation and practical applications of management discipline.

Our graduates are expected to demonstrate competency in business knowledge, communication skills, innovative and critical thinking, personal and social responsibility and differentiate themselves in competitive business environments.

Program Outcomes

TED University Business Administration Program graduates are expected to achieve the following learning outcomes:

1. Demonstrate knowledge of major concepts, theories and applications in the area of business administration.
2. Manage business decision-making processes by using quantitative and qualitative tools and information technology.
3. Evaluate how economic, legal, political, social, technical and competitive forces (local, regional, global) impact business practice.
4. Use the English language proficiently in knowledge sharing and professional communication.
5. Develop quality documents and make presentations that exhibit competence in content, organization and clarity.
6. Articulate ways to turn situations and problems into business or personal opportunities.
7. Formulate solutions to complex problems individually and in interdisciplinary teams using creative thinking, team building and leadership skills.
8. Identify ethical issues in business administration and implement social, scientific and professional codes of ethical conduct.
9. Recognize and appreciate different cultures and respect individual and cultural differences.
10. Engage in lifelong learning and enrich personal, social, professional development by exploring interests in diverse disciplines.
11. Practice good working habits, time management, and self-discipline.

Undergraduate Curriculum

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
MATH 111	Introduction to Calculus of One Variable	3	2	0	4	7
ECON 101	Economics I	3	1	0	4	6
ENG 101	English for Academic Purposes	2	2	0	3	5
CMPE 101	Introduction to IT	2	0	2	3	5
	Elective, CC	3	0	0	3	5
TUR 101	Turkish I	2	0	0	2	2
TOTAL		16	5	2	19	30

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
ECON 102	Economics II	3	1	0	4	6
ENG 102	Expository Writing	2	2	0	3	5
	Elective, CC	3	0	0	3	5
	Elective, CC	3	0	0	3	5
	Elective, CC	3	0	0	3	5
TUR 102	Turkish II	2	0	0	2	2
TOTAL		16	3	0	18	28

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
MATH 112	Intro. to Multivariable Calculus and Linear Algebra	3	2	0	4	7
MATH 230	Introduction to Probability Theory	3	0	0	3	6
BA 201	Fundamentals of Business	3	0	0	3	6
BA 203	Financial Accounting	3	0	0	3	6
BA	Elective, BA	3	0	0	3	6
HIST 101	History of Turkish Republic I	2	0	0	2	2
TOTAL		17	2	0	18	33

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
MATH 232	Introduction to Statistics	3	0	0	3	6
ENG 204	Professional Communication in English	3	0	0	3	5
BA 202	Management Science	3	0	0	3	6
BA 204	Organizational Behavior	3	0	0	3	6
	Elective, CC	3	0	0	3	5
HIST 102	History of Turkish Republic II	2	0	0	2	2
TOTAL		17	0	0	17	30

Semester 5

Code	Course Title	C	P	L	Cr	ECTS
BA 301	Principles of Marketing	3	0	0	3	6
BA 303	Managerial Accounting	3	0	0	3	6
BA 305	Production and Operations Management	3	0	0	3	6
SF	Secondary Field	3	0	0	3	5
F	Elective, Free	3	0	0	3	5
BA 300	Summer Practice I	1	0	0	1	2
TOTAL		16	0	0	16	30

Semester 6

Code	Course Title	C	P	L	Cr	ECTS
BA 302	Business Law	3	0	0	3	6
BA 304	Corporate Finance	3	0	0	3	6
BA	Elective, BA	3	0	0	3	6
SF	Secondary Field	3	0	0	3	5
F	Elective, Free	3	0	0	3	5
TEDU 400	Student Development Seminars	0	0	0	0	1
TOTAL		15	0	0	15	29

Semester 7

Code	Course Title	C	P	L	Cr	ECTS
BA 401	Research Methods	3	0	0	3	7
BA	Elective, BA	3	0	0	3	6
BA	Elective, BA	3	0	0	3	6
SF	Secondary Field	3	0	0	3	5
F	Elective, Free	3	0	0	3	5
BA 400	Summer Practice II	1	0	0	1	2
TOTAL		16	0	0	16	31

Semester 8

Code	Course Title	C	P	L	Cr	ECTS
BA 402	Graduation Paper and Seminar	3	0	0	3	7
BA	Elective, BA	3	0	0	3	6
BA	Elective, BA	3	0	0	3	6
SF	Secondary Field	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
TOTAL		15	0	0	15	29

Totals expected for graduation		127	10	2	134	240
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Courses with Pre-requisites

Course Name	Pre-requisites
BA 202 Management Science	MATH 102 or MATH 112
BA 303 Managerial Accounting	BA 203
BA 304 Corporate Finance	BA 203 or IE 222
BA 305 Production and Operations Management	BA 202
BA 400 Summer Practice II	BA 300
BA 402 Graduation Paper and Seminar	BA 401
BA 406 Market Data Analysis	BA 304
BA 410 Independent Research	BA 401
BA 411 Auditing and Financial Statement Analysis	BA 304
BA 413 Valuation and Financial Statement Analysis	BA 304
BA 414 Financial Statements of Banking Sector	BA 203
BA 420 Business Simulation and Strategik Decisions	BA 301 and BA 304 and BA 305
BA 421 Strategic Management	BA 201
BA 422 Creativity and Entrepreneurship Experience	BA 201
BA 424 Investment Analysis	BA 304
BA 428 Marketing of Financial Product and Service	BA 301 and BA 305 and BA 304
BA 432 Risk Management	BA 304
BA 434 Financial Econometrics	BA 304 and ECON 332
BA 441 International Finance	BA 304
BA 442 International Marketing	BA 301
BA 454 Mergers and Acquisitions	BA 304
BA 461 Consumer Behavior	BA 301
BA 462 New Product Development	BA 301
BA 463 Marketing Research	MATH 232 & BA 301
BA 464 Brand Management	BA 301
BA 465 Social Media Marketing	BA 301
BA 466 Advertising	BA 301
BA 467 Retailing	BA 301
BA 471 Cost Benefit Analysis	BA 303
BA 472 Supply Chain Management	BA 305
BA 474 Facilities Planning and Design	BA 203 or IE 232
BA 476 Quality Management	BA 305
BA 477 Inventory Management	BA 305
BA 478 Operations Research	BA 202
BA 479 Decision Analysis	BA 202
BA 482 Corporate Governance	BA 204

Undergraduate Course Descriptions

- BA 110** (3+0+0) 3 Credits / 5 ECTS
Introduction to Business and Entrepreneurship
 (İşletmeye ve Girişimciliğe Giriş)
 Turning an idea into a business. Basic understanding of all functions of business. Successful entrepreneurship stories. Storytelling for entrepreneurs. Building and developing a business model. Collecting customer data. Industry and target market analysis. Raising capital. Preparing a business plan.
- BA 201** (3+0+0) 3 Credits / 6 ECTS
Fundamentals of Business
 (İşletmeciliğin Temelleri)
 Business environment. Main functions of marketing, accounting, finance, production, and operation divisions. Business and society interaction. Global business environment concept.
- BA 202** (3+0+0) 3 Credits / 6 ECTS
Management Science
 (Yönetim Bilimi)
 Mathematical modeling techniques of managerial problems. Linear programming. Integer programming. Sensitivity analysis. Project management. Multi-criteria decision making techniques.
 Pre-requisite: MATH 102 or MATH 112
- BA 203** (3+0+0) 3 Credits / 6 ECTS
Financial Accounting
 (Finansal Muhasebe)
 Record keeping and reporting of financial statement information. Reporting and interpreting balance sheet, income statement, cash flow statement, and statement of shareholders' equity.
- BA 204** (3+0+0) 3 Credits / 6 ECTS
Organizational Behavior
 (Örgütsel Davranış)
 Behavior of individuals and groups in organizations. Performance concept. Individual behaviors. Communication among individuals. Performance improvement methods. Behavior analysis. The role of management.
- BA 220** (3+0+0) 3 Credits / 6 ECTS
Fundamentals of Entrepreneurship
 (Girişimciliğin Temelleri)
 Principles of entrepreneurship, ecosystems, mentorship, networking, business ideation, Access to funding, business modeling.
- BA 281** (3+0+0) 3 Credits / 6 ECTS
Turkish Tax System
 (Türk Vergi Sistemi)
 Basic structure of Turkish law system. Tax Procedure Law. Income Tax Law. Corporate Tax Law and Value Added Tax Law. Applications.

<p>BA 282 Business Ethics (İşletme Etiği)</p> <p>Concept of business ethics at individual and organizational level. Ethical awareness. Business ethics' impact on decision making processes and global economy. Conflict resolution models.</p>	<p>(3+0+0) 3 Credits / 6 ECTS</p>
<p>BA 300 Summer Practice I (Yaz Stajı I)</p> <p>Minimum 20 business days of summer internship that students are required to complete in order to gain work experience in economics.</p>	<p>(1+0+0) 1 Credits / 2 ECTS</p>
<p>BA 301 Principles of Marketing (Pazarlama İlkeleri)</p> <p>Fundamental marketing concepts. Marketing environment. Marketing research. Marketing mix. Marketing strategy, market research, market analysis, customer relationship management, and consumer behavior.</p>	<p>(3+0+0) 3 Credits / 6 ECTS</p>
<p>BA 302 Business Law (Ticaret Hukuku)</p> <p>Legal environment of a business. Fundamental legal principles and processes. Contracts, legal forms of business associations, trade regulations, intellectual property, dispute resolution, law of unfair competition, law of labor and consumer protection.</p>	<p>(3+0+0) 3 Credits / 6 ECTS</p>
<p>BA 303 Managerial Accounting (Yönetim Muhasebesi)</p> <p>Cost classifications. Budgeting techniques. Systems design. Cost-volume-profit relationships. Controlling and decision making processes.</p> <p>Pre-requisite: BA 203</p>	<p>(3+0+0) 3 Credits / 6 ECTS</p>
<p>BA 304 Corporate Finance (Şirketler Finansmanı)</p> <p>Risk and return concept. Risk management techniques. Rate of return on investments. Time value of money. Bond and stock valuation. Capital budgeting techniques. Analysis methods of investment projects. Capital asset pricing models.</p> <p>Pre-requisite: BA 202 or IE 222</p>	<p>(3+0+0) 3 Credits / 6 ECTS</p>
<p>BA 305 Production and Operations Management (Üretim ve Operasyonlar Yönetimi)</p> <p>Input and output concepts. Total quality management. Statistical quality control. Product and process strategy. Capacity planning and inventory management techniques.</p> <p>Pre-requisite: BA 202</p>	<p>(3+0+0) 3 Credits / 6 ECTS</p>

- BA 322** (3+0+0) 3 Credits / 6 ECTS
New Enterprises
(Yeni Girişimler)
 Process of identifying market opportunities. Steps in starting a new business. SWOT analysis. Value proposition. Legal procedures. Entrepreneurial ethics and the business plan.
- BA 342** (3+0+0) 3 Credits / 6 ECTS
International Business
(Uluslararası İşletmecilik)
 Economic analysis of the forces driving international business. Competitive advantage concept. Competitive strategies. Alternative modes of market entry. Import and export through intermediaries. Contracting with suppliers and distributors. Foreign direct investment.
- BA 400** (1+0+0) 1 Credits / 2 ECTS
Summer Practice II
(Yaz Stajı II)
 Minimum 20 business days of internship at a company or institution during which students gain work experience in business administration. Preparing a report that compares the internship with previous internship (s).
 Pre-requisite: BA 300
- BA 401** (3+0+0) 3 Credits / 7 ECTS
Research Methods
(Araştırma Yöntemleri)
 Epistemological, quantitative and qualitative research methods. Scientific method. Problem definition process and classification of variables. Sampling techniques. Data collection methods.
 Pre-requisites: Minimum senior standing
- BA 402** (3+0+0) 3 Credits / 7 ECTS
Graduation Paper and Seminar
(Mezuniyet Projesi ve Seminer)
 Undertake an independent research. Gain and demonstrate proficiency in a strand of literature chosen by the student in collaboration with an advisor. Writing an analytical research paper. Presentation in written and oral form.
 Pre-requisite: BA 401
- BA 406** (3+0+0) 3 Credits / 6 ECTS
Market Data Analysis
(Piyasa Veri Analizi)
 Building fundamental understanding and monitoring skills for economic and financial market data. Use of major domestic and international economic and financial market data sources. Assessing international financial structure by analysing sovereign, FX, equity, commodity, and industry market data. Data handling and analysis in MS Excel.
 Pre-requisite: BA 304

- BA 407** (3+0+0) 3 Credits / 6 ECTS
Management Information Systems
(Yönetim Bilişim Sistemleri)
Fundamentals of information systems. Information Systems in Global Business. Information Systems for competitive advantage. Management of databases. Electronic commerce systems. Decision support systems. Security and ethical issues.
- BA 410** (3+0+0) 3 Credits / 6 ECTS
Independent Research
(Bağımsız Araştırma)
Independent research. Literature review. Data Analysis. Writing an analytical research paper. Presentation in written and oral form.
Pre-requisite: BA 401
- BA 411** (3+0+0) 3 Credits / 6 ECTS
Auditing and Financial Statement Analysis
(Denetim ve Finansal Tablolar Analizi)
Duties and responsibilities of auditors. Accountability and professional ethics concepts. Audit process steps. International Auditing Standards. Contents of financial statements. Cash flow analysis. Profitability analysis. Creditability analysis and capital analysis.
Pre-requisite: BA 304
- BA 413** (3+0+0) 3 Credits / 6 ECTS
Valuation and Financial Statement Analysis
(Değerleme ve Finansal Tablolar Analizi)
Methodology and techniques involved in business valuations. Basic financial statements analysis. Standards for valuation, valuation methodology, cash flow analysis, financial analysis techniques, international standards. Applications.
Pre-requisite: BA 304
- BA 414** (3+0+0) 3 Credits / 6 ECTS
Financial Statements of Banking Sector
(Bankacılık Sektörü ve Temel Finansal Tablolar)
Interpretation of banking sector financial statements. Contents of financial statements. Accounting and finance based valuation analysis tools. Accounting standards. Accounting of basic banking transactions.
Pre-requisite: BA 203
- BA 415** (2+2+0) 3 Credits / 6 ECTS
Technology Development and Entrepreneurship
(Teknoloji Geliştirme ve Girişimcilik)
Technology Life-Cycle, Technology Readiness Level concept and current practices, Intellectual Property Rights, Types of Intellectual Property Protection, Novel Strategies on Intellectual Assets Management and Commercialisation, Technology Entrepreneurship, Understand target market and positioning of product/service in the market, Use of Business Canvas Methodology in Business Model Development, Current practices by case studies.

- BA 420** (3+0+0) 3 Credits / 6 ECTS
Business Simulation and Strategic Decisions
(Yönetim Simulasyonu ve Stratejik Kararlar)
 Decision making using knowledge of management, marketing, operations, finance, production, internal and external analysis, business simulation, strategy development, business scenarios, competition, team-work. Pre-requisites: BA 301 and BA 304 and BA 305
- BA 421** (3+0+0) 3 Credits / 6 ECTS
Strategic Management
(Yönetim Stratejileri)
 Strategy development process. Internal and external analysis. Organization's resources and competences from the perspective of top-level management. Strategic position and options. Various business strategies.
 Pre-requisite: BA 201
- BA 422** (3+0+0) 3 Credits / 6 ECTS
Creativity and Entrepreneurship Experience
(Yaratıcılık ve Girişimcilik Deneyimi)
 Creativity and innovation. Opportunity recognition. Business Plan. Effective communication and teamwork. Venture development. Management and leadership. Inter-dependency of marketing, finance, and operations. Funding and financial projections. Growth planning.
 Pre-requisite: BA 201
- BA 423** (3+0+0) 3 Credits / 6 ECTS
Women and Entrepreneurship
(Kadın ve Girişimcilik)
 Fundamentals of business development. Market access modes for female entrepreneurs. Gender-based entrepreneurship development methods and policies. Women's role in society as entrepreneurs.
- BA 424** (3+0+0) 3 Credits / 6 ECTS
Investment Analysis
(Yatırım Analizi)
 Basic concepts of investment analysis. Characteristics of financial markets and financial instruments. Portfolio construction and management. Investment valuation and asset pricing models.
 Pre-requisite: BA 304
- BA 425** (3+0+0) 3 Credits / 6 ECTS
Entrepreneurship in Turkey
(Türkiye'de Girişimcilik)
 Short history of entrepreneurship in Turkey. Drivers of economic growth in Turkey. Identification of future trends. Unique features of Turkish markets, organizations, and social structures. Marketing, branding, human resource, and strategic management activities. Identification of business opportunities in Turkey.

- BA 427** (3+0+0) 3 Credits / 6 ECTS
Global Economic and Financial Analysis
 (Küresel Ekonomik ve Finansal Analiz)
 The theory and policy of the contemporary global economics. Theories of international economics (i.e. on international trade, finance and growth). Latest empirical research and trends of economic development.
- BA 428** (3+0+0) 3 Credits / 6 ECTS
Marketing of Financial Product and Service
 (Finansal Ürün ve Hizmetlerin Pazarlaması)
 Marketing of Financial Product & Services (FPS) as a Branch of Services Management, Unique Aspects of FPS Marketing, Financial Consumer's Decision Making Process, Types of FPS, Pricing of FPS, Distributing FPS, Promoting FPS, Product Development in Financial Services, Segmenting the Financial Consumer, Service Quality and Customer Satisfaction in Financial Services, Regulations in the Marketing of Financial Services, Strategic Marketing Planning in Financial Services
 Pre-requisites: BA 301 and BA 305 and BA 304
- BA 430** (3+0+0) 3 Credits / 6 ECTS
Customer Development and Prototyping for Entrepreneurs
 (Girişimciler için Müşteri Geliştirme ve Prototiplendirme)
 Lean start-up methodologies. Design thinking process. Principles of customer development, design and prototyping for entrepreneurs. The relation between customer development and prototyping. Tools for customer development, prototyping and the user engagement. The value propositions. Minimum viable products (MVP). Testing, iterating and pivoting ideas. Pitching techniques to investors.
- BA 431** (3+0+0) 3 Credits / 6 ECTS
Financial Markets and Institutions
 (Finansal Piyasalar ve Kurumlar)
 Structure of financial markets and financial intermediaries. Central banking system. Monetary policy. Securities markets. Institutional investors such as investment banks, insurance companies and mutual funds.
- BA 432** (3+0+0) 3 Credits / 6 ECTS
Risk Management
 (Risk Yönetimi)
 Various components of risk in financial markets. Methods of risk measurement. Risk management. Use of financial derivatives in financial markets. Hedging concept and techniques.
 Pre-requisite: BA 304
- BA 434** (3+0+0) 3 Credits / 6 ECTS
Financial Econometrics
 (Finansal Ekonometri)
 Mathematical optimization. Data analysis. Probability models. Statistical analysis. Linear models. Dynamic factor models. Intertemporal behavior and method of moments. Econometrics of derivatives. Market indexes.
 Pre-requisites: BA 304 and ECON 332

- BA 441** (3+0+0) 3 Credits / 6 ECTS
International Finance
(Küresel Finans)
Differences between domestic and international environments. Financial management of multinational corporations. International money and capital markets. Global financial crises. Foreign exchange and interest rate risks. Hedging and risk management.
Pre-requisite: BA 304
- BA 442** (3+0+0) 3 Credits / 6 ECTS
International Marketing
(Uluslararası Pazarlama)
Economic, socio-cultural, financial, legal and political factors in international marketing. Opportunities and threats on a global scale. Global marketplace. International pricing and distribution. International promotion strategies.
Pre-requisite: BA 301
- BA 443** (3+0+0) 3 Credits / 6 ECTS
Global Entrepreneurship
(Küresel Girişimcilik)
Global economy concept. Problems related to globalization. Practical entrepreneurial issues. SMEs and global business. Export and import processes.
- BA 444** (3+0+0) 3 Credits / 6 ECTS
Doing Business in EU
(AB'de İş Yapma)
European Union as a place to do business. Competition policy. Common external trade policies. Shared responsibilities of the EU and national governments for policies concerning financial services and investment.
- BA 451** (3+0+0) 3 Credits / 6 ECTS
Human Resource Management
(İnsan Kaynakları Yönetimi)
Role of human resource function in organizations. Methods of job analysis. Recruitment process. Employee training and development. Performance appraisal methods. Career management and pricing techniques.
- BA 452** (3+0+0) 3 Credits / 6 ECTS
Managing and Leading
(Yönetim ve Liderlik)
Basic concepts of leadership. Motivation from the management perspective. Basic leadership and motivation theories. Applicability of these theories to management practices.
- BA 453** (3+0+0) 3 Credits / 6 ECTS
Organization Theory
(Örgüt Teorisi)
Analysis of organizational structure. Organizational effectiveness. Main organization theories and concepts. Internal processes of organizations. Organization culture, technology, and environment.

- BA 454** (3+0+0) 3 Credits / 6 ECTS
Mergers and Acquisitions
(Birleşme ve Satın Almalar)
 Analysis of mergers, acquisitions and divestitures. Pricing acquisitions. Pre-merger analysis. Synergy concept. Negotiation strategies. Post-merger or acquisition restructuring. Financing strategies.
 Pre-requisite: BA 304
- BA 457** (3+0+0) 3 Credits / 6 ECTS
Capital Markets: Theory and Practice
(Sermaye Piyasaları: Kuram ve Uygulama)
 Capital market institutions, instruments, and rules, and their real time applications globally/locally. Industry-specific trends in capital markets. Theoretical/empirical fundamentals of pricing in capital markets.
- BA 461** (3+0+0) 3 Credits / 6 ECTS
Consumer Behavior
(Tüketici Davranışı)
 Consumer needs analysis. Consumer decision process. Factors affecting purchasing decisions. Customer-centered marketing. Information processing. Perception. Attitudes and beliefs.
 Pre-requisite: BA 301
- BA 462** (3+0+0) 3 Credits / 6 ECTS
New Product Development
(Yeni Ürün Geliştirme)
 New product development techniques. Concept development and evaluation. New idea generation. Product related decisions: Design, positioning, segmentation, packaging, advertising and branding.
 Pre-requisite: BA 301
- BA 463** (3+0+0) 3 Credits / 6 ECTS
Marketing Research
(Pazarlama Araştırması)
 Assessment of marketing information. Survey design and sampling. Interview techniques. Secondary data sources. Measurement and data analysis. Research ethics.
 Pre-requisites: MATH 232, BA 301
- BA 464** (3+0+0) 3 Credits / 6 ECTS
Brand Management
(Marka Yönetimi)
 Brand and brand management. Brand management process. Factors affecting the brand management process. Sample brand management cases. Brand management plan.
 Pre-requisite: BA 301
- BA 465** (3+0+0) 3 Credits / 6 ECTS
Social Media Marketing
(Sosyal Medya Pazarlama)
 Social media marketing techniques. Consumer behavior in social media. Social media applications: Social networking sites, blogs, online communities, rapid sharing systems and podcasts.
 Pre-requisite: BA 301

- BA 466** (3+0+0) 3 Credits / 6 ECTS
Advertising
(Reklamcılık)
 Advertising process. Elements of arts and sciences related to advertising. Social, ethical and legal issues. International advertising. Concept development process. Using creative media.
 Pre-requisite: BA 301
- BA 467** (3+0+0) 3 Credits / 6 ECTS
Retailing
(Perakendecilik)
 Retailing. Retail businesses. Online retailing stores. Consumer behavior in retail store settings. Store site selection. Dynamics of the retail industry. Traditional and nontraditional methods in retailing.
 Pre-requisite: BA 301
- BA 471** (3+0+0) 3 Credits / 6 ECTS
Cost Benefit Analysis
(Fayda Maliyet Analizi)
 Valuing benefits and costs in markets. Discounting benefits and costs. Expected values. Sensitivity analysis. Many real life examples and cases.
 Pre-requisite: BA 303
- BA 472** (3+0+0) 3 Credits / 6 ECTS
Supply Chain Management
(Tedarik Zinciri Yönetimi)
 Supply chain concept. Planning and coordinating. Centralized and decentralized planning. Supply chain optimization. Managing and controlling. Inventories and logistics strategies. Life cycle costing.
 Pre-requisite: BA 305
- BA 473** (3+0+0) 3 Credits / 6 ECTS
Project Management
(Proje Yönetimi)
 Conceptual design, definition and planning. Monitoring and controlling. Termination. Project scheduling tools. Project monitoring and control methods. Project risk analysis tools and project management software.
- BA 474** (3+0+0) 3 Credits / 6 ECTS
Facilities Planning and Design
(Tesis Planlama ve Tasarımı)
 Process design. Systems design. Associated plant layout. Material-handling and storage systems design. Required resource examination. Cost analysis techniques. Inventory management.
 Pre-requisites: BA 202 and IE 232

- BA 475** (3+0+0) 3 Credits / 6 ECTS
Innovation Management
(Yenilik Yönetimi)
 Innovation processes. Competitive advantage concept. Scope and success of R&D activities. Positioning strategies and innovation. Measurement of innovation.
- BA 476** (3+0+0) 3 Credits / 6 ECTS
Quality Management
(Kalite Yönetimi)
 Quality control systems. Fundamental statistical methods. Control charts. Graphical methods. Quality standards and application of design of experiments to quality control.
 Pre-requisite: BA 305
- BA 477** (3+0+0) 3 Credits / 6 ECTS
Inventory Management
(Envanter Yönetimi)
 Fundamental inventory planning. Control facilities in manufacturing and service firms. Inventory classification methods. Basic deterministic and probabilistic inventory planning methods. Software packages and computer-simulation games.
 Pre-requisite: BA 305
- BA 478** (3+0+0) 3 Credits / 6 ECTS
Operations Research
(Yöneylem Araştırması)
 Principles of mathematical programming. Various real-life optimization problems. Linear programming. Duality. Sensitivity analysis. Basics of integer programming and network models.
 Pre-requisite: BA 202
- BA 479** (3+0+0) 3 Credits / 6 ECTS
Decision Analysis
(Karar Analizi)
 Decision elements. Quantitative decision making. Quantitative decision support systems and tools. Decision trees. Monte Carlo simulation. Probabilistic decision analysis.
 Pre-requisite: BA 202
- BA 480** (3+0+0) 3 Credits / 6 ECTS
Contemporary Commercial Banking
(Çağdaş Ticari Bankacılık)
 Contemporary commercial banking. Financial system and the role of banks. Main activities and services of banks and tradeoffs in bank management. Causes and effects of banking crises. Rationale behind heavy bank regulation and supervision. Digitalization trends in banking.

BA 482 (3+0+0) 3 Credits / 6 ECTS
Corporate Governance
(Kurumsal Yönetişim)
 Internal and external control systems within an organization. Managerial duties and responsibilities. The role of boards. Aligning management and stakeholder interests. Corporate social responsibility.
 Pre-requisite: BA 204

BA 490 (3+0+0) 3 Credits / 6 ECTS
Blockchain Applications for Financial Markets
(Finansal Piyasalar için Blockchain Uygulamaları)
 Blockchain Technology. Applications of blockchain technology in finance. Blockchain technology and monetary policy. Blockchain technology and regulations in financial markets.

Graduate Course Descriptions

BA 501 (3+0+0) 3 Credits / 7.5 ECTS
Game Theory
(Oyun Kuramı)
 Terminology and basic definitions of game theory. Formulation of games. Mixed and continuous strategies. Dynamic games. Reputation and repeated games. Signaling. Bargaining. Auctions. Business applications.

BA 502 (3+0+0) 3 Credits / 7.5 ECTS
Business Law and Ethics
(Ticaret Hukuku ve Etik)
 Legal environment of a business, fundamental legal principles and processes. Contracts. Legal forms of business association. Intellectual property rights. Law of unfair competition and law of labor. Concept of business ethics at individual and organizational level.

BA 503 (3+0+0) 3 Credits / 7.5 ECTS
Financial and Managerial Accounting
(Finans ve Yönetim Muhasebesi)
 Basic accounting principles, details of the accounting methods and their uses. Budget, income and cash flow statements, reporting and detailed analysis. Budgeting techniques. Control systems design and decision analysis. Case studies.

BA 504 (3+0+0) 3 Credits / 7.5 ECTS
Financial Management
(Finans Yönetimi)
 Firm and financial manager. Accounting and finance. Time value of money. Bonds and inflation. Stocks and investment criteria. Cash flow and project analysis. Risk and return. Opportunity cost. Cost of capital. Corporate financing.

- BA 506** (3+0+0) 3 Credits / 7.5 ECTS
Market Data Analysis
(Piyasa Veri Analizi)
 Building fundamental understanding and monitoring skills for economic and financial market data. Use of major domestic and international economic and financial market data sources. Assessing international financial structure by analysing sovereign, FX, equity, commodity, and industry market data. Data handling and analysis in MS Excel.
- BA 507** (3+0+0) 3 Credits / 7.5 ECTS
Management Information Systems
(Yönetim Bilişim Sistemleri)
 Foundations of Information systems, business applications and management. Information systems and strategic advantages. Electronic commerce systems. Security and ethical challenges. Enterprise Information Systems and Installation.
- BA 515** (2+2+0) 3 Credits / 7.5 ECTS
Technology Development and Entrepreneurship
(Teknoloji Geliştirme ve Girişimcilik)
 Technology Life-Cycle, Technology Readiness Level concept and current practices, Intellectual Property Rights, Types of Intellectual Property Protection, Novel Strategies on Intellectual Assets Management and Commercialisation, Technology Entrepreneurship, Understand target market and positioning of product/service in the market, Use of Business Canvas Methodology in Business Model Development, Current practices by case studies.
- BA 518** (3+0+0) 3 Credits / 7.5 ECTS
Managerial Accounting
(Yönetim Muhasebesi)
 Basic accounting concepts. Cost classifications. Budgeting techniques. Systems design. Cost-volume- profit relationships. Controlling and decision making processes. Applications for Education Institutions.
- BA 520** (3+0+0) 3 Credits / 7.5 ECTS
Business Simulation and Strategic Decisions
(Yönetim Simülasyonu ve Stratejik Kararlar)
 Decision making using knowledge of management, marketing, operations, finance, production, internal and external analysis, business simulation, strategy development, business scenarios, competition, team-work.
- BA 521** (3+0+0) 3 Credits / 7.5 ECTS
Strategic Management
(Yönetim Stratejileri)
 Process of strategic management. Strategic position and options. Internal and external analysis. Operation, business, corporate and international level strategy. Context, systems and action levers.

- BA 522** (3+0+0) 3 Credits / 7.5 ECTS
Business Plan
(İş Planı)
 Process of creating a business plan. Inter-dependency of marketing, finance, management and leadership, and systems and operations. Preparation of financial and supporting documents. Case studies.
- BA 524** (3+0+0) 3 Credits / 7.5 ECTS
Investment and Feasibility Analysis
(Yatırım ve Fizibilite Analizi)
 Risk-return concepts, debt and equity securities, and options and futures contracts. Evaluation of the array of financial instrument investment alternatives and their risk profiles. Expected return characteristics, individually and in combination within a portfolio. Various investment strategies and valuation models. Case studies.
- BA 526** (3+0+0) 3 Credits / 7.5 ECTS
New Enterprises
(Yeni Girişimler)
 Fundamental concepts of entrepreneurship. Process of identifying market opportunities. Steps in starting a new business. Value proposition. Entrepreneurial ethics. The business plan and legal procedures.
- BA 527** (3+0+0) 3 Credits / 7.5 ECTS
Global Economic and Financial Analysis
(Küresel Ekonomik ve Finansal Analiz)
 The theory and policy of the contemporary global economics. Theories of international economics (i.e. on international trade, finance and growth). Latest empirical research and trends of economic development. Case studies.
- BA 528** (3+0+0) 3 Credits / 7.5 ECTS
Marketing of Financial Product and Service
(Finansal Ürün ve Hizmetlerin Pazarlaması)
 Marketing of Financial Product & Services (FPS) as a Branch of Services Management, Unique Aspects of FPS Marketing, Financial Consumer's Decision Making Process, Types of FPS, Pricing of FPS, Distributing FPS, Promoting FPS, Product Development in Financial Services, Segmenting the Financial Consumer, Service Quality and Customer Satisfaction in Financial Services, Regulations in the Marketing of Financial Services, Strategic Marketing Planning in Financial Services.
- BA 530** (3+0+0) 3 Credits / 7.5 ECTS
Customer Development and Prototyping for Entrepreneurs
(Girişimciler için Müşteri Geliştirme ve Prototiplendirme)
 Lean start-up methodologies. Design thinking process. Principles of customer development, design and prototyping for entrepreneurs. The relation between customer development and prototyping. Tools for customer development, prototyping and the user engagement. The value propositions. Minimum viable products (MVP). Testing, iterating and pivoting ideas. Pitching techniques to investors.

- BA 531** (3+0+0) 3 Credits / 7.5 ECTS
Financial Markets and Institutions
(Finansal Piyasalar ve Kurumlar)
 Structure of financial markets and financial intermediaries. Interaction of key participants. Money, bond, sock and foreign exchange markets. Operations of insurance companies, mutual funds and investment banks. Applications.
- BA 532** (3+0+0) 3 Credits / 7.5 ECTS
Risk Management
(Risk Yönetimi)
 Various components of risk in financial markets. Methods of risk measurement. Risk management. Use of financial derivatives in financial markets. Hedging concept and techniques. Case Studies.
 Pre-requisites: BA 504
- BA 539** (3+0+0) 3 Credits / 7.5 ECTS
Finance and Investment Management
(Finans ve Yatırım Yönetimi)
 Risk and return concept. Risk management techniques. Rate of return on investments. Time value of money. Bond and stock valuation. Capital budgeting techniques. Analysis methods of investment projects. Capital asset pricing models.
- BA 557** (3+0+0) 3 Credits / 7.5 ECTS
Capital Markets: Theory and Practice
(Sermaye Piyasaları: Kuram ve Uygulama)
 Capital market institutions, instruments, and rules, and their real time applications globally/locally. Industry-specific trends in capital markets. Theoretical/empirical fundamentals of pricing in capital markets.
- BA 558** (3+0+0) 3 Credits / 7.5 ECTS
Human Resource Management in Educational Institutions
(Eğitim Kurumlarında İnsan Kaynakları Yönetimi)
 The role of human resource management in educational institutions. Methods of job analysis. Recruitment processes. Employee training and motivation. Performance appraisal methods. Career management and wage policy.
- BA 559** (3+0+0) 3 Credits / 7.5 ECTS
Management and Leadership in Educational Institutions
(Eğitim Sektöründe Pazarlama Teknikleri)
 Basic concepts of leadership. Motivation, decision making processes, group dynamics, conflict resolution, leadership and motivation theories from the management perspective. Application of these theories in educational institutions.

- BA 568** (3+0+0) 3 Credits / 7.5 ECTS
Marketing Techniques in Educational Institutions
(Eğitim Sektöründe Pazarlama Teknikleri)
 Application of marketing concepts in education management. Basic marketing concepts. Marketing environment. Marketing research. Marketing mix. Marketing strategy. Market research. Market analysis. Customer relationship management. Consumer behavior. Successful marketing strategies and case studies in education management.
- BA 573** (3+0+0) 3 Credits / 7.5 ECTS
Project Management
(Proje Yönetimi)
 Introduction to project management: objectives, functions, methods and tools. Planning and scheduling: CPM, PERT, resource constrained scheduling models, solution methods. Budgeting and project finance management. Control methods: Earned Value Analysis. Planning and control relationship. Risk analysis and management: Uncertainty and risk concept, simulation and statistical analysis. Project management software, decision support systems.
- BA 575** (3+0+0) 3 Credits / 7.5 ECTS
Innovation Management
(Yenilik Yönetimi)
 Entrepreneurship, innovation and technology: Conceptual framework and global overview. Innovation processes, measurement and competitive advantage. Positioning strategies and innovation. Technology, transfer and copyright. Scope and success of R&D activities. R&D collaborations, corporate and national innovation systems: institutes, functions, policies.
- BA 580** (3+0+0) 3 Credits / 7.5 ECTS
Contemporary Commercial Banking
(Çağdaş Ticari Bankacılık)
 Contemporary commercial banking. Financial system and the role of banks. Main activities and services of banks and tradeoffs in bank management. Causes and effects of banking crises. Rationale behind heavy bank regulation and supervision. Digitalization trends in banking.
- BA 588** (3+0+0) 3 Credits / 7.5 ECTS
Ethics in Educational Institutions
(Eğitim Kurumlarında Etik)
 Concept of business ethics at individual and organizational level. Ethical awareness. Business ethics' impact on decision making processes. Conflict resolution models.

DEPARTMENT OF ECONOMICS

Chair

Prof. Jülide Yıldırım Öcal

Academic Staff

Prof. Jülide Yıldırım Öcal, Prof. Ayça Tekin Kuru, Prof. Nazire Nergiz Dinçer, Prof. Semih Tümen, Assoc. Prof. Tekin Köse, Asst. Prof. Sezer Yaşar, Ataman İçer*, Erdener Emin Eker*, Elizabett Sert*.

* Research Assistant

Undergraduate Program in Economics

The world has become a global village with the expansion of international trade and investment. However, the most important development has been the technology revolution, which has accelerated globalization for the last three decades. Majoring in economics not only enables students to have a good grasp of economic theories, but also equips them with the knowledge to understand how the economic units function under technological revolution and the challenge of global competitiveness. In a global economic order where competitiveness means a matter of economic sustainability for countries and companies, how regional and national economies function has become an important part of economics teaching. The objective of the Department of Economics at TED University is to provide its undergraduate students with a multifaceted approach that integrates contemporary theoretical perspectives with applications so that they develop the necessary professional credentials to become eligible for any career development.

Program Outcomes

Students graduating from TEDU Department of Economics will:

1. Be able to apply their economic knowledge to a variety of problems and issues in a range of economic contexts.
2. Achieve the knowledge of testing and expressing economic cases and problems through quantitative and qualitative methods.
3. Be competent in informatics and communication technologies and to perform economic analysis through one of the softwares used in economics.
4. Acquire basic knowledge in economic related sciences and be able to participate in interdisciplinary studies.
5. Be able to evaluate, interpret and analyze developments in economics in terms of causality by using statistical and econometric tools and report the outcomes.
6. Develop a sense of responsibility in team work; self-discipline; good work habits and time management practices.
7. Prepare outputs such as reports, projects, presentation and articles in line with ethical rules and to implement social, scientific, and professional codes of ethical conduct.
8. Follow and evaluate the economics literature and to be able to contact his/her colleagues both in Turkish and in English.
9. Engage in life-long learning and enrich personal, social, professional development by exploring interests in diverse disciplines.

10. Understand the roles of institutions and organizations in the society and their effects on economic structure.
11. Acquire critical and analytical thinking ability.
12. Appreciate the plurality of and respect for differences of opinion, lifestyles, cultural practices and identities, use his expertise concerning social responsibility.

Undergraduate Curriculum

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
MATH 111	Introduction to Calculus of one Variable	3	2	0	4	7
ECON 101	Economics I	3	1	0	4	6
ENG 101	English for Academic Purposes	2	2	0	3	5
CMPE 101	Introduction to IT	2	0	2	3	5
	Elective, CC	3	0	0	3	5
TUR 101	Turkish I	2	0	0	2	2
TOTAL		15	5	2	19	30

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
ECON 102	Economics II	3	1	0	4	6
ENG 102	Expository Writing	2	2	0	3	5
	Elective, CC	3	0	0	3	5
	Elective, CC	3	0	0	3	5
	Elective, CC	3	0	0	3	5
TUR 102	Turkish II	2	0	0	2	2
TOTAL		16	3	0	18	28

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
MATH 112	Intro. to Multivariable Calculus and Lin. Algebra	3	2	0	4	7
MATH 230	Introduction to Probability Theory	3	0	0	3	6
ECON 211	Microeconomics I	3	1	0	3	6
ECON 221	Macroeconomics I	3	0	0	3	6
	Elective, CC	3	0	0	3	5
HIST 101	History of Turkish Republic I	2	0	0	2	2
TOTAL		17	3	0	18	32

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
MATH 232	Introduction to Statistics	3	0	0	3	6
ENG 204	Professional Communication in English	3	0	0	3	5
ECON 212	Microeconomics II	3	1	0	3	6
ECON 222	Macroeconomics II	3	0	0	3	6
F	Elective, Free	3	0	0	3	5
HIST 102	History of Turkish Republic II	2	0	0	2	2
TOTAL		17	1	0	17	30

Semester 5

Code	Course Title	C	P	L	Cr	ECTS
ECON 331	Econometrics I	3	0	2	4	6
ECON	Elective, ECON	3	0	0	3	6
ECON	Elective, ECON	3	0	0	3	6
SF	Secondary Field	3	0	0	3	5
F	Elective, Free	3	0	0	3	5
ECON 300	Summer Practice I	1	0	0	1	3
TOTAL		16	0	2	17	30

Semester 6

Code	Course Title	C	P	L	Cr	ECTS
ECON 332	Econometrics II	3	0	2	4	6
ECON	Elective, ECON	3	0	0	3	6
ECON	Elective, ECON	3	0	0	3	6
SF	Secondary Field	3	0	0	3	5
F	Elective, Free	3	0	0	3	5
TEDU 400	Student Development	0	0	0	0	1
TOTAL		15	0	2	16	29

Semester 7

Code	Course Title	C	P	L	Cr	ECTS
ECON 401	Research Methods	3	0	0	3	7
ECON	Elective, ECON	3	0	0	3	6
ECON	Elective, ECON	3	0	0	3	6
ECON	Elective, ECON	3	0	0	3	6
SF	Secondary Field	3	0	0	3	5
ECON 400	Summer Practice II	1	0	0	1	2
TOTAL		16	0	0	16	32

Semester 8

Code	Course Title	C	P	L	Cr	ECTS
ECON 402	Graduation Paper and Seminar	3	0	0	3	7
ECON	Elective, ECON	3	0	0	3	6
ECON	Elective, ECON	3	0	0	3	6
SF	Secondary Field	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
TOTAL		15	0	0	15	29

Totals expected for graduation		127	12	6	136	240
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Courses with Pre-requisites

Course Name	Pre-requisites
ECON 211 Microeconomics I	ECON 101 or ECON 110 and MATH 101 or MATH 111
ECON 212 Microeconomics II	ECON 211
ECON 221 Macroeconomics I	ECON 102 or ECON 110
ECON 222 Macroeconomics II	ECON 221
ECON 303 Mathematical Economics	MATH 102 or MATH 112
ECON 321 Advanced Macroeconomic Theory	ECON 222
ECON 331 Econometrics I	MATH 232
ECON 332 Econometrics II	ECON 331
ECON 341 International Economics I	ECON 212
ECON 342 International Economics II	ECON 221
ECON 351 Monetary Theory, Policy and Banking	ECON 221
ECON 362 Economic History	ECON 101 and ECON 102 or ECON 110
ECON 372 Environmental Economics	ECON 211
ECON 400 Summer Practice II	ECON 300
ECON 402 Graduation Paper and Seminar	ECON 401
ECON 403 Turkish and World Economy in the 20th Century	ECON 221
ECON 404 Turkish Economy	ECON 221
ECON 405 Economic Policy Analysis	ECON 212
ECON 411 Agricultural Economics	ECON 212
ECON 412 Labor Economics	ECON 212
ECON 414 Industrial Economics	ECON 212
ECON 416 General Equilibrium & Welfare Economics	ECON 212
ECON 417 Economic Institutions in Historical Perspective	ECON 101 and ECON 102 or ECON 110
ECON 421 Economic Growth	ECON 222
ECON 431 Applied Econometrics	ECON 212
ECON 432 Time Series	ECON 332
ECON 434 Panel Data Analysis	ECON 332
ECON 495 Economics of Education and Human Capital	ECON 212

Undergraduate Course Descriptions

- ECON 101** **(3+1+0) 4 Credits / 6 ECTS**
Economics I
(Ekonomi I)
 Introduction to the principles of economics. Economic actors. Gains from trade. Supply and demand. Government intervention. Firm behavior in output markets. Market structures.
- ECON 102** **(3+1+0) 4 Credits / 6 ECTS**
Economics II
(Ekonomi II)
 Introduction to macroeconomics. National income. Theory of income determination. The determination of output, employment, unemployment, interest rates and inflation. Monetary policy.
- ECON 110** **(3+0+0) 3 Credits / 5 ECTS**
Principles of Economics
(Ekonominin İlkeleri)
 Basic tools for economic thinking. Framework to evaluate key microeconomic and macroeconomic topics. The nature of economics. A general view of price system. Markets, costs and pricing behavior of the firms. The determination and the control of national income. International trade and government. Measurement of unemployment and inflation.
- ECON 211** **(3+1+0) 3 Credits / 6 ECTS**
Microeconomics I
(Mikroekonomi I)
 Formal tools of microeconomic theory. Preferences and choice. Analysis of expenditure decisions of consumers. Production and costs. Cost minimization and profit maximization. Functioning of competitive markets. Application of the theoretical principles of microeconomics in various contexts in everyday life. Pre-requisites: ECON 110 or ECON 101 and MATH 101 or MATH 111
- ECON 212** **(3+1+0) 3 Credits / 6 ECTS**
Microeconomics II
(Mikroekonomi II)
 Formal tools of microeconomic theory. Monopoly and monopsony. Price discrimination, monopolistic competition and oligopoly. Game theory and strategic behavior. Uncertainty and information. General equilibrium. The issues in public economics, such as externalities and public goods.
 Pre-requisite: ECON 211
- ECON 221** **(3+0+0) 3 Credits / 6 ECTS**
Macroeconomics I
(Makroekonomi I)
 Macroeconomics and national income accounting. Keynesian Theory and Classical Theory. Closed economy version of Keynesian macroeconomics under fixed price and variable prices. Labor market and Phillips Curve. Analysis of basic macroeconomic variables.
 Pre-requisite: ECON 102

- ECON 222** (3+0+0) 3 Credits / 6 ECTS
Macroeconomics II
(Makroekonomi II)
 Growth theory. Economic Policy in an open economy. Exchange rate regimes. Application of macroeconomic theory to current policy issues. Use of analytical tools to understand macroeconomy. Response of policy makers to macroeconomic issues.
 Pre-requisite: ECON 221
- ECON 300** (1+0+0) 1 Credits / 2 ECTS
Summer Practice I
(Yaz Stajı I)
 Minimum 20 business days of summer internship that students are required to complete in order to gain work experience in economics
- ECON 301** (3+0+0) 3 Credits / 6 ECTS
Game Theory
(Oyun Kuramı)
 Terminology and basic definitions of game theory. Formulation of games. Solution concepts. Uncertainty and information. Applications to law, government, politics, diplomacy, business, management and economic behavior.
- ECON 303** (3+0+0) 3 Credits / 6 ECTS
Mathematical Economics
(Matematiksel Ekonomi)
 Mathematics for advanced economic analysis. Optimization under inequality constraints. Dynamic economic models. Differential and difference equations and dynamic optimization. Optimal control theory.
 Pre-requisite: MATH 102 or MATH 112
- ECON 321** (3+0+0) 3 Credits / 6 ECTS
Advanced Macroeconomic Theory
(İleri Makroekonomi Teorisi)
 Mathematical modeling in macroeconomics. Inter-temporal consumption-saving and labor-leisure choice. Exogenous growth. Introduction to neo-classical growth model. Business cycles. Theories of unemployment.
 Pre-requisite: ECON 222
- ECON 322** (3+0+0) 3 Credits / 6 ECTS
Development Economics
(Kalkınma İktisadi)
 Growth and development. Theories of growth. Inequality and poverty. Education and and health. Human capital. Population growth. Urbanization and migration. Agriculture and development. Environment and development. Microcredits. Foreign aid and income distribution.

- ECON 331** (3+0+2) 4 Credits / 6 ECTS
Econometrics I
(Ekonometri I)
 Interactions between economic problems and the assumptions of statistical theory. Formulation, estimation and testing of economic models. Single variable and multiple variable regression techniques. Theory of identification and issues relating to inference. Functional forms and specification error analysis. Detection of multicollinearity and heteroscedasticity. Use of dummy variables.
 Pre-requisite: MATH 232
- ECON 332** (3+0+2) 4 Credits / 6 ECTS
Econometrics II
(Ekonometri II)
 Estimation of binary dependent variable models. Use of instrumental variables technique. Introduction to forecasting models. Analysis of time series data. Detection of autocorrelation and heteroscedasticity in time series data. Identification of stationarity and cointegration of time series. Causality in time series models.
 Pre-requisite: ECON 331
- ECON 341** (3+0+0) 3 Credits / 6 ECTS
International Economics I
(Uluslararası İktisat I)
 The law of comparative advantage. The Ricardian, the Heckscher-Ohlin and the increasing Returns models of international trade. Economic growth and trade. Trade policy analysis: tariffs and nontariff barriers. Economic integration. International factor movements.
 Pre-requisite: ECON 212
- ECON 342** (3+0+0) 3 Credits / 6 ECTS
International Economics II
(Uluslararası İktisat II)
 Macroeconomic analysis of open economies. National income accounting and the balance of payments. International financial markets and instruments. Exchange rate determination theories and evidence. International capital flow systems. Financial crises and international macroeconomic interdependence. The international experience with currency and banking crises.
 Pre-requisite: ECON 221
- ECON 351** (3+0+0) 3 Credits / 6 ECTS
Monetary Theory, Policy and Banking
(Para Teorisi, Politikası ve Bankacılık)
 Basic models of money and monetary policy. An overview of central banking by giving emphasis on money supply process, the tools of monetary policy and the conduct of monetary policy. Analysis of the demand and supply of money. Monetary theory. Monetary transmission mechanisms and the role of expectations in Monetary policy.
 Pre-requisite: ECON 221

- ECON 352** (3+0+0) 3 Credits / 6 ECTS
Financial Economics and Financial Markets
(Finansal İktisat ve Finansal Marketler)
 Conceptual understanding of finance. Asset pricing and modern portfolio theory. Insights into theoretical, empirical and practical issues concerning the operation of financial markets.
- ECON 361** (3+0+0) 3 Credits / 6 ECTS
History of Economic Thought
(Ekonomik Düşünce Tarihi)
 Contributions of leading economists and the relevance of their theories to later periods. Economic thinking of Smith, Mill, Hume, Marx, Malthus, and Keynes. The influence of economists on society. Analysis of the progress of the principles of economics from early to modern times.
- ECON 362** (3+0+0) 3 Credits / 6 ECTS
Economic History
(Ekonomi Tarihi)
 Economic History. Malthusianism. Industrial Revolution. Technology. Markets. Industry, Factory, Trade and Transportation. Great Depression. Money. Credits. Banking. Financial Sector and Industry. Institutions. Global Economic Society. War and Growth. Energy. Environment.
 Pre-requisite: ECON 101 and ECON 102 or ECON 110
- ECON 371** (3+0+0) 3 Credits / 6 ECTS
Political Economy
(Politik Ekonomi)
 Relationship between politics and economics in the international economy. Concepts and approaches from political science, economics, history and sociology for a broad introduction to current issues in political economy.
- ECON 372** (3+0+0) 3 Credits / 6 ECTS
Environmental Economics
(Çevre Ekonomisi)
 Linkages between economic activities and the environment. Economic methods and tools to analyze basic environmental issues. Social cost. Choice of policy instrument. Analysis of enforcement of regulations. Estimating benefits of environmental improvements.
 Pre-requisite: ECON 211
- ECON 373** (3+0+0) 3 Credits / 6 ECTS
The Political Economy of European Integration
(Avrupa'nın Entegrasyonunun Politik İktisadı)
 Political and economic dimensions of European integration. History, evolution and institutions of European integration. Sectoral and social policies. Analysis of the challenges for the European economies.

- ECON 400** (1+0+0) 1 Credit / 2 ECTS
Summer Practice II
(Yaz Stajı II)
Minimum 20 business days of summer internship that students are required to complete in order to gain work experience in economics.
Pre-requisite: ECON 300
- ECON 401** (3+0+0) 3 Credits / 7 ECTS
Research Methods
(Araştırma Yöntemleri)
Epistemological, quantitative and qualitative research methods. Scientific method. Problem definition process and classification of variables. Sampling techniques. Data collection methods.
Pre-requisite: MATH 232
- ECON 402** (3+0+0) 3 Credits / 7 ECTS
Graduation Paper and Seminar
(Mezuniyet Projesi ve Seminer)
Undertake an independent research. Gain and demonstrate proficiency in a strand of literature chosen by the student in collaboration with an advisor. Writing an analytical research paper. Presentation in written and oral form.
Pre-requisite: ECON 401
- ECON 403** (3+0+0) 3 Credits / 6 ECTS
Turkish and World Economy in the 20th Century
(20. Yüzyılda Türkiye ve Dünya Ekonomisi)
Growth and developments in Turkey and the World since Industrial Revolution. Application of economic analysis to historical issues. Great Depression. The interwar period. The Bretton Woods System and its collapse. The collapse of communism. Turkish economy during the Great Depression and thereafter.
Pre-requisite: ECON 221
- ECON 404** (3+0+0) 3 Credits / 6 ECTS
Turkish Economy
(Türkiye Ekonomisi)
The structural characteristics of the Turkish economy. In depth analyses of current topics and problems in Turkish economy. The cyclical growth performance. Credit markets. Employment. Informal sector. Industrialization. Privatization. Corporate finance, trade, crises and access to EU.
Pre-requisite: ECON 221
- ECON 405** (3+0+0) 3 Credits / 6 ECTS
Economic Policy Analysis
(Ekonomik Politika Analizi)
The role of economic analysis in the design, evaluation, and implementation of economic policy. The principles, practices and applications of applied welfare analysis. The basic theory of benefit-cost analysis (BCA) and its implementation. A framework of social welfare analysis to a variety of public policy questions such as health policy, the design of unemployment insurance, and regulatory policies.
Pre-requisite: ECON 212

- ECON 406** (3+0+0) 3 Credits / 6 ECTS
Experimental Economics
 (Deneysel İktisat)
 Use of experiments to study individual and interactive (strategic) decision-making. Choice over risky alternatives, altruism and reciprocity, allocation and information aggregation in competitive markets. Cooperation and collusion, bidding in auctions, strategy in coordination.
- ECON 407** (3+0+0) 3 Credits / 6 ECTS
Data Science for Social Scientists
 (Sosyal Bilimciler için Veri Bilimi)
 Introduction to data science. Causal inference. Programming with R, Stata, and/or Python. Rubin causal model. Various causal inference methods and techniques. Text analytics applications. Machine learning applications in social sciences. The use of big data in addressing social and economic problems.
- ECON 411** (3+0+0) 3 Credits / 6 ECTS
Agricultural Economics
 (Tarımsal Ekonomi)
 Economics of agricultural and food markets. Structure and organization of the agricultural industry. Application of basic principles of microeconomics and macroeconomics to agriculture. Role of agriculture in Turkey and the world.
 Pre-requisite: ECON 212
- ECON 412** (3+0+0) 3 Credits / 6 ECTS
Labor Economics
 (Çalışma Ekonomisi)
 Analysis of labor markets. Labor supply and labor demand. Determination of wages, conditions of work, the distribution of employment. Evaluation of labor market policy.
 Pre-requisite: ECON 212
- ECON 414** (3+0+0) 3 Credits / 6 ECTS
Industrial Economics
 (Endüstriyel Ekonomi)
 Firms' behavior in a market economy. Forms of state intervention in modern capitalist economics. The relationship between market structure, market behavior and market performance.
 Pre-requisite: ECON 21
- ECON 416** (3+0+0) 3 Credits / 6 ECTS
General Equilibrium and Welfare Economics
 (Genel Denge ve Refah Ekonomisi)
 Theory of general competitive equilibrium from modern mathematical points of view. Basic concepts in welfare economics allowing an understanding of important economic factors affecting the level of social welfare. Tools of applied welfare analysis.
 Pre-requisite: ECON 212

- ECON 417** (3+0+0) 3 Credits / 6 ECTS
Economic Institutions in Historical Perspective
(Tarihsel Perspektifte Ekonomi Kurumları)
 Economic history. The Divergence Debate. Malthusianism and Natural Selection. Geographical Determinants. Industrial Revolution. Markets. State. Cultural Beliefs. Colonial Institutions. Theory of Institutional Change.
 Pre-requisite: ECON 101 and ECON 102 or ECON 110
- ECON 420** (3+0+0) 3 Credits / 6 ECTS
Gender and Development
(Toplumsal Cinsiyet ve Kalkınma)
 Work and gender relation. Theoretical approaches to gender and development. Markets, globalization and gender. Gender dimensions of economic development. Economics discipline from a feminist perspective. The gendered effects of the development strategies implemented in different regions of the world. Policies towards gender equality. A gender-aware interpretation of the economic development policy concerns, and debates from a feminist economics perspective.
- ECON 421** (3+0+0) 3 Credits / 6 ECTS
Economic Growth
(Ekonomik Büyüme)
 Neoclassical and recent growth theories. Solow growth model and Cass-Koopmans model. Endogenous growth theory. Models of endogenous technological progress and technological diffusion.
 Pre-requisite: ECON 222
- ECON 422** (3+0+0) 3 Credits / 6 ECTS
Institutional Economics
(Kurumsal İktisat)
 Institutions and institutional change. Analyses of cooperation, behavioral assumptions in a theory of institutions. Transaction costs and constraints. Institutions and economic performance.
- ECON 424** (3+0+0) 3 Credits / 6 ECTS
Gender, Trade and Poverty
(Cinsiyet, Ticaret ve Yoksulluk)
 Work and gender relation. Theoretical approaches to international trade, gender, poverty and development. Markets, globalization and gender. Gendered effects of trade changes and trade policy. Women and poverty.
- ECON 431** (3+0+0) 3 Credits / 6 ECTS
Applied Econometrics
(Uygulamalı Ekonometri)
 A dual focus on econometric theory and hands-on experience working with economic data. Empirical investigation. Evaluation of econometric and other statistical evidence.
 Pre-requisite: ECON 212

- ECON 432** (3+0+0) 3 Credits / 6 ECTS
Time Series
(Zaman Serisi)
 A variety of statistical models for time series. Main methods for analyzing these models. Correlogram and a sample spectrum. Moving average (MA), Autoregressive (AR), ARMA and ARIMA models. Forecasts for a variety of linear methods and models.
 Pre-requisite: ECON 332
- ECON 434** (3+0+0) 3 Credits / 6 ECTS
Panel Data Analysis
(Panel Veri Analizi)
 Applied econometrics dealing with 'panel' or 'longitudinal' data sets. Specification, estimation, and inference in the context of models that include individual (firm, person, etc.) and/or time effects. Panel data estimators, instrumental variables estimators, and maximum likelihood estimation of limited dependent variable models.
 Pre-requisite: ECON 332
- ECON 441** (3+0+0) 3 Credits / 6 ECTS
Economics of Migration
(Göç Ekonomisi)
 The basic theory of labor and human capital mobility. Self-selection of immigrants into locations. Migration, economic growth, and inflation. Labor market effects of immigration: theory and evidence. Immigration and education. Immigration and health. High-skill immigration and brain drain. Immigration, neighborhoods, and the housing market. Immigration and electoral outcomes. Attitudes towards immigrants. Emigration and remittances. Immigrant social networks and diasporas. The refugee issue around the world. Differences between forced and voluntary migration.
- ECON 445** (3+0+0) 3 Credits / 6 ECTS
The Political Economy of Globalization
(Küreselleşmenin Politik Ekonomisi)
 Challenges of international integration in historical perspective. Bretton Woods and its demise. Financial globalization and its challenges. Trade, multinational corporations and global value chains. Globalization, inequality and employment. Dilemmas for developing countries. Challenges of global governance. Globalization and populism.
- ECON 451** (3+0+0) 3 Credits / 6 ECTS
Fiscal Policy and Public Finance
(Maliye Politikası ve Kamu Maliyesi)
 Examining the role of public sector in the economy. The concept of public economics. Reasons for government intervention in the economy. Response of private agents to government actions. Design of tax systems.

- ECON 471** (3+0+0) 3 Credits / 6 ECTS
Economics of Energy
(Enerji Ekonomisi)
 Economics of markets for various energy sources and their interactions with each other and with the rest of the economy. Government intervention in energy markets. Effects of price controls and regulation. Policy issues related to energy use, economic growth, and the environment.
- ECON 472** (3+0+0) 3 Credits / 6 ECTS
Topics in Political Economy
(Politik Ekonomide Araştırma Konuları)
 Theoretical models and empirical techniques used in political-economy literature. Recent research topics in political-economy. Formation of economic policy. Determinants of development. Effects of media.
- ECON 481** (3+0+0) 3 Credits / 6 ECTS
Health Economics
(Sağlık Ekonomisi)
 Theory and practice of health economics. Application of economic tools to analyze health and medical care issues. The special features of healthcare as a commodity. Demand for health and medical care services. Economic basis for the behavior of medical care physicians and hospitals. Functioning of insurance markets.
- ECON 482** (3+0+0) 3 Credits / 6 ECTS
Health Policy
(Sağlık Politikası)
 Conceptual and analytical approach to the process and contents of health policy making and implementation. Health policy, health care systems, and health care services. Analysis of the health care systems from economic, political and social perspectives. Welfare policies and their impact on health care system.
- ECON 484** (3+0+0) 3 Credits / 6 ECTS
Economics of Conflict, War and Peace
(Anlaşmazlık, Savaş ve Barış Ekonomisi)
 Economic dimensions of violence and peace. Economic explanations of war and peace. Economic impact of war and the costs of peace. Links between conflict, poverty, and development. Economics of terrorism and foreign policy.
- ECON 490** (3+0+0) 3 Credits / 6 ECTS
Economics of Discrimination
(Ayrımcılık Ekonomisi)
 Differences and discrimination associated with race, religion, gender or nation of birth. Employer and employee discrimination. Market discrimination. The indicators, causes and consequences of discrimination in economic markets. Econometrics to address discrimination issues.

ECON 491	(3+0+0) 3 Credits / 6 ECTS
Managerial Economics (İşletme Ekonomisi)	
Application of economic principles and methodologies to business decision problems. Quantitative and qualitative applications of economic principle to business analysis. Demand, costs and market structure. Pricing. Product choice and resource allocation. Industrial organization.	
ECON 492	(3+0+0) 3 Credits / 6 ECTS
Economics of Regulation and Antitrust (Düzenleme ve Antitröst Ekonomisi)	
Role of government in the economy. Antitrust and regulations as forms of government interventions. The causes and results of intervention.	
ECON 495	(3+0+0) 3 Credits / 6 ECTS
Economics of Education and Human Capital (Eğitim ve Beşeri Sermaye İktisadı)	
The basic theory of investment in human capital. The relation between human capital and economic growth/development. The fundamental link between innate ability, education, and labor market outcomes. The effect of vocational versus general education on labor market outcomes. Gender/racial gaps in educational outcomes and the theory of signalling. The role of school and teacher quality on educational outcomes. Main policy issues in the economics of education.	
Pre-requisite: ECON 212	

Graduate Course Descriptions

ECON 505	(3+0+0) 3 Credits / 7.5 ECTS
Economic Policy Analysis (Ekonomik Politika Analizi)	
The role of economic analysis in the design, evaluation, and implementation of economic policy. The principles, practices and applications of applied welfare analysis. The basic theory of benefit-cost analysis (BCA) and its implementation. A framework of social welfare analysis to a variety of public policy questions such as health policy, the design of unemployment insurance, and regulatory policies.	
ECON 506	(3+0+0) 3 Credits / 7.5 ECTS
Experimental Economics and Finance (Deneysel İktisat ve Finans)	
Use of experiments to study individual and interactive (strategic) decision-making. Experimental methodology and data analysis. Choice over risky alternatives. Theories of altruism and reciprocity. Pricing, resource allocation and information aggregation in competitive markets. Cooperation and collusion, bidding in auctions, strategy in coordination. Preferences and behavioral biases. Measuring risk and time preferences. Behavioral finance.	

- ECON 511** (3+0+0) 3 Credits / 7.5 ECTS
Microeconomics
(Mikroekonomi)
 Consumer theory. Producer theory. Analysis of market structures. Decision-making under uncertainty. Game theory. General equilibrium analysis.
- ECON 521** (3+0+0) 3 Credits / 7.5 ECTS
Macroeconomics
(Makroekonomi)
 Inter-temporal consumption-saving choice, growth model, exogenous growth, welfare theorems, labor supply, business cycles, unemployment, fiscal policy, monetary policy.
- ECON 531** (3+0+0) 3 Credits / 7.5 ECTS
Econometrics
(Ekonometri)
 Regression and correlation. Multiple regression and functional forms. Heteroscedasticity. Multicollinearity. Autocorrelation. Models with limited variables. Time series analysis and stationarity.
- ECON 532** (3+0+0) 3 Credits / 7.5 ECTS
Applied Econometrics
(Uygulamalı Ekonometri)
 Simultaneous equations. Instrumental variables. Ordered choice models. Panel data analysis. Applications of financial econometrics.
 Pre-requisite: ECON 531
- ECON 543** (3+0+0) 3 Credits / 7.5 ECTS
Multinational Corporations
(Çokuluslu Şirketler)
 Definition of Multinational Corporation. Foreign Direct Investment (FDI). Firm Structure. Determinants of FDI: Theory and Empirics. Markets Multinationals involved in. Multinational Entry Modes. FDI and Employment Effects. Multinationals, Taxes and Transfer Pricing. FDI, Wages and Working Conditions. FDI and Spillovers. FDI and Growth. FDI and the Environment. FDI and Corruption. FDI and Intellectual Property Rights. FDI and Regional Integration.
- ECON 572** (3+0+0) 3 Credits / 7.5 ECTS
Topics in Political Economy
(Politik Ekonomide Araştırma Konuları)
 Theoretical models and empirical techniques used in political-economy literature. Recent research topics in political-economy. Formation of economic policy. Determinants of development. Effects of media.

ECON 581	(3+0+0) 3 Credits / 7.5 ECTS
Health Economics (Sağlık Ekonomisi)	
Definition and scope of health economics. Application of economic tools to analyze health and medical care issues. Health production function. Healthcare demand and supply. Economic analysis of insurance markets. Government's role in health. Valuation techniques. Cost-benefit analysis. Comparative health care systems.	
ECON 581	(3+0+0) 3 Credits / 7.5 ECTS
Eğitim Ekonomisi (Education Economics)	
Basic concepts on the economics of education. Introduction to human capital theory. Impact of education on earnings, earnings inequality and economic growth. Rate of return to education. Labor market for teachers. Case studies.	
ECON 583	(3+0+0) 3 Credits / 7.5 ECTS
Eğitimde Politika Analizi (Policy Analysis in Education)	
Basic concepts in education policy. Effects of specific government policies on educational outcomes, practices and organizational structures. The role of economics analysis in the design, implementation and assessment of education policy.	
ECON 595	(3+0+0) 3 Credits / 7.5 ECTS
Economics of Education and Human Capital (Eğitim ve Beşeri Sermaye İktisadı)	
The basic theory of investment in human capital. The relation between human capital and economic growth/development. The fundamental link between innate ability, education, and labor market outcomes. The effect of vocational versus general education on labor market outcomes. Gender/racial gaps in educational outcomes and the theory of signalling. The role of school and teacher quality on educational outcomes. Main policy issues in the economics of education.	

DEPARTMENT OF POLITICAL SCIENCE AND INTERNATIONAL RELATIONS

Chair

Prof. Aylin Özman Erkman

Academic Staff

Prof. Aylin Özman Erkman, Prof. Zühal Yeşilyurt Gündüz, Asst. Prof. Emre Demir, Asst. Prof. Gülşen Seven, Asst. Prof. Kerem Kılıçdaroğlu, Asst. Prof. Selin Akyüz, Bahar Oral Gündoğdu*, Çağla Lüleci Sula*, Didem Gül Kızır*, Halil Can İnce*.

* Research Assistant

Undergraduate Program in Political Science and International Relations

The fields of Political Science and International Relations at present encompass wider issues, concerns and assumptions that go beyond their classical scope. Along with the conventional topics, today the disciplines deal with complex issues of political economy, business and trade, transnational relations, ethics, human rights, migration, gender, identity and global environmental risks. Thus, a critical understanding of social and political realities facing the global community increasingly requires an intellectual training based on cross-disciplinary accumulation of skills and knowledge. A cross-disciplinary perspective endows the students and researchers with a plurality of approaches necessary for the awareness of the broad range of social and political problems in a continuously changing global environment. In that regard, our program seeks to cultivate an in-depth understanding of political, economic, social and cultural aspects of the rapidly changing world. Our ultimate aim is to provide high quality education in Political Science and International Relations that enables our graduates to make significant contributions to the field both intellectually and professionally.

Program Outcomes

Political Science and International Relations Program graduates are expected to achieve the following learning outcomes:

1. Demonstrate knowledge of the main theories, ideas and concepts associated with Political Science and International Relations and apply theoretical and conceptual knowledge on topics of Political Science and International Relations.
2. Acquire an interdisciplinary perspective based on the synthesis of related disciplines (sociology, economics, psychology, law, history...).
3. Think critically and creatively, including the ability to formulate clear and logically coherent questions and arguments regarding local, national and global politics.
4. Make policy analysis regarding political and social developments individually and/or in interdisciplinary teams.
5. Acquire in-depth knowledge on research methods and academic ethics and use this knowledge in conducting theoretical and/or empirical research projects.
6. Identify ethical issues in local, domestic and international politics and implement social, scientific and professional codes of ethical conduct.
7. Identify and follow credible social science literature and develop skills to utilize diverse types of information sources.
8. Demonstrate high skills in oral and written communication both in Turkish and English and apply non-discriminative language.

9. Use a second foreign language (aside English) at an intermediate or high level of proficiency.
10. Appreciate the plurality of and respect for differences of opinion, lifestyles, cultural practices and identities.
11. Practice good working habits, time management and self-discipline with a strong vision of social responsibility.
12. Engage in life-long learning and enrich personal, social and professional development by exploring interests in diverse disciplines.

Undergraduate Curriculum

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
MATH 111	Introduction to Calculus of one Variable	3	2	0	4	7
ECON 101	Economics I	3	1	0	4	6
ENG 101	English for Academic Purposes	2	2	0	3	5
CMPE 101	Introduction to IT	2	0	2	3	5
	Elective, CC	3	0	0	3	5
TUR 101	Turkish I	2	0	0	2	2
TOTAL		15	5	2	19	30

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
ECON 102	Economics II	3	1	0	4	6
ENG 102	Expository Writing	2	2	0	3	5
	Elective, CC	3	0	0	3	5
	Elective, CC	3	0	0	3	5
	Elective, CC	3	0	0	3	5
TUR 102	Turkish II	2	0	0	2	2
TOTAL		16	3	0	18	28

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
MATH 233	Statistics for Social Sciences	3	1	0	3	5
PSIR 213	Political Concepts and Processes	3	0	0	3	6
PSIR 291	Global Politics	3	0	0	3	6
PSIR 263	Fundamental Principles of Law	3	0	0	3	6
PSIR	Elective, PSIR	3	0	0	3	6
HIST 101	History of Turkish Republic I	2	0	0	2	2
TOTAL		17	1	0	17	31

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
PSIR 214	Political Currents	3	0	0	3	6
PSIR 292	International Relations Theory	3	0	0	3	6
PSIR 266	Turkish Constitutional Law	3	0	0	3	6
ENG 204	Professional Communication in English	3	0	0	3	5
	Elective, CC	3	0	0	3	5
HIST 102	History of Turkish Republic II	2	0	0	2	2
TOTAL		17	0	0	17	30

Semester 5

Code	Course Title	C	P	L	Cr	ECTS
PSIR 335	Formation of Modern Turkey	3	0	0	3	6
PSIR 367	Public International Law	3	0	0	3	6
PSIR 351	History of Political Thought I	3	0	0	3	6
PSIR 401	Research Methods	3	0	0	3	8
SF	Secondary Field	3	0	0	3	5
PSIR 300	Summer Practice	1	0	0	1	2
TOTAL		16	0	0	16	33

Semester 6

Code	Course Title	C	P	L	Cr	ECTS
PSIR 336	Contemporary Turkish Politics	3	0	0	3	6
PSIR 374	Comparative Politics	3	0	0	3	6
PSIR 352	History of Political Thought II	3	0	0	3	6
SF	Secondary Field	3	0	0	3	5
F	Elective, Free	3	0	0	1	5
TEDU 400	Student Development Seminars	0	0	0	0	1
TOTAL		15	0	0	15	29

Semester 7

Code	Course Title	C	P	L	Cr	ECTS
PSIR 439	Turkish Foreign Policy	3	0	0	3	6
PSIR	Elective, PSIR	3	0	0	3	6
PSIR	Elective, PSIR	3	0	0	3	6
SF	Secondary Field	3	0	0	3	5
F	Elective, Free	3	0	0	1	5
PSIR 400	Summer Practice II	1	0	0	1	2
TOTAL		16	0	0	16	30

Semester 8

Code	Course Title	C	P	L	Cr	ECTS
PSIR 402	Graduation Paper and Seminar	3	0	0	3	7
PSIR	Elective, PSIR	3	0	0	3	6
PSIR	Elective, PSIR	3	0	0	3	6
SF	Secondary Field	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
TOTAL		15	0	0	15	29

Totals expected for graduation		127	9	2	133	240
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Courses with Pre-requisites

Course Name	Pre-requisites
PSIR 214 Political Currents	PSIR 213
PSIR 266 Turkish Constitutional Law	PSIR 263
PSIR 292 International Relations Theory	PSIR 291
PSIR 336 Contemporary Turkish Politics	PSIR 335
PSIR 352 History of Political Thought II	PSIR 351
PSIR 400 Summer Practice II	PSIR 300
PSIR 401 Research Methods	MATH 233
PSIR 402 Graduation Paper and Seminar	PSIR 401

Undergraduate Course Descriptions

- PSIR 110** **(3+0+0) 3 Credits / 5 ECTS**
Introduction to Political Studies
(Siyaset Çalışmalarına Giriş)
 Introduction to the study of politics and its sub-divisions. Basic ideas, practices and actors. Analysis of political phenomena.
- PSIR 118** **(3+0+0) 3 Credits / 5 ECTS**
Major Works in Political Cinema
(Politik Sinema - Temel Örnekler)
 Social and political issues by means of films.
- PSIR 213** **(3+0+0) 3 Credits / 6 ECTS**
Political Concepts and Processes
(Siyasal Kavramlar ve Süreçler)
 Introduction to basic concepts, approaches and theories of political science. Political participation. Political parties and interest groups. Political culture. Political socialization. Forms and systems of government. State and bureaucracy. Nations, nationalism and citizenship.
- PSIR 214** **(3+0+0) 3 Credits / 6 ECTS**
Political Currents
(Siyasal Akımlar)
 Study of political currents and related movements. Nationalism, conservatism, liberalism, Marxism..., social democracy, anarchism, feminism, environmentalism.
 Pre-requisite: PSIR 213

- PSIR 216** (3+0+0) 3 Credits / 6 ECTS
Political Sociology
(Siyaset Sosyolojisi)
 Conceptual and theoretical guidelines for the sociological study of politics. Methodological tools. Politics, power, and state. Political systems and systems approach. Legitimacy and authority. Civil society and democracy. Historical sociology and the Marxist tradition.
- PSIR 221** (3+0+0) 3 Credits / 6 ECTS
Global Environmental Issues
(Global Çevre Sorunları)
 Global environmental issues and policies. Capitalist growth strategies and environmental problems. International conservation conventions and states' policies. Civil societal initiatives.
- PSIR 226** (3+0+0) 3 Credits / 6 ECTS
Cross National Perspectives on Women's Movements
(Kadın Hareketi: Karşılaştırmalı Bir Perspektif)
 Evolution and current state of women's movements in different countries. Middle Eastern, North American, European, and Latin American cases.
- PSIR 263** (3+0+0) 3 Credits / 6 ECTS
Fundamental Principles of Law
(Hukukun Temel İlkeleri)
 Basic concepts and principles of law. Law and social order. Sources of law and hierarchy of the sources. Characteristics of common law and the continental legal systems. Main branches of public and private law. Turkish judicial system. The application of norms and methods of interpretation.
- PSIR 266** (3+0+0) 3 Credits / 6 ECTS
Turkish Constitutional Law
(Türk Anayasa Hukuku)
 Constitutional developments in the Ottoman Empire and Turkish Republic. Ottoman constitutional movement during the 19th century. Comparative study of 1921, 1924, 1961 and 1982 Constitutions. Pre-requisite: PSIR 263
- PSIR 271** (3+0+0) 3 Credits / 6 ECTS
Formation of Modern State
(Modern Devletin Oluşumu)
 Origins, historical evolution and functions of the modern state. Liberal and Marxist theories of state.
- PSIR 291** (3+0+0) 3 Credits / 6 ECTS
Global Politics
(Global Siyaset)
 Political, economic and security relations among states and regions. Structure of the international system. International actors and their roles. Peace, conflict and security. Diplomacy. The role of international law and organizations.

- PSIR 292** (3+0+0) 3 Credits / 6 ECTS
International Relations Theory
(Uluslararası İlişkiler Kuramı)
 Classical and critical theories of international relations. Idealism-liberalism, neo-liberalism, realism, Marxist, and neo-Marxist perspectives, constructivism, feminism, English School, postmodern approaches.
 Pre-requisite: PSIR 291
- PSIR 294** (3+0+0) 3 Credits / 6 ECTS
International Organizations
(Uluslararası Örgütler)
 Institutional structures, policy making processes, and functions of international organizations.
- PSIR 300** (1+0+0) 1 Credits / 2 ECTS
Summer Practice I
(Yaz Stajı I)
 Minimum 20 business days of summer internship that students are required to complete in order to gain work experience in economics
- PSIR 311** (3+0+0) 3 Credits / 6 ECTS
Critical Security Studies
(Eleştirel Güvenlik Çalışmaları)
 The notion of security in the pre-cold war, cold war and post-cold war periods. Classical and critical approaches to security.
- PSIR 323** (3+0+0) 3 Credits / 6 ECTS
Media and International Politics
(Medya ve Uluslararası Siyaset)
 The role of media in international relations. Theories of media. Media-power relationship. Media as a means of governments and media as a means to resist governments.
- PSIR 335** (3+0+0) 3 Credits / 6 ECTS
Formation of Modern Turkey
(Modern Türkiye'nin Oluşumu)
 Social and political dynamics leading to the formation of modern Turkey. Ottoman modernization. Social and political developments during the early Republican era. Modernization. State and society relationship.
- PSIR 336** (3+0+0) 3 Credits / 6 ECTS
Contemporary Turkish Politics
(Çağdaş Türkiye'de Siyaset)
 Development of Turkish Politics from the transition to multi-party regime onwards. Democratization, political parties and participation. Social and political movements. Role of military in political processes. Ideologies. Identity politics.
 Pre-requisite: PSIR 335

- PSIR 351** (3+0+0) 3 Credits / 6 ECTS
History of Political Thought I
(Siyasal Düşünce Tarihi I)
 Classical and medieval political thought. Political ideas of Socrates, Plato, Aristotle, Cicero, St. Augustine, St. Thomas Aquinas.
- PSIR 352** (3+0+0) 3 Credits / 6 ECTS
History of Political Thought II
(Siyasal Düşünce Tarihi II)
 Modern political thought from Renaissance to the Age of Enlightenment. Political ideas of Niccolo Machiavelli, Jean Bodin, Hobbes, Locke, David Hume, Jean Jacques Rousseau, Burke, Jeremy Bentham, John Stuart Mill, Hegel, and Karl Marx.
- PSIR 355** (3+0+0) 3 Credits / 6 ECTS
Social Theory
(Sosyal Teori)
 Introduction to classical social theory through an analysis of the works of Karl Marx, Max Weber and Emile Durkheim.
- PSIR 367** (3+0+0) 3 Credits / 6 ECTS
Public International Law
(Devletler Umumi Hukuku)
 Introduction to the study of international law. Historical development and sources of international law. Subjects of international law. Sovereignty and statehood. State responsibility, jurisdiction, and immunities. Law-making through treaties and other means. International adjudication. The use of force. The mechanisms for the protection of human rights.
- PSIR 368** (3+0+0) 3 Credits / 6 ECTS
Private International Law
(Devletler Özel Hukuku)
 Introduction to Private International Law. Conflicts of law, rules of jurisdiction, law of aliens and nationality law. Analysis of the basic concepts and principles of Turkish law of nationality and aliens.
- PSIR 374** (3+0+0) 3 Credits / 6 ECTS
Comparative Politics
(Karşılaştırmalı Siyaset)
 Major concepts and theoretical approaches in comparative politics. Democracy, breakdowns and transitions. Political structures and institutions. Political parties and party systems. Social movements. Class analysis. Systems analysis.
- PSIR 377** (3+0+0) 3 Credits / 6 ECTS
Social and Political Movements
(Toplumsal ve Siyasal Hareketler)
 Origins, dynamics, and consequences of social and political movements. Approaches and theories of reform, revolution, and social movements. Study of historically important cases.

PSIR 392	(3+0+0) 3 Credits / 6 ECTS
Peace Studies and Conflict Resolution (Barış Çalışmaları ve Çatışmaların Çözümlemesi)	
Main approaches, theories and models on peace and conflict.	
PSIR 394	(3+0+0) 3 Credits / 6 ECTS
Diplomatic History (Diplomasi Tarihi)	
Introduction to the history of international politics. The emergence of the concept of diplomacy as an institutional phenomenon and its historical advance to our present day. Developments from 16th century onwards.	
PSIR 395	(3+0+0) 3 Credits / 6 ECTS
International Political Economy (Uluslararası Ekonomi Politik)	
Global distribution of economic and political power. Global economic order with a view to classical, neo- classical and new economic theories. Regional integration and the nation state. International trade and monetary system. Multi-national corporations. The North-South relations.	
PSIR 398	(3+0+0) 3 Credits / 6 ECTS
Critical Theories of International Relations (Eleştirel Uluslararası İlişkiler Kuramları)	
The views of Hegel, Marx, Gramsci and the Frankfurt school. Feminist theories. Post-structuralism. Critical globalization theories.	
PSIR 400	(1+0+0) 1 Credits / 3 ECTS
Summer Practice II (Yaz Stajı II)	
Minimum 10 business days of summer internship that students are required to complete in order to gain work experience in their major.	
Pre-requisites: PSIR 300	
PSIR 401	(3+0+0) 3 Credits / 7 ECTS
Research Methods (Araştırma Yöntemleri)	
Epistemological, quantitative and qualitative research methods. Scientific method. Problem definition process and classification of variables. Sampling techniques. Data collection methods.	
Pre-requisites: MATH 233	
PSIR 402	(3+0+0) 3 Credits / 8 ECTS
Graduation Paper and Seminar (Mezuniyet Projesi ve Seminer)	
Undertake an independent research. Gain and demonstrate proficiency in a strand of literature chosen by the student in collaboration with an advisor. Writing an analytical research paper. Presentation in written and oral form.	
Pre-requisites: PSIR 401	

- PSIR 422** (3+0+0) 3 Credits / 6 ECTS
Current Issues in World Politics
(Dünya Siyasetinde Güncel Konular)
Regional and global issues in contemporary world politics.
- PSIR 425** (3+0+0) 3 Credits / 6 ECTS
Politics of Energy
(Enerji Politikası)
Economic and political dimensions of the global energy issue. World energy consumption. Geographic distribution and availability of energy sources. Energy producing and energy consuming states. Global energy policies. Renewable energy sources. Energy efficiency.
- PSIR 428** (3+0+0) 3 Credits / 6 ECTS
Ethnic Problems and Nationalism
(Etnik Sorunlar ve Milliyetçilik)
Ethnic and nationalist conflicts at the global level. Application of the theoretical models to various nationalist and ethnic movements. The relation between nation and nationalism. The functions of nationalism in the modernization process. The historical development of nationalism as an ideology and movement. The crisis of nation-state.
- PSIR 429** (3+0+0) 3 Credits / 6 ECTS
Human Rights and World Politics
(İnsan Hakları ve Dünya Siyaseti)
Conceptual and theoretical study of human rights. Historical foundations of the idea of human rights. The evolution of modern human rights regime. Controversies in the concept of rights. Problems involved in asserting universal moral standards across political and cultural divides. The role of the United Nations, governmental, and nongovernmental organizations in protecting human rights.
- PSIR 432** (3+0+0) 3 Credits / 6 ECTS
Themes in Turkish Political Thought
(Türkiye’de Siyasal Düşüncenin Temaları)
Political thought in Republican Turkey. Kemalist, nationalist, conservative, liberal, socialist, Islamic and feminist currents of thought with an emphasis on their main arguments and political projects.
- PSIR 439** (3+0+0) 3 Credits / 6 ECTS
Turkish Foreign Policy
(Türk Dış Politikası)
Historical, economic, and political dynamics underlying the foreign policy making process. Turkish foreign policy preferences from 18th century to the present day.
- PSIR 449** (3+0+0) 3 Credits / 6 ECTS
American Politics and Foreign Policy
(Amerika’da Siyaset ve Dış Politika)
Political structure and foreign policy making process in United States (US). The distribution of power among the US political institutions. The political parties and the election system. The notion of national security state. US foreign policy making process and lobbies.

- PSIR 453** (3+0+0) 3 Credits / 6 ECTS
Political Theory
(Siyaset Kuramı)
 Political theory in 20th century. Liberalism, Marxism, post-Marxism, structuralism, post-structuralism, de-constructivism, and post-modernism.
- PSIR 458** (3+0+0) 3 Credits / 6 ECTS
Art and Politics
(Sanat ve Politika)
 Inter-relationships between art and politics in 20th century. The role of art in the creation process of political messages, propaganda, and mass mobilization. Art as a mean of constructing social and political memory. State policies regarding art and art works in selected countries.
- PSIR 459** (3+0+0) 3 Credits / 6 ECTS
Political Parties and Party Systems
(Siyasi Partiler ve Parti Sistemleri)
 Political parties. Party systems. Party models. Party organization. Party government. Party system change.
- PSIR 461** (3+0+0) 3 Credits / 6 ECTS
Law of the European Union
(Avrupa Birliđi Hukuku)
 The European Union's (EU) law and legal order. Sources of community law: the treaties, derived law, international law. Relationship of Community Law to national law. Law making process in EU. The limits of EU law. EU citizenship. Social and economic regulations.
- PSIR 476** (3+0+0) 3 Credits / 6 ECTS
Post-Colonial Studies
(Post-Kolonyal alıřmalar)
 Currents of thought that react to colonialism and Eurocentricism. Analysis of the works of Edward Said, Frantz Fanon, Gayatri Spivak and Homi Bhabha.
- PSIR 491** (3+0+0) 3 Credits / 6 ECTS
Foreign Policy Analysis
(Dıř Politika Analizi)
 Foreign policy decision making processes. Political, social, economic, and psychological factors affecting the process. Decision making models. International crisis management.

FACULTY OF
EDUCATION



FACULTY OF EDUCATION

Dean's Statement

Today, the development level of countries is assessed by to what extent they prioritize education. It has been known that professionals are the most important elements among other factors that contribute to the quality of education.

TED University, Faculty of Education was founded upon the principles of 21st century education philosophy and student characteristics. The principal standards of TEDU's teacher education programs and procedures are lifelong learning, national and international teaching competencies, individual differences, interdisciplinary studies, rich learning environments, authentic and performance assessments, social responsibility and cooperation, integrated learning, as well as information and communication technologies.

Students enrolled before 2017-2018 academic year are offered a program which includes common core subjects, consisting of courses such as Math, Natural and Physical Sciences, Social Sciences, Humanities, and Fine Arts. Students enrolled in 2018-2019 academic year are exposed to a new program prepared by the Council of Higher Education for education faculties all over the country. One of our primary goals at TEDU is to make students graduate with a high level English proficiency. We provide our students with different scholarship opportunities. Our graduates start their career a step ahead of their colleagues as they graduate with more clinical and school experience.

Our faculty members bring national and international project grants on lifelong learning and teacher professional development. For instance, we have several projects supported by EU FP7 and TUBITAK. We want our students to assume roles in these projects as we believe this type of an experience will help them graduate with rich and multifaceted experiences. In addition, we encourage our students to study in a European country for a limited time period through the EU's ERASMUS program.

You are cordially invited to explore our diploma programs.

Prof. Yüksel KAVAK, Dean

Undergraduate Course Descriptions
(Courses Common to Faculty)
(2017-2018 and Before)

EDU 200 Observation in Schools (Okullarda Gözlem)	(1+4+0) 3 Credits / 6 ECTS
<p>Observation of different educational programs. Gaining familiarity with school culture. Observing organizational structure of schools. Gaining familiarity with educational environments, children and teachers. Observation, documentation techniques, and tools with their use in practice. Using tools to observe school culture and children's development.</p>	
EDU 201 School, Families and Society (Okul, Aile ve Toplum)	(1+2+0) 2 Credits / 4 ECTS
<p>Interactions of school, family, society and culture. Social and family structures in Turkey. Family and public education programs, models, and projects. Family and community involvement in education. Effective communication skills. Developing school-community partnership projects.</p>	
EDU 302 Special Education and Inclusion (Özel Eğitim ve Kaynaştırma)	(2+0+0) 2 Credits / 3 ECTS
<p>Definition of special education, terms related to special education, causes of disabilities. Importance of early diagnosis and treatment. Inclusion and roles and responsibilities in inclusion. Types, characteristics, education of disabilities, and accommodations regarding these children in inclusive settings. Parentes of children with special needs and including parents into their children's education. Special education programs and institutions in Turkey.</p>	
EDU 401 Community Service (Topluma Hizmet Uygulamaları)	(1+2+0) 2 Credits / 3 ECTS
<p>Definition and examples of community service in education. Importance of community service. Development and assessment of community service. Identifying and preparing projects to solve the current issues and problems of the society. Voluntary participation in social responsibility projects. Participation in scientific activities.</p>	
EDU 404 Turkish Education System and School Management (Türk Eğitim Sistemi ve Okul Yönetimi)	(2+0+0) 2 Credits / 3 ECTS
<p>Structure, goals and basic principles of Turkish education system. Education reform. Politics of education and legal regulations. Theories and processes of school management. School organization and management. School planning. School economy and business. Personnel evaluation. Quality in schools and accreditation process.</p>	

Undergraduate Course Descriptions
(Courses Common to Faculty)
(2017-2018 and After, 1st Year Courses)

EDUC COMPULSORY COURSES

- EDUC 101** (2+0+0) 2 Credits / 3 ECTS
Introduction to Education
(Eđitime Giriř)
 Basic concepts related to education. Purposes and the functions of education. Relationship of education with other fields. Educational law, social, cultural, historical, political, economic and psychological foundations. Method in educational sciences. School and classroom as an educational setting. Teaching profession and current trends in teacher education. Teaching-related trends in 21st century.
- EDUC 102** (2+0+0) 2 Credits / 3 ECTS
Educational Psychology
(Eđitim Psikolojisi)
 Basic concepts of psychology and education psychology. Research methods in education psychology. Theories of development, areas of development and development processes. Individual differences in development. Basic concepts related to learning. Factors affecting learning; theories of learning as part of education-learning processes. Motivation in learning process.
- EDUC 103** (2+0+0) 2 Credits / 3 ECTS
Educational Sociology
(Eđitim Sosyolojisi)
 Basic concepts of sociology: society, social structure, social fact, social event etc.; pioneers of sociology (İbn Khaldun, A. Comte, K. Marx, E. Durkheim, M. Weber etc.) and their views on education; the relationship between the field of education and the major sociological theories (functionalism, structuralism, symbolic interactionism, conflict theory, critical theory, phenomenology, and ethnomethodology); social processes (socialization, social stratification, social mobility etc.) and education; social institutions (family, religion, economy, politics) and education; the development of sociology and educational sociology in Turkey (Ziya Gökalp, İsmail Hakkı Baltacıođlu, Nurettin Topçu, Mümtaz Turhan etc.); culture and education; school as a social, cultural, and moral system and community.
- EDUC 104** (2+0+0) 2 Credits / 3 ECTS
Educational Philosophy
(Eđitim Felsefesi)
 Basic concepts and problem areas of Philosophy; existence, knowledge, philosophy of ethics and education, basic philosophical trend (idealism, realism, naturalism, empiricism, rationalism, pragmatism, existentialism, analytical philosophy) and education; educational philosophy and education trends: Perennialism, essentialism, progressivism, existentialist education, critical/radical education; education views of some philosophers in Islamic world and in the West (Platon, Aristo, Socrates, J. Dewey, Avicenna, Al-Farabi, J.J. Rousseau etc.); human nature; individual differences and

education; education in terms of some politic and economic ideologies; influential ideologies in Turkey during modernization process and education; philosophical foundation of Turkish education system.

EDUC 201

(2+0+0) 2 Credits / 3 ECTS

**Instructional Principles and Methods
(Öğretim İlke ve Yöntemleri)**

Concepts related to teaching principles and methods; teaching-learning principles, models, strategies, methods and techniques; identifying target and goal in education; content selection and organization in education; teaching materials; planning teaching and teaching plans; theories and approaches related to teaching; effective teaching in school, learning and success in learning; assessing in-class learning.

EDUC 202

(2+0+0) 2 Credits / 3 ECTS

**Turkish Education History
(Türk Eğitim Tarihi)**

The scope, method and sources of Turkish Education History. Education in first Turkish states. Education in first Muslim Turkish states. Education in Turkey Seljuks and Anatolian principalities. Education in Ottoman Empire; education system till first attempts for innovation movements. Education system in Turkish states in 13rd-18th century located outside of Ottoman geography. Innovation movements in education in Ottoman Empire till the political reforms. Foundation of modern education from political reforms to republic. Organization of traditional education system. Education in other Turkish states and communities in Eurasian in 19th-20th centuries. Education during national struggle period. Foundations, structure, establishment and development of Turkish Education System. Teacher education process from past to present: common goals, language and alphabet unity, common history writing studies.

EDUC 203

(2+0+0) 2 Credits / 3 ECTS

**Instructional Technologies
(Öğretim Teknolojileri)**

Information technologies in education; teaching process and the classification of instructional technologies; theoretical approaches to instructional technologies; new trends in teaching approaches; current literacies; instructional technologies as a means and material; design of instructional technologies; thematic material preparation; object storage creation peculiar to subject area; evaluation criteria for teaching material.

EDUC 204

(2+0+0) 2 Credits / 3 ECTS

**Research Methods in Education
(Eğitimde Araştırma Yöntemleri)**

Basic concepts and principles related to research methods. Research process (recognizing the problem, specifying the problem and sampling, data collection and analysis, interpreting findings). Common features of instruments. Data analysis and evaluation. Access to article, thesis and data bases. Research models and research types. Basic paradigms in scientific researches. Qualitative and quantitative research patterns. Sampling, data collection and data analysis in qualitative research.

Validity and reliability in qualitative research. Article or thesis review. Evaluation and presentation. Preparing reports consonant with research principles and research ethics. Action research in education.

EDUC ELECTIVE COURSES

EDUC 250 (2+0+0) 2 Credits / 4 ECTS

Adult Education and Lifelong Learning (Yetişkin Eğitimi ve Hayat Boyu Öğrenme)

Definition and the scope of adult education; concepts related to adult education (continuing education, public education, informal education, vocational education etc.); historical development of adult education in Turkey; approaches and methods related to adult education; adults and learning; historical development, purpose and the scope of lifelong learning; lifelong learning practices in Turkish education system.

EDUC 251 (2+0+0) 2 Credits / 4 ECTS

Open and Distance Education (Açık ve Uzaktan Öğrenme)

Basic concepts and philosophy of open and distance education; development of distance education in the world; development of distance education in Turkey; learner and counsellor roles in distance education; technologies used in distance education; management of open and distance education; classroom management and its components in open and distance education; open education sources and trends in the world; mass open online courses; individualized learning settings; problems related to open and distance education and their solutions; open and distance education practices in teacher education; individualized teaching material development and student support services in open and distance education; specifying teaching strategies for different learning situations; research and evaluation in distance education.

EDUC 252 (2+0+0) 2 Credits / 4 ECTS

Child Psychology (Çocuk Psikolojisi)

Basic concepts in child psychology; history of child psychology; main approaches/methods in child psychology; characteristics of different stages of development (Prenatal, Infancy, Early Childhood, Middle Childhood); child within family structure; child within school structure; adaptation and behavior problems in childhood; student with special needs.

EDUC 253 (2+0+0) 2 Credits / 4 ECTS

Attention Deficiency and Hyperactivity Disorders (Dikkat Eksikliği ve Hiperaktivite Bozukluğu)

Definition and characteristics of attention deficiency of hyperactivity disorders; basic principles of attention deficiency of hyperactivity disorders (attention deficit, hyperactivity and impulsivity); the influence of attention deficiency and hyperactivity disorders on children in terms of social, emotional, and school success aspects; causes of attention deficiency and hyperactivity disorders; risk factors in the emergence of attention deficiency and hyperactivity disorders; types of attention deficiency and hyperactivity disorders; approaches to children who suffer from attention deficiency and hyperactivity

disorders; guidance to students who suffer from attention deficiency and hyperactivity disorders; education of children who suffer from attention deficiency and hyperactivity disorders; school-family cooperation.

EDUC 254**(2+0+0) 2 Credits / 4 ECTS****Educational Law
(Eğitim Hukuku)**

Basic concepts of law and administrative law; sources of administrative law; rights and duties in administration; Convention on the Rights of the Children and Human Rights Declaration; administrative and judicatory review of teachers; principles that base and regulate Turkish Education System; duties, rights and responsibilities of stakeholders in education.

EDUC 255**(2+0+0) 2 Credits / 4 ECTS****Educational Anthropology
(Eğitim Antropolojisi)**

Subject, basic concepts, history and the method of anthropology. Basic approaches in social-cultural anthropology. Basic concepts of educational anthropology in terms of anthropological aspect. Culture, acculturation, enculturation, adaptation, sub-culture, counter culture, common culture etc. Cultural foundations and functions of education. Intercultural differentiation. Education and learning. School as a living space. School culture and ethnography. Media, mass communication. Popular culture and education. Globalization. Cultural interaction. Cultural literacy and education. Education in oral and written literary works in Turkish culture and civilization history. Parents and children roles in Turkish family structure.

EDUC 256**(2+0+0) 2 Credits / 4 ECTS****History of Education
(Eğitim Tarihi)**

Education in ancient period (in Ancient Egypt, Mesopotamia, Anatolian, Indian, China, Ancient Greece and Rome civilizations). Education in Middle Age and New Age in the East, the West and Islamic communities. Renaissance, Reform, Enlightenment movements and education. Education in Industrial Age and Modern Age. The relationships of Islam culture and civilization with Western civilization. The emergence of nation states and development of national education systems. Post-modern society discussions and education. Basic changes and transformations that took place in education in the world from Ancient period to present.

EDUC 257**(2+0+0) 2 Credits / 4 ECTS****Drama in Education
(Eğitimde Drama)**

Basic concepts of drama and creative drama (drama, creativeness, creative drama, play and theatre pedagogy, communication-interaction, role playing, improvisation, action, dramatic play, child theatre, puppet, pantomime etc.). Steps, dimensions and components of creative drama. Role playing and improvisation. History of creative drama. The relationship between social events and creative drama. Application steps of drama in education. Sources to be used in drama in education. Preparation and application of creative drama lesson plan. Contribution of drama to individual and social development.

EDUC 258**(2+0+0) 2 Credits / 4 ECTS****Extracurricular Activities in Education
(Eđitimde Program Dıřı Etkinlikler)**

Formal education and extracurricular activities/hidden curriculum concepts in education; approaches to hidden curriculum; cognitive domain and affective domain learnings and hidden curriculum; school as a ritual environment; school ceremonies as extracurricular activities in the school; importance and the management of social, cultural, sportive and artistic activities in the school; the place and the importance of hidden curriculum in values education; extracurricular activities (commemorative ceremony, pageant, gathering, graduation etc.) in terms of values education.

EDUC 259**(2+0+0) 2 Credits / 4 ECTS****Curriculum Development in Education
(Eđitimde Program Geliřtirme)**

Basic concepts related to curriculum development. Theoretical foundations of curriculum development. Types of curriculum. Philosophical, social, historical, psychological and financial foundations of curriculums. Properties of curriculum development and curriculums. Steps of curriculum development. Key elements of curriculum (goal, content, process and evaluation) and the relationship between these elements. Classification of goals and the relation of curriculum with its elements. Approaches to content organization. Identifying education needs. Process and models of curriculum development. Approaches to curriculum design. Curriculum evaluation models. Curriculum literacy. Roles and responsibilities of teachers in curriculum development. Properties of MoE curriculums. Implementation of curriculums. Current discussions and trends related to curriculum development in the world and Turkey.

EDUC 260**(2+0+0) 2 Credits / 4 ECTS****Project Design in Education
(Eđitimde Proje Hazırlama)**

Project concept and types of projects. Curriculums and project-based learning. Project programs at schools (TÜBİTAK, EU and others). Topic selection for projects. Literature review. Logical framework in projects. Planning and the management of a project. Application of scientific method in projects. Preparation and development of a project report. Finalization of a project report; project evaluation and examination of good examples. Project presentation, poster and leaflet design techniques.

EDUC 350**(2+0+0) 2 Credits / 4 ECTS****Critical and Analytical Thinking
(Eleřtirel ve Analitik Düşünme)**

Basic concepts and definitions; brain as mental organ, types of thinking and classification of thinking; unintentional thinking and its characteristics; intentional thinking and its characteristics; methods for intentional thinking; critical and analytical thinking; basic characteristics and criteria of critical and analytical thinking; steps in critical and analytical thinking; factors affecting critical and analytical thinking; scope of critical and analytical thinking; critical and analytical reading; critical and analytical listening; critical and analytical writing.

- EDUC 351** (2+0+0) 2 Credits / 4 ECTS
Inclusive Education
(Kapsayıcı Eğitim)
 Inclusion and the scope of inclusion. Inclusive education: definition, content and importance. Legal basis of inclusive education. National and international regulations. Approaches and standards in inclusive education. Teacher roles in inclusive education. Inclusive curriculum and materials. Attitudes and values in inclusive education. Inclusive school and classroom. Action planning for inclusive education. Inclusive education practices: properties differentiating students, effective communication, language used, psycho-social support, differentiating teaching and examples, methods and techniques, planning teaching, inclusion in course materials and selection of inclusive activities. Course design practices.
- EDUC 352** (2+0+0) 2 Credits / 4 ECTS
Comparative Education
(Karşılaştırmalı Eğitim)
 The definition, scope and history of comparative education. Method and research in comparative education. The comparison of the education systems of different countries in terms of structure, operation, school levels, human resources, education financing, privatization in education. Policy-making, planning and application in education. Sexuality, social justice and equality in education in different countries. Educational reform and innovation attempts in different countries. Teacher education/school manager education systems in different countries. Globalization and internationalization in education. International exams, institutions and organizations related to education.
- EDUC 353** (2+0+0) 2 Credits / 4 ECTS
Micro Teaching
(Mikro Öğretim)
 Basic concepts and principles related to effective teaching and learning. Professional competence, attitude, role and behaviors of teachers. Preparing lesson plans. Scope, benefits and the limitations of micro teaching. Preparing active learning activities in accord with subject-matter. Sample teaching practices in the classroom. Video recording of course presentations. Evaluation of the course by drawing on recordings. Improvement of activities and the way lectures are given.
- EDUC 354** (2+0+0) 2 Credits / 4 ECTS
Museum Education
(Müze Eğitimi)
 Definition and characteristics of museum, exhibition in museums; museum and museum education; types of museum; development of Turkish museology; A general overview of the history of museology in the world; the relationship between museum, art, culture and civilization; museum and art education; museum and society; the contribution of museums to historical awareness; protecting historical artifacts; modern museology in the world and Turkey.

EDUC 355**(2+0+0) 2 Credits / 4 ECTS****Out-of-School Learning Environments
(Okul Dışı Öğrenme Ortamları)**

Out-of-school education and learning concepts; the scope and the importance of out-of-school learning; teaching in out-of-school environments; teaching methods and techniques appropriate for out-of-school learning environments (project-based learning, station technique etc.) and teaching materials; out-of-school learning environments (museums, science centers, zoos, botanical gardens, planetariums, industrial institutions, national parks, science festivals, science camps, natural environments etc.); improvement of out-of-school areas and environments; planning, practice and evaluation of out-of-school activities.

EDUC 356**(2+0+0) 2 Credits / 4 ECTS****Learning Disability
(Öğrenme Güçlüğü)**

Definition, characteristics and classification of learning disability; Pedagogic, psychological, medical factors; its prevalence; causes of learning disability; early intervention; response to intervention model; diagnosis; medical, developmental and pedagogic diagnosis; academic and nonacademic characteristics; team and collaboration; education settings; practices having a scientific base; supporting reading, writing and mathematics skills; supporting nonacademic skills.

EDUC 357**(2+0+0) 2 Credits / 4 ECTS****Individualization and Adaptation of Teaching
(Öğretimi Bireyselleştirme ve Uyarlama)**

The concept of individualization and its importance in education; things to do for individualization; evaluation based on curriculum; superficial evaluation; developing criteria-dependent assessment instrument; requirements for evaluation; specifying long-term and short-term teaching objectives; arrangements to do in classes and schools for inclusion/integration; teaching adaptation; individualization and adaptation examples in inclusion/integration classes.

EDUC 358**(2+0+0) 2 Credits / 4 ECTS****Sustainable Development and Education
(Sürdürülebilir Kalkınma ve Eğitim)**

The concept of sustainability and its usage areas; sustainability in terms of social and physical sciences; sustainability in terms of social change; education and sustainability; future of humanity and sustainability; migration, poverty and inequality; sustainable environment; ecology, global environmental problems and sustainability; sustainable society in concordance with nature; population, economic system and natural habitat; technological developments; consumption habits and environment; social responsibility studies; sustainability in terms of concrete and intangible cultural heritage; readdressing human-nature relationships with regard to sustainability.

EDUC 359**(2+0+0) 2 Credits / 4 ECTS****Character and Values Education
(Karakter ve Değer Eğitimi)**

Conceptual framework: character, personality, value, virtue, morals, temper, etc.; character development and character education; role of family, environment, and school in character development and character education; description and classification of values; sources of values and individual, social, cultural, religious, and moral foundations of values; approaches and practices in character and values education; intercultural differences and diversity in character and values education; character and values education in relation to educational philosophies; instructional methods/techniques in character and values education; value conflicts and values education in modern and multicultural societies; values education through humanitarian-cultural development process; examples of values education from the history of Turkish education and culture, research and practices in values education in Turkey; teacher as a role model in character and values education.

EDUC 360**(2+0+0) 2 Credits / 4 ECTS****Education of In-patient Children
(Hastanede Yatan Çocukların Eğitimi)**

The development of in patient children- their needs, interests, psychology; the communication of hospital staff, child and the parents; preparation of life in hospital, diagnosis, treatment and readiness for the operation; preparing play, music, art, drama, maths activities for inpatient children; the communication of hospital schools and children with terminal diseases, their parents and the hospital staff.

GENC COMPULSORY COURSES**CMPE 103****(3+0+0) 3 Credits / 5 ECTS****Information Technologies
(Bilişim Teknolojileri)**

Information technologies and information processing; problem solving concepts and approaches; algorithm and flow diagrams; computer systems; basic concepts related to software and hardware; basics of operating systems; recent operating systems; file management; utility programs (third party utilities); word processing programs; spreadsheet programs; presentation programs; desktop publishing; database management system; web design; use of internet in education; communication and cooperation technologies; safe internet use; information ethics and copyright law; the effects of computers and internet on children/the young.

GENC 101**(2+0+0) 2 Credits / 3 ECTS****Foreign Language I - English
(Yabancı Dil I - İngilizce)**

Present continuous tense; simple present tense; oral, reading, writing and listening skills in these tenses; oral skills (introducing herself, describing a thing/place, giving directions, question and answer patterns related to personal information); reading skills (reading a list or label, asking questions at a restaurant, on means of transportation like bus/train); reading skills (writing a short message, poster content, filling out a form); listening skills (giving directions, describing a place/person, etc.).

GENC 102**(2+0+0) 2 Credits / 3 ECTS****Foreign Language II - English**
(Yabancı Dil II - İngilizce)

Past tense; future tense; modals (can, could, may, must, etc.); speaking, reading, writing and listening skills in these tenses and modals; oral skills (asking questions at a restaurant, ordering food, etc.); reading skills (weather forecast on the internet, recipe, banner/poster content, etc.); writing skills (writing a short message, giving written directions, writing an e-mail/invitation, etc.); listening skills (weather forecast, recipe, etc.).

GENC 103**(2+0+0) 2 Credits / 3 ECTS****Foreign Language I - Spanish**
(Yabancı Dil I - İspanyolca)

Present continuous tense; simple present tense; oral, reading, writing and listening skills in these tenses; oral skills (introducing herself, describing a thing/place, giving directions, question and answer patterns related to personal information); reading skills (reading a list or label, asking questions at a restaurant, on means of transportation like bus/train); reading skills (writing a short message, poster content, filling out a form); listening skills (giving directions, describing a place/person, etc.).

GENC 104**(2+0+0) 2 Credits / 3 ECTS****Foreign Language II - Spanish**
(Yabancı Dil II - İspanyolca)

Past tense; future tense; modals (can, could, may, must, etc.); speaking, reading, writing and listening skills in these tenses and modals; oral skills (asking questions at a restaurant, ordering food, etc.); reading skills (weather forecast on the internet, recipe, banner/poster content, etc.); writing skills (writing a short message, giving written directions, writing an e-mail/invitation, etc.); listening skills (weather forecast, recipe, etc.).

GENC 202**(1+2+0) 2 Credits / 3 ECTS****Community Services**
(Topluma Hizmet Uygulamaları)

Past tense; future tense; modals (can, could, may, must, etc.); speaking, reading, writing and listening skills in these tenses and modals; oral skills (asking questions at a restaurant, ordering food, etc.); reading skills (weather forecast on the internet, recipe, banner/poster content, etc.); writing skills (writing a short message, giving written directions, writing an e-mail/invitation, etc.); listening skills (weather forecast, recipe, etc.).

HIST 103**(2+0+0) 2 Credits / 3 ECTS****History of Turkish Republic I**
(Atatürk İlkeleri ve İnkılap Tarihi I)

Internal and external reasons for the collapse of the Ottoman Empire; XIX. Innovation movements in the Ottoman Empire in the 16th century; The idea movements in the last period of the Ottoman Empire; XX. At the beginning of the century the political and military situation of the Ottoman Empire; World War I and the Armenian question; Invasion and reactions of Anatolia; Mustafa Kemal Pasha's departure to Samsun and his activities; congress period and organization; the opening of the last

Ottoman Parliament and the adoption of the National Pact; Preparation for the National Struggle and the material and moral foundations of this preparation; The opening and activities of the TGNA; Treaty of Sevr; The struggles on the southern and eastern fronts; establishment of a regular army; Greek offensive and wars on the Western front; Signing of the Mudanya Negotiation; Convening the Lausanne Conference and signing the Peace Treaty.

HIST 104

(2+0+0) 2 Credits / 3 ECTS

History of Turkish Republic II (Atatürk İlkeleri ve İnkılap Tarihi II)

Political reforms (abolition of the Sultanate, proclamation of the Republic, abolition of the Caliphate, etc.); revolutions in the social field (hat revolution, closure of dervish lodges and lodges, calendar, time and surname law); reforms in the field of education and culture (Tevhid-i Tedrisat Law, Letters Revolution, Turkish History and Language Revolution); revolutions in the field of law; Attempts and reactions to transition to multi-party life in the period of Atatürk (the establishment and closure of Progressive Republican Firka, Sheikh Sait rebellion and assassination attempt to Atatürk); Attempts to transition to multi-party political life in the period of Atatürk (establishment of the Free Republican Party, closure and the Menemen Incident); Republican period, Turkey's economic resources and policy (İzmir Economic Congress); Turkish foreign policy during the period of Atatürk (Population Exchange, membership of the League of Nations, Balkan Entente and Sadabat Pact); Atatürk era of Turkish foreign policy (Montreux Convention Regarding the Regime of the Straits, Hatay to join the motherland, Turkey's bilateral relations with other countries); Definition, scope and principles of Atatürk's thought system; After Atatürk's Turkey, the ruling Democratic Party in the 1960s and 1970s in Turkey, Turkey's foreign policy after 1960.

TUR 103

(3+0+0) 3 Credits / 5 ECTS

Turkish I (Türk Dili I)

Writing language and its features; writing and pronunciation; characteristics of written and oral expression; paragraph formation and paragraph types (introduction, development, conclusion paragraphs); ways of developing thought (explanation, discussion, narration, description, identification, exemplification, witness demonstration, comparison etc. applications); text structure (structural features of text, introduction-development-result parts); textual features (cohesion, coherence, purposefulness, acceptability, situationality, informationalism, intertextuality); writing text (drafting, writing, editing and sharing); writing informative-descriptive text; writing narrative text, writing descriptive text; writing controversial and persuasive texts).

TUR 104

(3+0+0) 3 Credits / 5 ECTS

Turkish II (Türk Dili II)

Characteristics of academic language and writing; using definitions, concepts and terms in academic writings; objective and subjective expression; the structure and types of academic texts (articles, reports and scientific abstracts etc); claiming, writing propositions (verifying an idea, defending or opposing); the formal characteristics of scientific reports and articles; the steps of writing reports;

explanation, discussion, establishing relations between texts, showing references (citation and footnotes, bibliography); writing a title, summarization, writing keywords; ethical principles to be observed in scientific writings; academic text writing applications.

GENC ELECTIVE COURSES

GENC 250 (2+0+0) 2 Credits / 3 ECTS

Addiction and Struggling with Addiction (Bağımlılık ve Bağımlılıkla Mücadele)

Basic concepts and definitions; types of addiction (substance addiction, technology addiction etc.); reasons of addiction; risk factors which prepare the person for addiction in the family; peer group and social context; communication skills in addicted children; adolescents and adults; the role of social work in addiction; models related to addiction; effort to prevent addiction; consequences of addiction; national policy and strategy methods for fight against addiction; reintegration process.

GENC 251 (2+0+0) 2 Credits / 3 ECTS

Nutrition and Health (Beslenme ve Sağlık)

Natural and healthy nutrition; fight against obesity; food additives; healthy life and exercise; growth and development; healthy sexual life; struggle with addiction (tobacco, alcohol, substance abuse etc.); traffic, disaster and first aid.

GENC 252 (2+0+0) 2 Credits / 3 ECTS

History and Philosophy of Science (Bilim Tarihi ve Felsefesi)

Science, philosophy, scientific method; Ancient Greece, Medieval Europe, Scholastic philosophy and science; science and philosophy in Islamic cultural geography, science in Mesopotamia; science and philosophy in Renaissance Europe; science and philosophy in the age of enlightenment; classification of sciences; science, scientism, ideology; ethics and religious relations; science and paradigms; Vienna and Frankfurt thought schools; the twentieth and the twenty-first century science criticism.

GENC 253 (2+0+0) 2 Credits / 3 ECTS

Science and Research Ethics (Bilim ve Araştırma Etiği)

Science, the nature of science, its development and scientific research; the concept of ethics and ethical theories; research and publication ethics; unethical behaviors and ethical violations in the research process; ethical issues related to authorship and copyright; biased publication; editorship; arbitration and ethics; ethics of broadcasting and unethical behaviors during publication process; legislation and committees on research and publication ethics; ways to identify ethical violations; common research, publication ethics violations and methods to prevent them.

GENC 254**(2+0+0) 2 Credits / 3 ECTS****Economy and Entrepreneurship
(Ekonomi ve Girişimcilik)**

Basic concepts of economics and economic systems; basic concepts of business and business management; establishment, objectives and legal structure of the enterprise; management processes and functions in enterprises; human and other resources management; entrepreneur and entrepreneurship; entrepreneurship concepts; success factors in entrepreneurship, entrepreneurship culture, entrepreneurship process and types of entrepreneurship; career planning, original ideas, extraordinary examples; Turkish Patent and Trademark Agency, Industrial Property Law; small and medium-sized enterprises; business idea development, innovation and business plan making, elements of business plan, writing and presentation; preparing a project about entrepreneurship in a specific field and subject.

GENC 255**(2+0+0) 2 Credits / 3 ECTS****Traditional Turkish Handcrafts
(Geleneksel Türk El Sanatları)**

Terms and concepts related to traditional Turkish arts; the importance of traditional Turkish arts; contributions to the economy of the individual, society and county; historical development of Traditional Turkish arts (Huns, Gokturks, Uighurs, Seljuks Beyliks and Ottoman Period); Ahilik and Guild Organization; institutions and organizations related to Turkish arts in the Republican period; classification of traditional arts according to raw materials and production techniques; traditional weaving (carpet-rug, fabric etc.), printing, knitting, felt, glass (stained glass, housewares, beads etc.), arts; metal (iron, copper, silver and gold etc.) arts, wood (kündekari, carving and mother of pearl inlay) arts, tile-ceramic and stone processing arts, traditional Turkish arts education, production and marketing.

GENC 256**(2+0+0) 2 Credits / 3 ECTS****Human Rights and Democracy Education
(İnsan Hakları ve Demokrasi Eğitimi)**

The concept and historical development of human rights; types of human rights; understanding The concept and historical development of human rights; types of human rights; understanding of democracy; principles, approaches and human rights; democracy education and democratic education; family and democracy education; education as a human right; preschool education and democracy education; primary education curriculum and democracy education; democracy education in secondary education; higher education and democracy education; democratic school and classroom environment.

GENC 257**(2+0+0) 2 Credits / 3 ECTS****Human Relations and Communication
(İnsan İlişkileri ve İletişim)**

Definition and classification of human relations; theoretical approaches to interpersonal relations (psychoanalytic, attachment, contemporary theories); theoretical approaches to interpersonal relations (social, psychological, cognitive theories); interpersonal relationships as a developmental process (infancy and childhood, adolescence and adulthood); factors affecting human relations;

gender, gender roles and interpersonal relations; self-adaptation and self-disclosure in interpersonal relationships; communication and communication errors; effective communication skills; interpersonal problems; conflict and conflict resolution approaches; human relations in terms of intercultural differentiation.

GENC 258

(2+0+0) 2 Credits / 3 ECTS

**Career Planning and Development
(Kariyer Planlama ve Geliştirme)**

Career concept, career planning and stages; Individual career development, developing a personal career strategy; career planning model, career options related to teaching fields; preparing a curriculum vitae (CV) and types of résumé, CV format and examples, important points to keep in minds while preparing a CV; writing cover letters for resumes introducing themselves, promotional letters, methods and types of job interview preparation to job interview, and stages; situations that may be encountered in interviews; question types, body language signs.

GENC 350

(2+0+0) 2 Credits / 3 ECTS

**Culture and Language
(Kültür ve Dil)**

Basic concepts about language and culture; bases and components of culture; verbal and written culture; material and moral culture; individual and communal culture; connective and discriminative culture; acculturation, cultural expansion and harmony; cognitive, symbolic, structural-functionan oriented culture; language as system of symbols; effects of culture on human conscious; relationship between culture, language, cognition and reality; language's function of passing on knowledge and culture, forming social relations and communication; evolution and transfer of language and culture; national identity and culture; dynamics of changes in culture and language; discussions about mutual interactions of changes in culture and language; national cultures; globalization, multilingualism and multiculturalism.

GENC 351

(2+0+0) 2 Credits / 3 ECTS

**Media Literacy
(Medya Okuryazarlığı)**

Information literacy; responsible utilization of internet and social media; effects of social media on individuals; power of spreading information and deception; power of dissemination; management of media and perception; internet oriented legal rights and responsibilities; copyright; personal right; privacy of information; violation of privacy; linguistic performance on media; value of news and analysis of quality; popular culture; gender roles on media; consumption culture and advertisements; forming stereotypes on media.

GENC 352

(2+0+0) 2 Credits / 3 ECTS

**Vocational English
(Mesleki İngilizce)**

Reading, writing, speaking, listening skills; basic concepts of child development and stages; basic concepts on each level of education(primary and secondary); concepts of educational sciences; dialogue samples of student, teacher and parent; listening and understanding academic talks

(youtube, teachertube, tedx etc.); professional language skills (vocabulary, jargon etc.) writing skills (reading web 2.0 sources); translation studies on education.

GENC 353

(2+0+0) 2 Credits / 3 ECTS

**Art and Aesthetics
(Sanat ve Estetik)**

Art, fine arts, craft and culture; art and education; art, creativity and artwork; philosophy of art and aesthetics; theories of art and aesthetics; art criticism; art history, art in pre-modern, modern and post-modern periods; art and social context; art and everyday life; Turkish-Islamic art-aesthetics and works of art; the position of art and artisian in the process of social change; the development of the arts in Turkey; understanding of art today; civilization and art; art, aesthetics and morality.

GENC 354

(2+0+0) 2 Credits / 3 ECTS

**Turkish Folk Dance
(Türk Halk Oyunları)**

Definition of folklore; rhythm and perception studies, play and folk-figure studies; local differences in folk dances, local figures, bar type, local figure learning, halay and spoon type local figure learning, horon and type of local figure learning, zeybek type local figure learning; studies about learned games, attitude and play styles; staging of folk dances, staging types and differences.

GENC 355

(2+0+0) 2 Credits / 3 ECTS

**Turkish Sign Language
(Türk İşaret Dili)**

Basic concepts related to sign language; Turkish sign language, history and characteristics; letters in Turkish sign language; phonology, the internal structure of sign, synchrony and concatenation, hand alphabet in terms of phonology, morphology in sign language, syntax; word order, sentence types; interrogative sentences in sign language; semantics, meaning and reference, types of meaning, idioms in sign language; conversation with the Turkish sign language.

GENC 356

(2+0+0) 2 Credits / 3 ECTS

**Turkish Cultural Geography
(Türk Kültür Coğrafyası)**

Culture, people and society; Turkish culture and Turkish civilization; The first ethnographic sources about Turks; Turkish states in history; Turkish state, administrative, military and social structure; Folk beliefs and mythology in Turks; The relationship between human and space in Turks; Verbal, written and material culture in Turks; Family structure in Turks; Demographic and cultural consequences of migrations in Turkish history; Turkish culture and its impact on other regions around; Tangible and intangible cultural heritage; transfer of natural and cultural heritage to future generations.

GENC 357**(2+0+0) 2 Credits / 3 ECTS****Turkish Classical Music
(Türk Musikisi)**

Music elements belonging to Turkish communities living in Central Asia and Anatolia, Turkish mythology (human, creation, religious rituals and holidays etc.), mythological elements in Turkish Folk Music repertoire, types of music in Turkish State and Communities, Turkish Folk Music in historical process and the development of Turkish Art Music; interaction of different traditions and styles related to music; examination of instruments, composers, performers and sample works.

GENC 358**(2+0+0) 2 Credits / 3 ECTS****Turkish Art History
(Türk Sanatı Tarihi)**

Art styles from Hun Art to Göktürk, Uygur, Karahanlı, Ghaznavid, Great Seljuk, Anatolian Seljuks, Principalities and Ottoman period, architectural, sculpture and painting examples of these periods are examined comparatively; Turkish art and artists starting from Republic Period Art.

DEPARTMENT OF EDUCATIONAL SCIENCES

Chair

Prof. Nilüfer Voltan Acar

Academic Staff

Prof. Nilüfer Voltan Acar, Prof. Oya Güneri, Assoc. Prof. Tolga Erdoğan, Asst. Prof. Begüm Serim Yıldız, Asst. Prof. Elif Öztürk, Asst. Prof. Kürşad Demirutku, Asst. Prof. Münevver İlgün Dibek, Asst. Prof. Olcay Yılmaz, Asst. Prof. Onur Özmen, Ayşe Bilicioğlu*, Ayşegül Aracı İyiyaydın*, Bünyamin Atay*, Nergis Hazal Yılmaztürk*, Yusuf Barburuğlu*, Zehra Yeler*.

* Research Assistant

Undergraduate Program in Guidance and Psychological Counseling

The main purpose of the program is to raise guidance and psychological counseling professionals who will primarily work at K-12 schools with all the stakeholders involved to support their academic, occupational, personal, and social development in a variety of work settings. The other aim of the program is to prepare qualified counselors, who have reflective and critical thinking, as well as leadership skills, and who can contribute to GPC practices at the national and the international level.

Program Outcomes

Guidance and psychological counselors graduating from GPC program at TEDU will demonstrate the following learning outcomes:

1. Apply the relevant research methods (qualitative and/or quantitative), collect, analyze and interpret data, and share the results with the stakeholders in order to monitor and improve students' development.
2. Apply both the formal and informal assessment techniques in an attempt to interpret students' strengths and needs as well as to evaluate the effectiveness of psychoeducational programs.
3. Relate content knowledge and fundamental counseling skills to enhance the academic, emotional, moral, social, and physical development of students.
4. Identify appropriate counseling methods of prevention and intervention for individuals and groups, and critically interpret and evaluate the theory and research underlying these methods.
5. Design and implement prevention and intervention strategies to meet the needs of individuals and groups.
6. Judge the coherence and consistency of moral and ethical values and act with personal and professional integrity.
7. Design comprehensive school guidance and group counseling programs, and lead the implementations of these programs with an ability to collaborate in team work with all the stakeholders (e. g., students, teachers, administrators, parents and others).
8. Analyze complex problems related to education in general and guidance and psychological counseling programs in particular within an interdisciplinary framework.

9. Manage personal affairs including problem solving and time management skills, and self-discipline.
10. Effectively use English and Turkish language in both oral and written communication to support his/ her personal and professional development.
11. Engage in lifelong learning by following the developments, staying up-to-date and pursuing self-development personally and practicing self-assessment at every opportunity.
12. Value individual and cultural differences (race, ethnicity, class, gender, language, belief system, sexual orientation, and political opinion).

Undergraduate Curriculum (2017-2018 and Before)

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
BIO 101	Life Sciences	3	0	0	3	5
TUR 101	Turkish I	2	0	0	2	2
HIST 101	History of Turkish Republic I	2	0	0	2	2
ENG 101	English for Academic Purposes	2	2	0	3	5
CMPE 101	Introduction to Information Technologies	2	0	2	3	5
EDU 101	Introduction to Education	2	2	0	3	6
MATH 103	Mathematics for Education Majors	3	0	0	3	5
TOTAL		16	4	2	19	30

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
EDU 102	Instructional Principles and Methods	2	2	0	3	6
PHYS 104	Introduction to Natural Sciences	2	2	0	3	5
ENG 102	Expository Writing	2	2	0	3	5
HIST 102	History of Turkish Republic II	2	0	0	2	2
TUR 102	Turkish II	2	0	0	2	2
PHIL 104	Philosophy and Ethics	3	0	0	3	5
PSY 104	Psychology	3	0	0	3	5
TOTAL		16	6	0	19	30

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
ART 100	Visual Arts and Aesthetics	2	2	0	3	5
EDU 201	School, Families and Society	1	2	0	2	4
MATH 233	Statistics for Social Sciences	3	1	0	3	5
LIT 100	World Literature	3	0	0	3	5
EDU 200	Observation in Schools	1	4	0	3	6
TOTAL		10	9	0	14	25

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
EDU 202	Research Methods	2	0	0	2	3
TOTAL		2	0	0	2	3

Semester 5

Code	Course Title	C	P	L	Cr	ECTS
EDU 301	Curriculum Development in Guidance	2	2	0	3	5
GPC 301	Behavioral Disorders	3	0	0	3	5
GPC 303	Measurement and Evaluation	2	2	0	3	5
GPC 311	Career Guidance and Counseling	2	2	0	3	5
GPC 321	Counseling Theories	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
TOTAL		15	6	0	18	30

Semester 6

Code	Course Title	C	P	L	Cr	ECTS
EDU 302	Special Education and Inclusion	2	0	0	2	3
GPC 322	Principles and Techniques of Counseling	2	2	0	3	5
GPC 342	Psychological Assessment	2	2	0	3	5
GPC 332	Group Counseling	2	2	0	3	5
GPC 382	Field Practice in Career Guidance and Counseling	1	4	0	3	7
SF	Secondary Field	3	0	0	3	5
TOTAL		12	10	0	17	30

Semester 7

Code	Course Title	C	P	L	Cr	ECTS
TEDU 400	Student Development Seminar	0	0	0	0	1
EDU 401	Community Service	1	2	0	2	3
GPC 411	Ethics and Legal Issues in Counseling	2	0	0	2	3
GPC 421	Culturally Sensitive Counseling	2	2	0	3	5
GPC 471	Research Project	1	4	0	3	7
GPC 481	Field Practice in Individual Counseling	1	4	0	3	7
SF	Secondary Field	3	0	0	3	5
TOTAL		10	12	0	16	31

Semester 8

Code	Course Title	C	P	L	Cr	ECTS
EDU 404	Turkish Education System & School Management	2	0	0	2	3
GPC 472	Capstone Experiences in Guidance and Counseling	2	4	0	4	7
GPC 482	Field Practice in Group Counseling	1	4	0	3	7
GPC 484	Field Practice in School Counseling Services	1	4	0	3	7
SF	Secondary Field	3	0	0	3	5
TOTAL		9	12	0	15	29

Totals expected for graduation		90	59	2	120	188
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Undergraduate Course Descriptions (2017-2018 and Before)

- GPC 301** (3+0+0) 3 Credits / 5 ECTS
Behavioral Disorders
(Davranış Bozuklukları)
 Concepts of normal and abnormal behavior, theoretical approaches and intervention techniques to abnormal behavior. Understand classification systems such as DSM (The Diagnostic and Statistical Manual for Mental Disorders) criteria.
- GPC 303** (2+2+0) 3 Credits / 5 ECTS
Measurement and Evaluation
(Ölçme ve Değerlendirme)
 Importance of measurement and evaluation in education. Basic concepts of measurement and evaluation. Characteristics of the measurement instruments used in education. Instruments regarding classic approaches. Individual appraisal techniques. Basic statistical techniques.
- GPC 311** (2+2+0) 3 Credits / 5 ECTS
Career Guidance and Counseling
(Mesleki Rehberlik ve Danışma)
 Basic concepts and principles regarding career guidance and counseling. Theories of career development. Measurement in career guidance and counseling. Computer based career guidance and counseling. Career guidance and counseling programs.
- GPC 321** (3+0+0) 3 Credits / 5 ECTS
Counseling Theories
(Psikolojik Danışma Kuramları)
 Basic counseling theories and approaches. Basic concepts, principles and strategies regarding these counseling theories and approaches. Putting together theories into practice and new approaches.
- GPC 322** (2+2+0) 3 Credits / 5 ECTS
Principles and Techniques of Counseling
(Psikolojik Danışma İlke ve Teknikleri)
 Principles of counseling. Process and stages of counseling. Basic counseling skills and techniques. Practice of these basic skills and techniques.
- GPC 332** (2+2+0) 3 Credits / 5 ECTS
Group Counseling
(Grupla Psikolojik Danışma)
 Basic concepts and principles of group counseling. Process of group counseling. Skills and techniques of group counseling. Stages of group counseling. Working with different problems and age groups.

- GPC 342** (2+2+0) 3 Credits / 5 ECTS
Psychological Assessment
(Psikolojik Değerlendirme Yöntemleri)
 Basic concepts and principles regarding psychological testing. Application and assessment of various tests and inventories. Individual appraisal techniques. Case studies. Non-test Assessment Techniques.
- GPC 382** (1+4+0) 3 Credits / 7 ECTS
Field Practice in Career Guidance and Counseling
(Mesleki Rehberlik ve Danışmada Alan Çalışması)
 Application and assessment of measurement instruments used in career guidance and practice. Developing career development programs, career guidance and practice with individuals and groups.
- GPC 411** (2+0+0) 2 Credits / 3 ECTS
Ethical and Legal Issues in Counseling
(Meslek Etiği ve Yasal Konular)
 The professional ethical laws in counseling area and general application standards. Client rights. Legal responsibilities of counselors. Legal problems. Multiculturalism and individual differences.
- GPC 421** (2+2+0) 3 Credits / 5 ECTS
Culturally Sensitive Counseling
(Kültüre Duyarlı Psikolojik Danışma)
 Understand the importance of cultural differences. Theories and methods in culturally sensitive counseling. Education, professional and ethical issues in culturally sensitive counseling. Increasing cultural awareness and cultural sensitivity. Evaluate applicability of counseling theories to Turkish Culture.
- GPC 471** (1+4+0) 3 Credits / 7 ECTS
Research Project
(Araştırma Projesi)
 Supervised individual research about guidance and psychological counseling.
- GPC 472** (2+4+0) 4 Credits / 7 ECTS
Capstone Experiences in Guidance and Counseling
(Rehberlik ve Psikolojik Danışma Bitirme Projesi)
 Research proposal or project in the field of psychological counseling as a final piece of an undergraduate degree. Practice in school internship. Oral presentation and paper submission.
- GPC 481** (1+4+0) 3 Credits / 7 ECTS
Field Practice in Individual Counseling
(Bireyle Psikolojik Danışma Uygulaması)
 Counseling with individuals using basic counseling skills and methods under supervision.

GPC 482

(1+4+0) 3 Credits / 7 ECTS

**Field Practice in Group Counseling
(Grupla Psikolojik Danışma Uygulaması)**

Examination of educational, vocational, individual guidance activities in preschools, primary and secondary schools. Application and assessment of test and individual appraisal techniques. Develop and practice group guidance programs in various subjects.

GPC 484

(1+4+0) 3 Credits / 7 ECTS

**Field Practice in School Counseling Services
(Kurum Deneyimi)**

A hands-on learning in a real-world setting to gain experience and knowledge in schools. Allow students to participate in counselor educational programs under the supervision of a professional counselor.

**Undergraduate Curriculum
(2018-2019 and After)**

Semester 1

Code	Course Title	C	P	Cr	ECTS
EDUC 101	Introduction to Education	2	0	2	3
EDUC 103	Educational Sociology	2	0	2	3
HIST 103	History of Turkish Republic I	2	0	2	3
GENC 101	Foreign Language I	2	0	2	3
TUR 103	Turkish I	3	0	3	5
CMPE 103	Information Technologies	3	0	3	5
PCG 101	Introduction to Psychology	2	0	2	4
PCG 103	Cultural Antropology	2	0	2	4
TOTAL		18	0	18	30

Semester 2

Code	Course Title	C	P	Cr	ECTS
EDUC 104	Educational Philosophy	2	0	2	3
EDUC 203	Instructional Technologies	2	0	2	3
HIST 104	History of Turkish Republic II	2	0	2	3
GENC 102	Foreign Language II	2	0	2	3
TUR 104	Turkish II	3	0	3	5
PCG 102	Developmental Psychology II	2	0	2	4
PCG 104	Physiological Psychology	2	0	2	4
PCG 106	Guidance & Psych. Counseling in Schools	2	0	2	5
TOTAL		17	0	17	30

Semester 3

Code	Course Title	C	P	Cr	ECTS
EDUC 203	Instructional Principles and Methods	2	0	2	3
EDUC ELECT.	Elective I	2	0	2	4
GENC ELECT.	Elective I	2	0	2	3
PCG ELECT.	Elective I	2	0	2	4
PCG 201	Developmental Psychology II	2	0	2	4
PCG 203	Psychology of Learning	2	0	2	4
PCG 205	Social Psychology	2	0	2	4
PCG 207	Basic Statistics	2	0	2	5
TOTAL		16	0	16	30

Semester 4

Code	Course Title	C	P	Cr	ECTS
EDUC 202	Turkish Education History	2	0	2	3
EDUC 204	Research Methods in Education	2	0	2	3
EDUC ELECT.	Elective II	2	0	2	4
GENC ELECT.	Elective II	2	0	2	3
GENC 202	Community Services	1	2	2	3
PCG ELECT.	Elective II	2	0	2	4
PCG 202	Personality Theories	2	0	2	2
PCG 204	Life Span and Adjustment Problems	2	0	2	2
PCG 206	Character and Values Education	2	0	2	3
PCG 208	Non-Testing Techniques	1	2	2	3
TOTAL		18	4	20	30

Semester 5

Code	Course Title	C	P	Cr	ECTS
EDUC 304	Turkish Education System and School Management	2	0	2	3
EDUC 302	Assessment and Evaluation in Education	2	0	2	3
EDUC ELECT.	Elective III	2	0	2	4
GENC ELECT.	Elective III	2	0	2	3
PCG ELECT.	Elective III	2	0	2	4
PCG 301	Behavioral Disorders I	2	0	2	3
PCG 303	Psychological Tests	1	2	2	3
PCG 305	Principles and Techniques of Counseling	2	0	2	3
PCG 307	Theories of Counseling	2	0	2	2
PCG 309	Career Guidance and Counseling	2	0	2	2
TOTAL		19	2	20	30

Semester 6

Code	Course Title	C	P	Cr	ECTS
EDUC 303	Morals and Ethics in Education	2	0	2	3
EDUC 301	Classroom Management	2	0	2	3
EDUC ELECT.	Elective IV	2	0	2	4
GENC ELECT.	Elective IV	2	0	2	3
PCG ELECT.	Elective IV	2	0	2	4
PCG 302	Behavioral Disorders II	2	0	2	2
PCG 304	Psychological Counseling Skills	1	2	2	4
PCG 306	Group Counseling	2	0	2	3
PCG 308	Field Practice in Career Guidance and Counseling	1	2	2	2
PCG 310	Spiritual Counseling	2	0	2	2
TOTAL		18	4	20	30

Semester 7

Code	Course Title	C	P	Cr	ECTS
EDUC 411	Practicum of Counseling in Schools I	2	6	5	10
EDUC 409	Special Education and Inclusion	2	0	2	3
EDUC ELECT.	Elective V	2	0	2	4
PCG ELECT.	Elective V	2	0	2	4
PCG 401	Family Counseling	2	0	2	2
PCG 403	Professional Ethics and Legal Issues	2	0	2	2
PCG 405	Curriculum Development in Psychological Counseling and Guidance	2	0	2	2
PCG 407	Field Practice in Individual Counseling I	1	2	2	3
TOTAL		15	8	19	30

Semester 8

Code	Course Title	C	P	Cr	ECTS
EDUC 412	Practicum of Counseling in Schools II	2	6	5	10
EDUC ELECT.	Elective VI	2	0	2	4
PCG ELECT.	Elective VI	2	0	2	4
PCG 402	Children's Law	2	0	2	3
PCG 404	Post Traumatic Counseling	2	0	2	3
PCG 406	Seminars on Guidance and Counseling	2	0	2	3
PCG 408	Field Practice in Individual Counseling II	1	2	2	3
TOTAL		13	8	17	30

Totals expected for graduation		134	26	147	240
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Undergraduate Course Descriptions (2018-2019 and After, 1st and 2nd Year Courses)

COMPULSORY COURSES

PCG 101 **(2+0+0) 2 Credits / 4 ECTS**

**Introduction to Psychology
(Psikolojiye Giriş)**

Definition of psychology, history of psychology, fields of psychology (social psychology, clinical psychology, educational psychology, etc.); psychological theories (behavioristic theories, cognitive theories, existential theory, etc.); biological bases of psychology, intelligence and its theories, sensation and perception, memory; personality and its theories, abnormal behaviors, motivation, emotion, defense mechanisms.

PCG 102 **(2+0+0) 2 Credits / 4 ECTS**

**Developmental Psychology I
(Gelişim Psikolojisi I)**

Basic concepts and principles about development, factors influencing development: genetic factors, environmental factors, historical time factor; theories of development: Freud's psychosocial development theory, Erikson's psychosocial development theory, Piaget's cognitive development theory, Maslow's personality development theory, Levinson's development theory, ecological approach (Bronfenbrenner); prenatal development, physical development in childhood, cognitive development, personality development, moral development; physical development in adolescence, adolescence-specific developmental tasks, cognitive development in adolescence, personality development, moral development and psychosocial development.

PCG 103 **(2+0+0) 2 Credits / 4 ECTS**

**Cultural Anthropology
(Kültürel Antropoloji)**

Basic subjects of anthropology and the concept of culture; the history of cultural anthropology and cultural change, culture and values, the concepts related to culture (language, ecology, modes of production and economy), gender, marriage, family, kinship and ancestry systems; symbolic meanings of social organizations and ceremonies; anthropology of religion, communication, economics, education, film and photography, history, journalism, law, linguistics, literature, medicine, political science and sociology.

PCG 104 **(2+0+0) 2 Credits / 4 ECTS**

**Physiological Psychology
(Fizyolojik Psikoloji)**

The field and research methods of physiological psychology; physiology and anatomy of the organism, behavioral mechanisms and sensory functions, motor functions and emotions, motivation and its physiological basis, functional disorders and their causes.

PCG 106**(2+0+0) 2 Credits / 5 ECTS****Guidance and Psychological Counseling in Schools
(Okullarda Rehberlik ve Psikolojik Danışma)**

Basic concepts and principles related to GPC, history, field and branches of GPC; research and assessment methods, psychological counseling process, theories of psychological counseling, school counseling models (traditional and developmental), school counseling approaches (crisis-oriented, therapeutic-remedial, preventive and developmental), the purpose and principles of traditional school counseling, roles and functions of the school counselors, the purpose, principles and program of developmental school counseling (Comprehensive Developmental Guidance Program), basic services/interventions and roles and functions of the developmental school counselor; purpose and principles of developmental and preventive approaches in GPC, importance of life skills training in developmental approach, positive youth development approaches and levels of prevention in preventive approach (primary, secondary and tertiary).

PCG 201**(2+0+0) 2 Credits / 4 ECTS****Developmental Psychology II
(Gelişim Psikolojisi II)**

Transition to adulthood (emerging adulthood); basic characteristics of early adulthood, developmental tasks specific to early adulthood, close relationships in early adulthood, adaptation to worklife in early adulthood; basic characteristics of middle adulthood, developmental tasks and problems specific to middle adulthood, physical development in middle adulthood, cognitive development in middle adulthood, personality development in middle adulthood, psycho-social development in middle adulthood, basic characteristics of late adulthood, developmental tasks specific to late adulthood, physical development in late adulthood, personality development in late adulthood, cognitive development in late adulthood and psycho-social development in late adulthood.

PCG 202**(2+0+0) 2 Credits / 2 ECTS****Personality Theories
(Kişilik Kuramları)**

Basic concepts related to personality; Personality development; Adjustment and mental health; Characteristics and comparison of personality theories; Making connection of theories of personality with counseling practices.

PCG 203**(2+0+0) 2 Credits / 4 ECTS****Psychology of Learning
(Öğrenme Psikolojisi)**

Basic principles and concepts of learning, factors influencing learning (related to learner, learning materials, strategy of learning, and learning environment), theories of learning (behavioral approach, cognitive approach, humanistic approach), effective learning methods and strategies.

PCG 204**(2+0+0) 2 Credits / 2 ECTS****Life Span and Adjustment Problems
(Yaşam Dönemleri ve Uyum Sorunları)**

Considering the concepts of normality and abnormality from various aspects, diagnosis systems and criteria of adjustment disorders in diagnosis systems, distinctive diagnosis criteria of identification of adjustment disorders (post-traumatic stress disorder, oppositional defiant disorder, aspects of behavioral disorders), reasons of why adjustment disorders are considered according to development period, preventive and risky factors in adjustment disorders; early childhood period, junior, adolescence, early adulthood, adulthood, late adulthood adjustment disorders and coping with them.

PCG 205**(2+0+0) 2 Credits / 4 ECTS****Social Psychology
(Sosyal Psikoloji)**

The field of social psychology and its research methods; social perception and social cognition, attitudes and attitude change theories; psychological processes affecting social behavior, social influence and conformity, group dynamics, interpersonal relations.

PCG 206**(2+0+0) 2 Credits / 3 ECTS****Character and Values Education
(Karakter ve Değer Eğitimi)**

Conceptual framework: Character, personality, value, virtue, morality, temperament etc.; character development and education; family, environment, and the school in character development and education; definition and classification of values; sources and personal, societal, cultural, religious, and moral foundations of values; approaches to and applications of character and values education; cross-cultural differentiation in character and values education, and culture of co-existence; character and values education from the philosophy of and goals of education; instructional methods and techniques in character/value education; value crisis and education in the modern and multicultural societies; examples of value education from Turkish history of education and culture; values education applications and research in Turkey; teacher as a role model in character and values education.

PCG 207**(2+0+0) 2 Credits / 4 ECTS****Basic Statistics
(Temel İstatistik)**

Basic concepts about statistics, data organization, descriptive statistics, probability calculations, probability distributions, parametric and nonparametric hypothesis tests, types of correlation, simple linear regression analysis, t tests, analysis of variance and software application of these statistics.

PCG 208**(1+2+0) 2 Credits / 3 ECTS****Non-Testing Techniques
(Test Dışı Teknikler)**

Non-test self-expression techniques such as interviews, questionnaires, information collecting slips, marking lists, time table, autobiography, observation, grading scale, sociometry, who are observational techniques such as case study, case recording, development of situational tests such as case registration, validity and reliability related studies.

ELECTIVE COURSES**PCG 250****(2+0+0) 2 Credits / 4 ECTS****Sexual Health Education
(Cinsel Sağlık Eğitimi)**

Sexual information which is necessary for protecting and improving physical, emotional and social health; precautions, different sexual behaviors; cultivating attitudes and values, decision-making, being able to define safe sexual behaviors.

PCG 251**(2+0+0) 2 Credits / 4 ECTS****Child Abuse and Neglect
(Çocuk İstismarı ve İhmali)**

Basic concepts of child abuse and neglect; children rights, theories and models, the impact of child abuse and neglect on children, therapeutic process, psycho-educational programs on child abuse and neglect, code of laws regarding child abuse and neglect, research on child abuse and neglect.

PCG 252**(2+0+0) 2 Credits / 4 ECTS****Psychological Counseling with Children and Adolescence
(Çocuk ve Ergenlerle Psikolojik Danışma)**

Developmental features of child and adolescents and their reflections on psychological counseling process; principles and techniques of counseling process with child and adolescents; planning the psychological counseling process, structuring and leading the counseling session; effective counseling theories for child and adolescents, individual and group counseling with child and adolescents, counseling with child and adolescents with special needs, counseling during and after divorce, ethical and legal issues.

PCG 253**(2+0+0) 2 Credits / 4 ECTS****Affective Education
(Duyuşsal Eğitim)**

Definition of affect, categorization of affective domain, stages of affective domain: receiving, responding, evaluation, organization, attitude and behavior change; perspectives of affective education, practicing affective education, importance of affective dimension of education in psychological counseling and guidance.

PCG 254**(2+0+0) 2 Credits / 4 ECTS****Short-Term Psychological Counseling
(Kısa Süreli Psikolojik Danışma)**

Cognitive, affective and behavioral therapy models and short-term therapy history; principles and techniques of solution oriented counseling, structuring solution oriented counseling sessions, techniques used, solution oriented counseling with children and adolescents.

- PCG 255** (2+0+0) 2 Credits / 4 ECTS
Crisis Intervention
(Krizle Müdahale)
 Crisis intervention and the definition of crisis, causal factors of crisis, models and techniques of crisis intervention, reactions of crisis victims, crisis in childhood and adolescence, crisis prevention, assessment of suicide, intervention strategies on individual and group base with the consideration of the developmental stage.
- PCG 256** (2+0+0) 2 Credits / 4 ECTS
Culturally Sensitive Counseling
(Kültüre Duyarlı Psikolojik Danışma)
 Culture, the history of culturally sensitive counseling practices; the reasons behind the development of culturally sensitive counseling practices; culturally sensitive counseling competencies; practices of culturally sensitive counseling.
- PCG 257** (2+0+0) 2 Credits / 4 ECTS
Mental Health at Schools
(Okulda Ruh Sağlığı)
 The definition of mental health and related concepts; mental health in theories of psychology, factors effecting mental health at schools, mental health at schools and humanistic perspective of education, mental health at schools according to developmental stages; cognitive and affective learning and their relation with mental health.
- PCG 258** (2+0+0) 2 Credits / 4 ECTS
Preventive Guidance and Counseling
(Önleyici Rehberlik ve Psikolojik Danışma)
 The prevention mission of guidance and psychological counseling; prevention levels, theories of prevention, essential life skills and positive youth development programs; cyberbullying, sexual abuse, technology and drug abuse, suicide, school dropout, counseling and reporting for children under probation.
- PCG 259** (2+0+0) 2 Credits / 4 ECTS
Gifted Children and Their Education
(Özel Yetenekli Çocuklar ve Eğitimi)
 Introduction to identification techniques of the intellectual and developmental characteristics of the gifted and talented , appropriate prevention psychological counselling and guidance services for gifted and talented students, points to consider in preparation of individual education and counselling program and introduction to application examples.
- PCG 260** (2+0+0) 2 Credits / 4 ECTS
Consultation in Psychological Counseling and Guidance
(Psikolojik Danışma ve Rehberlikte Konsültasyon)
 School counseling and consultation services, consultation principles and techniques; implementation of consultation services for families and teachers, analyzing efficacy research related to consultation services, cooperation with administration.

- PCG 261** (2+0+0) 2 Credits / 4 ECTS
Social Skills Training
(Sosyal Beceri Eğitimi)
 Concepts related to social skills, components of social skills, social skill acquisition, models and measurement of social skills, social skills for dealing with difficult people; emotional expressivity, emotional awareness, emotion regulation; social expressivity, social awareness and social control.
- PCG 262** (2+0+0) 2 Credits / 4 ECTS
Applied Behavior Analysis
(Uygulamalı Davranış Analizi)
 Learning theories, basic principles of applied behavior analysis, determination of target behaviors, data recording techniques, drawing and interpreting graphics, reinforcement, hint and its types, shaping, symbol reinforcement, evaluation of problem behaviors and reduction of inappropriate behaviors.
- PCG 263** (2+0+0) 2 Credits / 4 ECTS
Creative Drama
(Yaratıcı Drama)
 Basic concepts of creative drama, historical development of creative drama; planning, implementing, and evaluating creative drama process according to developmental periods and individual differences of individuals; developing positive attitude toward creative drama.
- PCG 264** (2+0+0) 2 Credits / 4 ECTS
Contemporary Approaches and Models in Counseling
(Yeni Psikolojik Danışma Yaklaşım ve Modelleri)
 New and different counseling approaches and models, concepts, principles and techniques that form the basis of these approaches and models; to have knowledge about conceptualizing and evaluating the problems of the client in the context of the subject approach and model, and sample applications.
- PCG 265** (2+0+0) 2 Credits / 4 ECTS
Adult Education and Lifelong Learning
(Yetişkin Eğitimi ve Hayat Boyu Öğrenme)
 Definition of adulthood, characteristics of adulthood period, school counseling services and adults, adult learning styles, problems during adulthood, characteristics of adult educators, educational principles, instructional methods and techniques, types of curriculum, and learning environments for adults.
- PCG 270** (2+0+0) 2 Credits / 4 ECTS
Family Counseling and Ethics
(Aile Danışmanlığı ve Etik)
 Ethical principles and standards of general professional practice, ethical issues in specialty areas, ethical and professional decision making, client rights, responsibilities of family counselor, legal issues.

- PCG 271** (2+0+0) 2 Credits / 4 ECTS
Family Relations and Communication
(Aile İçi İlişkiler ve İletişim)
 Structure of family and communication patterns, effective communication skills in family, basic communication skills, I-you language, dysfunctional communication patterns, communication between couples, parent-child communication education and family communication.
- PCG 272** (2+0+0) 2 Credits / 4 ECTS
Family Violence
(Aile İçi Şiddet)
 Family structure and dysfunctional family patterns; types of violence and its indicators, incest, support to family member who is victim of violence; mandated counselling for bully family member; types of domestic violence, causes and consequences of domestic violence, prevalence of domestic violence; primary, secondary and tertiary prevention topics .
- PCG 273** (2+0+0) 2 Credits / 4 ECTS
Addiction Education for Families
(Ailede Bağımlılık Eğitimi)
 Causes, types and stages of addiction; treatment process in addiction; medical support to addicted family member, legal process, supervised liberation process, mandatory counseling for addicted family member, family support process with systemic model, coordination of narcologist, psychiatrist and family counselor.
- PCG 274** (2+0+0) 2 Credits / 4 ECTS
Parental Education
(Ana-Baba Eğitimi)
 Differences between pedagogy and andragogy, basic features of adult students; types of parental education, history of parental education, Parent's effectiveness training, principles of parental education formation, parental attitudes, the methods of familial healthy communication.
- PCG 275** (2+0+0) 2 Credits / 4 ECTS
Divorce and Divorce Conciliation
(Boşanma ve Boşanma Arabuluculuğu)
 Problems during divorce process, models of divorce process, effects of divorce, possible domestic abuse during divorce, psychological support for parents and children during divorce, counseling for adjustment to divorce, coordination with mediator during divorce.
- PCG 276** (2+0+0) 2 Credits / 4 ECTS
Pre-marital Counseling
(Evlilik Öncesi Psikolojik Danışma)
 Premarital period and romantic relationships, choosing a mate and factors affecting choosing a mate; theories of mate selection; premarital individual counseling, premarital couples counseling, examples of premarital psychoeducational programs.

- PCG 277** (2+0+0) 2 Credits / 4 ECTS
Culturally Sensitive Family Counseling
(Kültüre Duyarlı Aile Danışmanlığı Kültüre Duyarlı Aile Danışmanlığı)
 Revisiting theories of family counseling in terms of culturally sensitive way; comparing and contrasting the culture of the theories in which were developed and the native cultural characteristics of in which will be applied; recognition of cultural backgrounds of the family; reflecting the counselor competencies in practices.
- PCG 278** (2+0+0) 2 Credits / 4 ECTS
Gender Equality
(Toplumsal Cinsiyet Eşitliği)
 Psychosocial development, gender and related concepts, models and theories; gender roles, stereotypes, scales and related studies; gender and education, development within the gender equality, gender and process of psychological counselling.
- PCG 279** (2+0+0) 2 Credits / 4 ECTS
Child and Family in Turkish Culture
(Türk Kültüründe Aile ve Çocuk)
 Structure of Turkish Family; child rearing practices and the value of child in different Turkish states; culture of, traditions and customs in families in Anatolia; the interactions between extended and nuclear family; marriage rituals, funeral ceremonies, roles and responsibilities of culturally sensitive family counselor.
- PCG 280** (2+0+0) 2 Credits / 4 ECTS
Psychology of Close Relationships
(Yakın İlişkiler Psikolojisi)
 Definition of close relationship, theories, processes and important dynamics in close relationships, developing a wider and cultural perspective in close relationships, starting, maintaining, and ending close relationships, conceptualization of problems of the clients in close relationships.
- PCG 301** (2+0+0) 2 Credits / 3 ECTS
Behavioral Disorders I
(Davranış Bozuklukları I)
 Causes and classification of behavior disorders in childhood and adolescence; behavioral disorders in children and adolescents according to diagnostic criteria and DSM V diagnostic criteria; intervention methods and clinical observation.
- PCG 302** (2+0+0) 2 Credits / 2 ECTS
Behavioral Disorders II
(Davranış Bozuklukları II)
 Definition and causes of behavior disorders according to different theories; Classic classification and DSM V diagnostic criteria, behavioral disorders in adults according to DSM V diagnostic criteria, intervention behavioral disorders in children and adolescents according to diagnostic methods and clinical observation criteria and DSM V diagnostic criteria, intervention methods and clinical observation.

PCG 303	(1+2+0) 2 Credits / 3 ECTS
Psychological Tests (Psikolojik Testler)	
Basic concepts and principles of psychological tests, individual and group intelligence tests, achievement, ability and personality tests, interest inventories, application and evaluation of some tests and inventories.	
PCG 304	(1+2+0) 2 Credits / 4 ECTS
Counseling Skills (Psikolojik Danışma Becerileri)	
Applying the concepts of learning therapeutic skills and conditions, defining the behavioral goals, using the advanced counseling skills, terminating and following up.	
PCG 305	(2+0+0) 2 Credits / 3 ECTS
Principles and Techniques of Counseling (Psikolojik Danışma İlke ve Teknikleri)	
Psychological counseling process and its stages, therapeutic conditions and to understand the importance and function of basic and advanced counseling skills, to create therapeutic conditions and to establish a relationship between counselor and client; to be able to use basic counseling skills, sample practice related to topics.	
PCG 306	(2+0+0) 2 Credits / 3 ECTS
Group Counseling (Grupla Psikolojik Danışma)	
Concepts and principles of group counseling, group process, skills and techniques in group counseling, phases of group, group dynamics, groups about different problems and about different lifespan.	
PCG 307	(2+0+0) 2 Credits / 2 ECTS
Theories of Counseling (Psikolojik Danışma Kuramları)	
Mainstream counseling theories and approaches. Basic concepts, principles, and strategies regarding these counseling theories and approaches. Having knowledge about conceptualizing and evaluating the problems of the counselee within the framework of mainstream counseling theories and practices.	
PCG 308	(1+2+0) 2 Credits / 2 ECTS
Field Practice in Career Guidance and Counseling (Mesleki Rehberlik Uygulamaları)	
Applying and evaluating the measurement tools used in career guidance and career counseling; preparing and implementing career development programs; individual and group career counseling.	
PCG 309	(2+0+0) 2 Credits / 2 ECTS
Career Guidance and Counseling (Mesleki Rehberlik)	
Basic concepts and principles regarding career guidance and counseling. Theories of career development. Measurement in career guidance and counseling. Computer based career guidance and counseling. Career guidance and counseling programs.	

PCG 310**(2+0+0) 2 Credits / 2 ECTS****Spiritual Counseling
(Manevi Danışmanlık)**

Basic concepts of and history of spiritual counseling; theories of psychological counseling and spirituality; cultural foundations of spiritual counseling; religious traditions, beliefs and spiritual counseling; competencies of spiritual counselling; measurement in spiritual counselling; techniques of spiritual counseling; institutional spiritual counselling; fields of application of spiritual counselling; ethics in spiritual counselling.

PCG 350**(2+0+0) 2 Credits / 4 ECTS****Computer-Assisted Career Guidance System
(Bilgisayar Destekli Kariyer Danışmanlığı)**

Domestic and foreign information systems and computer-based career counseling programs offering services over the internet; to develop knowledge and skills about the evaluation of these systems, the standards that the systems should have, and the use of the systems within the framework of ethical standards.

PCG 351**(2+0+0) 2 Credits / 4 ECTS****Sociology of Work
(Çalışma Sosyolojisi)**

The concepts of work and work sociology, history of work relations, industrial work and organizations, division of labor and its theories, workgroups and the social structure of work, work relationships in industrial work settings, knowledge society and its basic characteristics, contemporary problems of work life, new work formats.

PCG 352**(2+0+0) 2 Credits / 4 ECTS****Career Guidance with the Disadvantaged
(Dezavantajlı Gruplarla Kariyer Danışmanlığı)**

To gain knowledge, skills and attitudes in preparing and implementing individual and group career intervention programs for disadvantaged, minority and different groups (eg immigrants, disabled, convicts, retirees, etc.).

PCG 353**(2+0+0) 2 Credits / 4 ECTS****Industrial and Organizational Psychology
(Endüstri ve Örgüt Psikolojisi)**

Investigation of individual behavior in work settings in order to develop scientifically-based solutions to the problems in work and industry; social and psychological processes necessary to develop and improve the workplace; investigation and assessment of employee behavior using quantitative methods.

PCG 354**(2+0+0) 2 Credits / 4 ECTS****Guidance and Counseling in Industry
(Endüstride Rehberlik ve Psikolojik Danışma)**

Relationship between working life and socio-economic and political systems; industrial psychology and field of study; communication patterns, motivation between group and group behaviors, problems of productivity, industrial democracy and participation in governance and their scientific methods.

PCG 355**(2+0+0) 2 Credits / 4 ECTS****Human Resources Management
(İnsan Kaynakları Yönetimi)**

The evolution of the concept of human resources, the three main sources and relationships of organizations; personnel selection, leadership, team building and management, innovation management, human resource management, management economics, communication techniques and development, crisis management, budgeting and money management, digital marketing and social media management.

PCG 356**(2+0+0) 2 Credits / 4 ECTS****Job Analysis and Performance Appraisal
(İş Analizi ve Performans Değerlendirmesi)**

Definitions of job, occupation, and carrier, job analysis techniques, performance appraisal, organizational management and the importance of job analysis, analysis of job characteristics, job analysis for different positions, criterions, effectiveness evaluation, productivity measurement, organizational carrier planning and analysis of the employees.

PCG 357**(2+0+0) 2 Credits / 4 ECTS****Occupational and Vocational Counseling
(İş ve Meslek Danışmanlığı)**

Business management, techniques used in personnel selection; the organization's career planning, career development, performance evaluation and management; trainings that support the personal development of employees and managers (time management, effective communication, conflict resolution, sensitivity training, leadership training, etc.).

PCG 358**(2+0+0) 2 Credits / 4 ECTS****Career Information Resources
(Kariyer Bilgi Kaynakları)**

The career planning process, the responsibilities of career counselors in the process, the methods of using information of the decision makers and the criteria that can be used to evaluate the quality of information, labor market, basic information sources of public and private sector and major occupational classification systems.

PCG 359**(2+0+0) 2 Credits / 4 ECTS****Career Guidance Interview Skills****(Kariyer Danışmanlığında Görüşme Becerileri)**

Interview techniques, rules to be followed in selecting personnel; organizational career planning; job descriptions, interview techniques and rules to be followed in the interview.

PCG 360**(2+0+0) 2 Credits / 4 ECTS****Life Career Development in Schools****(Okullarda Yaşam Kariyeri Gelişimi)**

Planning and implementation of GPC intervention programs to support the preparation of students for life events, life spaces and roles that they may encounter in accordance with their developmental characteristics and tasks; career interview planning and implementation, preparing group programs.

PCG 361**(2+0+0) 2 Credits / 4 ECTS****Life-Span Career Development****(Yaşam Boyu Kariyer Gelişimi)**

Considering career development as a dynamic process based on the continuous and unpredictable change of the individual and work life; approach and assistance services for lifelong career development; strategies that can be applied in educational and industrial institutions.

DEPARTMENT OF ELEMENTARY EDUCATION

Chair

Assoc. Prof. Sühendan Er

Academic Staff

Assoc. Prof. Sühendan Er, Prof. Sibel Balcı, Assoc. Prof. Adile Gülşah Saranlı, Assoc. Prof. Tülin Haşlaman, Asst. Prof. Berrin Genç Ersoy, Asst. Prof. Çağla Öneren Şendil, Asst. Prof. Seçil Yücelyigit, Asst. Prof. Sibel Akın, Tuba Özgül*, Sinem Sözen Özdoğan*, Yavuz Kamacı*.

* Research Assistant

Undergraduate Program in Early Childhood Education

The Early Childhood Education undergraduate program within the Department of Elementary Education at TED University serves the community with faculty members and research assistants. The program is located at the Kolej Campus of TED University.

Early Childhood Education is usually defined as the care and education of young children (from birth to age eight). The program is based on the premise that children best learn in a material-rich learning environment where children spend most of their time playing. Thus, the goal of the early childhood undergraduate program at TED University is to train high quality early childhood teachers, capable of supporting the development and learning of young children. This is done in a rich learning environment and can contribute to early childhood education at the national and international level.

Program Outcomes

Graduates of the Early Childhood Education program will demonstrate the following learning outcomes:

1. Integrate knowledge of child development and learning, subject-matter/disciplinary content, interdisciplinary themes, research and inquiry methods to early childhood pedagogy.
2. Create developmentally and culturally appropriate early childhood learning environments that encourage individual and collaborative learning.
3. Cooperate and collaborate with colleagues, families, community, other individuals and agencies in ways that contribute to development and learning of young children.
4. Use multiple tools and methods of early childhood assessments to continuously monitor and document children's progress and to guide instruction.
5. Utilize appropriate pedagogical and professional knowledge and skills in planning, implementation, and evaluation of early childhood curriculum and services.
6. Demonstrate commitment to early childhood profession, professionalism, lifelong learning, ethics, personal and professional growth.
7. Value diverse opinions, belief systems, cultures and contribution of others.
8. Demonstrate critical thinking skills, inquiry, creativity, initiative and innovation to solve a range of problems in everyday situations.
9. Access and analyze information from a variety of sources, including information and communication technology, to attain personal and professional goals.
10. Demonstrate skills in self-discipline, time and information management, individual and team work in interdisciplinary projects.

11. Demonstrate competence in effective communication in written, spoken, nonverbal and electronic forms.
12. Use English at B2 level to support personal and professional activities.

Undergraduate Curriculum (2017-2018 and Before)

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
MATH 103	Mathematics for Education Majors	3	0	0	3	5
BIO 101	Life Sciences	3	0	0	3	5
TUR 101	Turkish I	2	0	0	2	2
HIST 101	History of Turkish Republic I	2	0	0	2	2
ENG 101	English for Academic Purposes	2	2	0	3	5
CMPE 101	Introduction to IT	2	0	2	3	5
EDU 101	Introduction to Education	2	2	0	3	6
TOTAL		16	4	2	19	30

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
PHYS 104	Introduction to Natural Sciences	2	2	0	3	5
PSY 104	Psychology	3	0	0	3	5
TUR 102	Turkish II	2	0	0	2	2
HIST 102	History of Turkish Republic II	2	0	0	2	2
ENG 102	Expository Writing	2	2	0	3	5
PHIL 104	Philosophy and Ethics	3	0	0	3	5
EDU 102	Instructional Principles and Methods	2	2	0	3	6
TOTAL		16	6	0	19	30

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
ART 100	Visual Arts and Aesthetics	2	2	0	3	5
LIT 201	Children's Literature	3	0	0	3	5
EDU 201	School, Families and Society	1	2	0	2	4
ECE 201	Introduction to Early Childhood Education	2	2	0	3	5
ECE 203	Child Development and Learning	2	2	0	3	5
ECE 205/ ECE 207	Dev. and Ed. of the Gifted/Drama in Education	3	0	0	3	6
TOTAL		13	8	0	17	30

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
EDU 202	Research Methods	2	0	0	2	3
EDU 200	Observation in Schools	1	4	0	3	6
ECE 202	Curriculum in ECE	2	2	0	3	6
ECE 204	Child Health Safety and Nutrition	2	2	0	3	5
ECE 206	Children Play and Learning	2	2	0	3	5
ECE 242	Language Development and Literacy Education	2	2	0	3	5
TOTAL		11	12	0	17	30

Semester 5

Code	Course Title	C	P	L	Cr	ECTS
ECE 311	Early Childhood Math Science and Technology Education	3	2	0	4	7
EGE 321	Art Education	2	2	0	3	4
EGE 341	Music Education	1	2	0	2	3
ECE 381	ECE Practicum I	1	4	0	3	6
SF	Secondary Field	3	0	0	3	5
ELE 307	Teaching English to Young Learners	2	2	0	3	5
TOTAL		12	12	0	18	30

Semester 6

Code	Course Title	C	P	L	Cr	ECTS
EDU 302	Special Education and Inclusion	2	0	0	2	3
ECE 302	Learning Environments	2	2	0	3	5
EGE 304	Assessment of Learning	2	2	0	3	5
ECE 342	School Readiness and Transition	2	2	0	3	6
ECE 382	ECE Practicum II	1	4	0	3	6
SF	Secondary Field	3	0	0	3	5
TOTAL		12	10	0	17	30

Semester 7

Code	Course Title	C	P	L	Cr	ECTS
TEDU 400	Student Development Seminar	0	0	0	0	1
EDU 401	Community Service	1	2	0	2	3
EGE 441	Motor Development and Physical Education	1	2	0	2	4
ECE 471	Research Project in Early Childhood Education	1	4	0	3	7
ECE 481	Student Teaching in ECE I	1	8	0	5	10
SF	Secondary Field	3	0	0	3	5
TOTAL		7	16	0	15	30

Semester 8

Code	Course Title	C	P	L	Cr	ECTS
GPC 212	Guidance and Psychological Counseling	2	2	0	3	6
EDU 404	Turkish Education System and School Management	2	0	0	2	3
ECE 472	Capstone Experience in ECE	1	4	0	3	7
ECE 482	Student Teaching in ECE II	1	8	0	5	9
SF	Secondary Field	3	0	0	3	5
TOTAL		9	14	0	16	30

Totals expected for graduation		96	82	2	138	240
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Undergraduate Course Descriptions (2017-2018 and Before)

- ECE 201** **(2+2+0) 3 Credits / 5 ECTS**
Introduction to Early Childhood Education
(Okul Öncesi Eğitime Giriş)
 Goals, principles, and importance of early childhood education. Child development and learning during early childhood. Early childhood teacher characteristics and competencies. Early childhood program models and approaches. Quality in early childhood programs. Role of families and community during early childhood. Assessment in early childhood education. Information and communication technology in early childhood education. Early childhood education in Turkey.
- ECE 202** **(2+2+0) 3 Credits / 6 ECTS**
Curriculum in Early Childhood Education
(Okul Öncesi Eğitimi Eğitim Programı)
 Early childhood development and learning theories. Scholars of early childhood education. Curriculum models and approaches in early childhood education. Design, development, and assessment of early childhood curriculum.
- ECE 203** **(2+2+0) 3 Credits / 5 ECTS**
Child Development and Learning
(Çocuk Gelişimi ve Öğrenme)
 Physical, cognitive, social, emotional, and language characteristics of children ages between birth to eight. Contextual factors that affect young children's development and learning. Theories of child development and learning. Application of child development and learning theories to early childhood learning teaching.
- ECE 204** **(2+2+0) 3 Credits / 5 ECTS**
Child Health, Safety and Nutrition
(Çocuk Sağlığı, Güvenliği ve Beslenmesi)
 Human body and growth. Child diseases and protection methods. Child safety. First aid. Child nutrition. Health and hygiene rules for food preparation. Teaching health, safety and nutrition to young children. Provision of safe, nutritious, and healthy environments for young children.
- ECE 205** **(2+2+0) 3 Credits/ 6 ECTS**
Development and Education of the Gifted
(Üstün Yeteneklilerin Gelişimi ve Eğitimi)
 Concept of giftedness. Cognitive, language, social-emotional and motor development of gifted children. Asynchronous development of gifted children. Over excitabilities. Gifted children and early intervention. Identification and education of gifted children. Parent education of gifted children.

- ECE 206** (2+2+0) 3 Credits / 5 ECTS
Children, Play and Learning
(Çocuk, Oyun ve Öğrenme)
 Play concepts. Theories of play. Play development. Types of play. Toys and play tools. Contribution of play to children's development. Play and toys in Turkish culture. Play environments and contexts. Assessment of play.
- ECE 207** (2+2+0) / 3 Credits / 6 ECTS
Drama in Education
(Eğitimde Drama)
 Concept of creative drama. Different types of drama. Drama techniques. Improvisation. Role of drama in active learning, exploration and imagination. Role of drama in the development and education of children. Integration of music, movement, visual arts, and literature into drama. Integration of pedagogic drama across elementary education curriculum.
- ECE 242** (2+2+0) 3 Credits / 5 ECTS
Language Development and Literacy Education
(Dil Gelişimi ve Okuma Yazma Eğitimi)
 Expressive and receptive language skills in early years. Emergent literacy activities in preschool. Assessment of language development and learning in early and primary school years. Listening, speaking, visual reading and visual presentation. Properties of the Turkish language and its effects on literacy education. Goals and principles of literacy education. Principal characteristics of first-grade teacher and students. Emergent literacy teaching methods. Phonetic based sentence method. Teaching letters through cursive italic writing. (The language of instruction in this course is both Turkish and English)
- ECE 302** (2+2+0) 3 Credits / 5 ECTS
Learning Environments
(Öğrenme Ortamları)
 Understanding the importance of the environment. Establishing an emotionally supportive and equitable environment. Arranging an effective environment. Design considerations. Integrating technology. Special-interest centers. Creating outdoor environments. Creating spaces for families and teachers. Meeting environmental challenges.
- ECE 311** (3+2+0) 4 Credits / 7 ECTS
Early Childhood Math, Science and Technology Education
(Okul Öncesi Matematik, Fen ve Teknoloji Eğitimi)
 Development of math, science and technology concepts in young children. Development of problem solving, critical thinking, inquiry, observation skills. Teaching fundamental math, science and technology concepts to young children. Math, science and technology tools and materials for early childhood teaching. Design of early childhood math, science and technology learning environments. Assessment of math, science and technology learning.

- ECE 342** (2+2+0) 3 Credits / 6 ECTS
School Readiness and Transition
 (İlköğretime Hazırlık)
 School readiness, its importance, influential factors. Dimensions of school readiness. School readiness activities. Characteristics of elementary school. School readiness assessment.
- ECE 381** (1+4+0) 3 Credits / 6 ECTS
Early Childhood Education Practicum I
 (Okul Öncesi Eğitimi Okul Deneyimi I)
 Early childhood field experience with children ages between zero and five. Instructional planning. Design of early childhood learning environment. Working as an assistant teacher. Assessment of children's learning. Parent involvement. Early childhood professional development activities. (The language of instruction in this course is both Turkish and English.)
- ECE 382** (1+4+0) 3 Credits / 6 ECTS
Early Childhood Education Practicum II
 (Okul Öncesi Eğitimi Okul Deneyimi II)
 Early childhood field experience with children ages of five and six. Instructional planning. Design of early childhood learning environment. Working as an assistant teacher. Assessment of children's learning. Parent involvement. Early childhood professional development activities. (The language of instruction in this course is both Turkish and English.)
- ECE 471** (1+4+0) 3 Credits / 7 ECTS
Research Project in Early Childhood Education
 (Okul Öncesi Eğitimi Araştırma Projesi)
 Preparation for an early childhood research project. Implementation of the research phases. Writing research reports.
- ECE 472** (1+4+0) 3 Credits / 7 ECTS
Capstone Experience in Early Childhood Education
 (Okul Öncesi Eğitimi Bitirme Projesi)
 Development of a professional teacher portfolio. Developmentally appropriate teaching activities. Samples of instructional plans. Early childhood learning environment design. Samples of school, family and community relationships. Samples of assessment activities. Professional development activities. Presentation of this professional portfolio.
- ECE 481** (1+8+0) 5 Credits / 10 ECTS
Student Teaching in Early Childhood Education I
 (Öğretmenlik Uygulaması I)
 Independent student teaching experience with children ages between zero and five in different early childhood education programs. Instructional planning. Design of learning environments. Assessment of learning. Provision of parent involvement. Participation in professional development activities. (The language of instruction in this course is both Turkish and English.)

ECE 482

(1+8+0) 5 Credits / 9 ECTS

Student Teaching in Early Childhood Education II
(Öğretmenlik Uygulaması II)

Independent student teaching experience with children ages of five and six in different early childhood education programs. Instructional planning. Design of learning environments. Assessment of learning. Provision of parent involvement. Participation in professional development activities. (The language of instruction in this course is both Turkish and English.)

Undergraduate Curriculum
(2018-2019 and After)

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
EDUC 101	Introduction to Education	2	0	0	2	3
EDUC 104	Educational Philosophy	2	0	0	2	3
HIST 103	History of Turkish Republic I	2	0	0	2	3
GENC 101	Foreign Language I	2	0	0	2	3
TUR 103	Turkish I	3	0	0	3	5
CMPE 103	Information Technologies	3	0	0	3	5
ECEP 101	Introduction to Early Childhood Education	3	0	0	3	5
ECEP 103	Child Health and First Aid	2	0	0	2	3
TOTAL		19	0	0	19	30

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
EDUC 103	Educational Sociology	2	0	0	2	3
EDUC 102	Educational Psychology	2	0	0	2	3
HIST 104	History of Turkish Republic II	2	0	0	2	3
GENC 102	Foreign Language II (English)	2	0	0	2	3
TUR 104	Turkish II	3	0	0	3	5
GENC ELECT.	Elective I	2	0	0	2	3
ECEP 102	Development in Early Childhood	3	0	0	3	5
ECEP 104	Development and Education in Infancy	2	0	0	2	5
TOTAL		18	0	0	18	30

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
EDUC 202	Turkish Education History	2	0	0	2	3
EDUC 204	Research Methods in Education	2	0	0	2	3
EDUC ELECT.	Elective I	2	0	0	2	4
ECEP ELECT.	Elective I	2	0	0	2	4
ECEP 201	Science Education in Early Childhood	3	0	0	3	6
ECEP 203	Mathematics Education in Early Childhood	3	0	0	3	5
ECEP 205	Curriculum in Early Childhood	3	0	0	3	5
TOTAL		17	0	0	17	30

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
EDUC 203	Instructional Technologies	2	0	0	2	3
EDUC 201	Instructional Principles and Methods	2	0	0	2	3
EDUC ELECT.	Elective II	2	0	0	2	4
GENC ELECT.	Elective II	2	0	0	2	3
GENC 202	Community Services	1	2	0	2	3
ECEP ELECT.	Elective II	2	0	0	2	4
ECEP 202	Music Education in Early Childhood	3	0	0	3	4
ECEP 204	Development and Education of Play in Early Childhood	3	0	0	3	3
ECEP 206	Drama in Early Childhood Education	2	0	0	2	3
TOTAL		19	2	0	20	30

Semester 5

Code	Course Title	C	P	L	Cr	ECTS
EDUC 304	Turkish Education System and School Management	2	0	0	2	3
EDUC 302	Assessment and Evaluation in Education	2	0	0	2	3
EDUC ELECT.	Elective III	2	0	0	2	4
GENC ELECT.	Elective III	2	0	0	2	3
ECEP ELECT.	Elective III	2	0	0	2	4
ECEP 301	Art Education in Early Childhood	3	0	0	3	4
ECEP 303	Child Monitoring and Evaluation	3	0	0	3	4
ECEP 305	Learning Approaches in Early Childhood	3	0	0	3	5
TOTAL		19	0	0	19	30

Semester 6

Code	Course Title	C	P	L	Cr	ECTS
EDUC 303	Morals and Ethics in Education	2	0	0	2	3
EDUC 301	Classroom Management	2	0	0	2	3
EDUC ELECT.	Elective IV	2	0	0	2	4
GENC ELECT.	Elective IV	2	0	0	2	3
ECEP ELECT.	Elective IV	2	0	0	2	4
ECEP 302	Environmental Education in Early Childhood	3	0	0	3	5
ECEP 304	Child Mental Health	3	0	0	3	5
ECEP 306	Early Childhood Literature	2	0	0	2	3
TOTAL		18	0	0	18	30

Semester 7

Code	Course Title	C	P	L	Cr	ECTS
EDUC 405	Teaching Practice I	2	6	0	5	12
EDUC 410	Counseling in Schools	2	0	0	2	3
EDUC ELECT.	Elective V	2	0	0	2	4
ECEP ELECT.	Elective V	2	0	0	2	4
ECEP 401	Character and Values Education	2	0	0	2	3
ECEP 403	Transition to School and Early Literacy	3	0	0	3	4
TOTAL		13	6	0	16	30

Semester 8

Code	Course Title	C	P	L	Cr	ECTS
EDUC 406	Teaching Practice II	2	6	0	5	15
EDUC 409	Special Education and Inclusion	2	0	0	2	3
EDUC ELECT.	Elective VI	2	0	0	2	4
ECEP ELECT.	Elective VI	2	0	0	2	4
ECEP 402	Policies in Early Childhood Education	3	0	0	3	4
TOTAL		11	6	0	14	30

Category	C	P	L	Cr	ECTS	Class Hour	Percentage
EDUC	44	12	0	50	93	56	35
GENC	26	2	0	27	42	28	19
ECEP	64	0	0	64	105	64	46
TOTAL	134	14	0	141	240	148	100

Undergraduate Course Descriptions (2018-2019 and After, 1st and 2nd Year Courses)

COMPULSORY COURSES

ECEP 101 **(3+0+0) 3 Credits / 5 ECTS**

**Introduction to Early Childhood Education
(Erken Çocukluk Eğitime Giriş)**

Principles and definition of early childhood, foundations and historical development of early childhood education. Early childhood education across nations and in Turkey. Needs and developmental characteristics of children. Early childhood teacher characteristics. Types of early childhood institutions (kindergarten, preschool, etc.). Physical, social and educational environment characteristics. The role and the importance of families in early childhood.

ECEP 102 **(3+0+0) 3 Credits / 5 ECTS**

**Development in Early Childhood Education
(Erken Çocukluk Döneminde Gelişim)**

Basic concepts about physical, motor, cognitive, language, social-emotional, personality development, moral development and sexual development of children aged 36-72 months, developmental theories; factors affecting developmental areas; developmental characteristics; relation of development areas.

ECEP 103 **(2+0+0) 2 Credits / 3 ECTS**

**Child Health and First Aid
(Çocuk Sağlığı ve İlk Yardım)**

Definition of child health; the conditions of child health in Turkey and in the world; child development in pregnancy; the effects of pregnancy diseases and accidents on child development; physical development of 0-8 years (tooth, height, weight), diseases of 0-8 years children (diarrhea, bronchitis, immunizations, exanthema diseases, parasites, infections etc.) vaccination; health problems of women in various life stages; family planning; teachers' first aid in case of fractures, dislocations, scalds, insect stings, intoxication, swallows.

ECEP 104**(2+0+0) 2 Credits / 5 ECTS****Development and Education in Infancy
(Bebeklik Döneminde Gelişim ve Eğitim)**

Basic concepts and principles of development, specifications of prenatal and postnatal development, infant (health, care and nutrition), importance of health, care and nutrition in infant development, developmental areas of 0-36 month-old children (motor, cognitive, literacy, social-emotional) and self-care skills, fundamentals, principles and indicators of preschool program for 0-36 month-old children, environmental specifications and activities, implementation and evaluation of educational plans (monthly, daily and activity plans).

ECEP 201**(3+0+0) 3 Credits / 6 ECTS****Science Education in Early Childhood
(Erken Çocuklukta Fen Eğitimi)**

Definition and importance of science education in early childhood; fundamentals and standards in science education; scientific process skills; nature of science; teaching techniques and methods in science concepts and scientific thinking skills; designing learning centers in science education; science programs used in early science education (Wings of Discovery, Tool Kit for early science education; Hands on Dough); acquisition of basic science concepts; planning and implementing science activities.

ECEP 202**(3+0+0) 3 Credits / 4 ECTS****Music Education in Early Childhood
(Erken Çocuklukta Müzik Eğitimi)**

Importance of music education in early childhood education, the relationship between music and education; musical development of 0-8 years old children and their musical skills; use of music in reaching the goals of early childhood education program and designing an appropriate repertoire; introducing and analyzing children songs, criteria in choosing child songs; creating a musical environment with equipment for early childhood educational institutions; spiral educational model integrated with music activities.

ECEP 203**(3+0+0) 3 Credits / 5 ECTS****Mathematics Education in Early Childhood
(Erken Çocuklukta Matematik Eğitimi)**

Definition and importance of mathematics education in early childhood; fundamentals and standards in early mathematics education; teaching techniques and methods in mathematics concepts and scientific thinking skills; mathematics education and play; mathematics programs (Building Blocks, STEM, GEMS (Great Explanation in Math and Science, Big Maths for Little Kids); designing learning centers in science education; science programs used in early science education (Wings of Discovery, Tool Kit for early science education; Hands on Dough); acquisition of basic science concepts; planning and implementing science activities.

- ECEP 204** (3+0+0) 3 Credits / 3 ECTS
Development and Education of Play in Early Childhood
(Erken Çocuklukta Oyun Gelişimi ve Eğitim)
 Educational and developmental value of play in early childhood; using play as a tool for development assessment of children; definition of play, its importance, its improvement; theories of play; factors affecting play; planning and applying play activities.
- ECEP 205** (3+0+0) 3 Credits / 5 ECTS
Curriculum in Early Childhood
(Okul Öncesi Eğitim Programları)
 The importance, principles and components of educational program; historical process of early childhood education programs applied in Turkey; main components, principles, objectives, indicators, settings, activities, forms, plans (monthly education plan, daily schedule and activity plan), implementations and assessment of early childhood program applied for 3-6 ages; applied practices of in-class activities related with early childhood education program. Curriculum models and approaches in early childhood education, design, development, and assessment of early childhood curriculum.
- ECEP 206** (2+0+0) 2 Credits / 3 ECTS
Drama in Early Childhood Education
(Erken Çocukluk Eğitiminde Drama)
 Definition and extended meaning of drama; psychodrama, creative drama, sociodrama, concepts; relationship between children's play and drama; history of drama in education; structure of drama in education and implementation stages; drama atmosphere and qualifications of teacher; evaluation of drama; developing, leading and evaluating drama appropriate for the objectives of the course.
- ECEP 301** (3+0+0) 3 Credits / 4 ECTS
Art Education in Early Childhood
(Erken Çocuklukta Sanat Eğitimi)
 Definition and importance of art education in early childhood; art education history; role of contemporary art; recognizing and evaluating artwork; definition and importance of early childhood art education and creativity; developmental stages of children's drawings; preschool art education teaching techniques, methods and materials; art in museum; theories and implementations of early childhood creativity and art education; designing and implementing art programs that support children's creativity and aesthetics awareness.
- ECEP 302** (3+0+0) 3 Credits / 5 ECTS
Environmental Education in Early Childhood
(Erken Çocukluk Dönemi Çevre Eğitimi)
 Basic principles of environmental education, the importance of environmental education. Environmental education in early childhood period. Planning environmental education activities for children in early childhood and the practices of environmental education (living creatures in the nature, plants, air, soil, water, recycling, energy saving, environmental pollution, natural disasters, etc.).

ECEP 303**(3+0+0) 3 Credits / 4 ECTS****Child Monitoring and Evaluation
(Çocuğu Tanıma ve Deęerlendirme)**

Importance and aim of child monitoring and evaluations, child monitoring from various perspectives, principles of child monitoring, techniques and characteristics of child monitoring (observation, event sampling, individual interview, home visiting). Tests used in early childhood (developmental tests, projective tests, intelligence tests); identification of children via play and art; portfolio (development file) and documentation.

ECEP 304**(3+0+0) 3 Credits / 5 ECTS****Child Mental Health
(Çocuk Ruh Saęlığı)**

Definition and importance of mental health, historical development of mental health, theories on mental health, characteristics of individuals with and without mental health, diagnosis and treatment of behavior and adaptation problems in children (stuttering, mutism, enuresis, encopresis, finger sucking, nail eating, aggression, jealousy, tics, stubbornness, sleep disorders, eating habit disorders, fears, attention deficit and hyperactivity disorder, school fear, theft, lying), the effects of special situations in the family (divorce, step-parent, parent's death, etc.) on the mental health of the child.

ECEP 305**(3+0+0) 3 Credits / 5 ECTS****Learning Approaches in Early Childhood
(Erken Çocuklukta Öğrenme Yaklaşımları)**

Core principles and concepts related with learning, factors affecting learning in early childhood period (response, motivation, reinforces); theories and approaches to learning (behaviorist learning approaches, cognitive theories, social learning theories, intelligence based learning theories); planning and arrangement of educational activities and learning environments for effective learning.

ECEP 306**(2+0+0) 2 Credits / 3 ECTS****Early Childhood Literature
(Erken Çocukluk Dönemi Edebiyatı)**

Development of children's literature in Turkey and in the World; the importance of meeting qualified literature in early years; investigating the main characteristics of children's literature (design, content and educational) samples; demonstrating samples of under-qualified children's literature and discussing their negative effects on development; studies on the age appropriateness of the books and their impact on development ; identifying the contribution of different genres of literature (legends, stories, folk tales, poems, etc.) and language tools (riddles, etc.) on children's development.

ECEP 401**(2+0+0) 2 Credits / 3 ECTS****Character and Values Education
(Karakter ve Deęer Eđitimi)**

Conceptual framework: character, personality, value, virtue, morals, temper, etc.; character development and character education; role of family, environment, and school in character development and character education; description and classification of values; sources of values and individual, social, cultural, religious, and moral foundations of values; approaches and practices

in character and values education; intercultural differences and diversity in character and values education; character and values education in relation to educational philosophies; instructional methods/techniques in character and values education; value conflicts and values education in modern and multicultural societies; values education through humanitarian-cultural development process; examples of values education from the history of Turkish education and culture, research and practices in values education in Turkey; teacher as a role model in character and values education.

ECEP 402

(3+0+0) 3 Credits / 4 ECTS

**Policies in Early Childhood Education
(Erken Çocukluk Eğitimi Politikaları)**

Recognizing early childhood policy and review the application of these policies in Turkey and in the world; establishing professional perceptions and understandings of pre-service teachers in the context of early childhood policies; develop an understanding of issues in the context of early childhood policies; explain the scope and importance of early childhood services; making comparisons about the development, objectives and scope of different early childhood programs; examining national and international examples on topics covered by early childhood education policy.

ECEP 403

(3+0+0) 3 Credits / 4 ECTS

**Transition to School and Early Literacy
(Okula Uyum ve Erken Okuryazarlık Eğitimi)**

The definition of school readiness, factors affecting school readiness, dimensions of school readiness (physical, social, emotional, cognitive, language, self-care skills), planning activities to make children gain competences in school readiness, the importance of emergent reading- writing studies in early childhood period, core concepts, approaches to reading-writing, factors affecting reading acquisition, development of reading-writing skills, early literacy, reading skills and sub-areas, knowledge in alphabet (pre-alphabet stage, logography level, partial alphabet stage/ half phonetic level, full alphabet stage, combined alphabet stage/pronunciation), phonological process skills (phonological awareness, phonological memory, phonology usage), verbal language skills and lexicology, readiness for writing (writing awareness) , planning, implementing and assessing reading and writing readiness activities appropriate to early childhood education program.

ELECTIVE COURSES

ECEP 250

(2+0+0) 2 Credits / 4 ECTS

**Family Education and Involvement
(Aile Eğitimi ve Katılımı)**

Basic concepts related to family education; the importance of family education, objectives, principles; family education models; family theories (Family System Theories, Social Relationship Theory, Bioecological Theory, Structural Functional Theory); family education practices in Turkey and in other countries; planning, implementation and evaluation of family education activities; methods and techniques used in family education; family participation activities (family communication activities, family participation in educational activities, individual interviews, home visits); The Family Support Training Guide (EBADER) and the Preschool education program integrated with the 0-36 month Children's Education Program (OBADER).

- ECEP 251** (2+0+0) 2 Credits / 4 ECTS
Child and Media
(Çocuk ve Medya)
 Media concepts investigating the relationship between the products of digital media (cartoons, advertisements, computer games, Internet sites etc) and the child; media and violence; media and bullying; media and children's rights; The effects of media on child development; media and child obesity; the role of parents and school in digital media access.
- ECEP 252** (2+0+0) 2 Credits / 4 ECTS
Behavior Management in Child
(Çocukta Davranış Yönetimi)
 Identification and description of positive and negative behaviors in children. Learning strategies to support positive behaviors while extinguishing negative behaviors, attitudes of teacher and parents toward behavior management, arranging home and class learning environments for behavior management, developing practical strategies toward problematic behaviors observed inside the classroom and also engaging in assessment and evaluation practices.
- ECEP 253** (2+0+0) 2 Credits / 4 ECTS
Motor Development and Education in Child
(Çocukta Hareket Gelişimi ve Eğitimi)
 Motor development and its characteristics; movement skills and development of physical skills; relation of play and movement; motor development stages; planning learning environments of motor development; planning, conducting and evaluating movement activities of early childhood settings.
- ECEP 254** (2+0+0) 2 Credits / 4 ECTS
Social Skills Education in Child
(Çocukta Sosyal Beceri Eğitimi)
 The definition of behavior; positive and negative behaviors, theoretical foundations of the behavioral development; the definition of social skills, the importance of gaining social skills; the role of value education in gaining social skills; reasons of social skills deficits, the scope of social skills; definition of problematic behaviors, the relationship between social skill and problem behavior, the classification of problematic behaviors; social skills and the problem; factors effective on social skills and problematic behaviors; social skill education program in early childhood period; preparing and presenting an exemplified program for social skills support trainings and the prevention of problematic behaviors.
- ECEP 255** (2+0+0) 2 Credits / 4 ECTS
Traditional Games in Early Childhood Education
(Erken Çocukluk Eğitiminde Geleneksel Çocuk Oyunları)
 Traditional children's games and their educational, cultural value; remembering these games which do not exist or in danger of extinction in Turkish culture; definition, importance, rules of these games; games played in groups or with adults; effects of traditional games on developmental areas; Planning and application of these games.

- ECEP 256** (2+0+0) 2 Credits / 4 ECTS
Language and Concept Development in Early Childhood
(Erken Çocuklukta Dil ve Kavram Gelişimi)
 Language development and its stages; physiological foundations of language and talking; concept development in ages; concept development approaches; classification of concepts; concepts in semantics; organization of concepts; relation of concepts and language development; assessment.
- ECEP 257** (2+0+0) 2 Credits / 4 ECTS
Sensory Education in Early Childhood
(Erken Çocuklukta Duyu Eğitimi)
 Development of senses; perception development; working of sensory systems; sense awareness in early years; importance of sensory education in child development; organizing learning environments for improving sense awareness; materials in sensory development; role of the teacher in sensory development; organizing, application and assessment of activity plans for improving sensory development.
- ECEP 350** (2+0+0) 2 Credits / 4 ECTS
Rhythm, Dance and Orff Education in Early Childhood
(Erken Çocuklukta Ritim, Dans ve Orff Eğitimi)
 Development of rhythmic perception, the relation of sound, rhythm and developmental areas; organizing learning environments; rhythm, sound and dance ; dance and movement; playing, singing, listening with Orff; producing own sound and using Orff instruments; planning, implementation and evaluation of music activities in early childhood program.
- ECEP 351** (2+0+0) 2 Credits / 4 ECTS
Creativity in Early Childhood and Creative Activities for Children
(Erken Çocuklukta Yaratıcılık ve Yaratıcı Çocuk Etkinlikleri)
 Definition of creativity; theories explaining creative thinking; dimensions of creativity; development of creativity in children; the relationship between creativity and intelligence; areas of creativity and art; creative personality characteristics, factors affecting creativity, the role of education in the development of creativity; evaluation of creativity; planning, implementation and evaluation of creative activities appropriate to pre-school education program.
- ECEP 352** (2+0+0) 2 Credits / 4 ECTS
Early Childhood Education Across Nations
(Farklı Ülkelerde Erken Çocukluk Eğitimi)
 Education system in different countries, history of preschool education in different countries, prevalence, types of institutions, types of programs, educational environments, family participation, integration of children with special needs, teacher training system in pre-school education.

ECEP 353**(2+0+0) 2 Credits / 4 ECTS****Education of In-Patient Children
(Hastanede Yatan Çocukların Eğitimi)**

The development of in patient children- their needs, interests, psychology; the communication of hospital staff, child and the parents; preparation of life in hospital, diagnosis, treatment and readiness for the operation; preparing play, music, art, drama, maths activities for inpatient children; the communication of hospital schools and children with terminal diseases, their parents and the hospital staff.

ECEP 354**(2+0+0) 2 Credits / 4 ECTS****Education of Children at Risk
(Risk Altındaki Çocuklar ve Eğitimi)**

Risk factors and effects, groups of children created by risk factors, children living and working on the streets, children working in sectors, fragmented family children, children in need of protection, children oriented to crime, children who are neglected and abused, children at risk of developmentally, children living under unfavorable environmental conditions and their characteristics, critical elements in their education, measures to be taken, projects implemented in Turkey and other countries for the education of children at risk.

ECEP 355**(2+0+0) 2 Credits / 4 ECTS****Assessment of In Class Learning
(Sınıf İçi Öğrenmelerin Değerlendirilmesi)**

Measurement tools used in education and their properties; tools based on traditional approaches: written exams, short answer exams, true-false type tests, multiple-choice tests, paired tests, oral examinations; tools for multi-faceted recognition of students: observation, interview, performance evaluation, student product file, research papers, research projects, peer review, self-assessment, attitude scales; points to be considered in the evaluation of student success; evaluation and grading of learning outcomes.

ECEP 356**(2+0+0) 2 Credits / 4 ECTS****Family and Child in Turkish Culture
(Türk Kültüründe Aile ve Çocuk)**

Turkish family; Child bringing in different Turkish societies; Parent culture , traditions in Anatolia; interaction of extended families and elementary family marriage ceremonies; funeral ceremonies; the roles of family consultants in collectivist societies.

Undergraduate Program in Primary Education

The Primary Education Program in the Department of Elementary Education at TED University is an undergraduate program which trains elementary school teachers for elementary schools from first to fourth grade. The main goal of the program is to train highly qualified school teachers who are reflective and critical thinkers and capable of showing leadership in their field as well as contributing to the field of elementary school education at both national and international levels.

Upon successful completion of their studies, students are awarded the Bachelor's degree in Primary Education. Our students who receive an education from a first-rate faculty in state-of-the-art facilities and who take advantage of the rich learning environments provided by the university will be sought after upon graduation and will easily find employment in the school systems in Turkey and the region.

Program Outcomes

Graduates of the Primary Education program will demonstrate the following learning outcomes:

1. Apply the research-based knowledge of child development (in the 5-9 years category) to his/her teaching practice.
2. Use effectively the content area knowledge in physical and social sciences, languages, arts and sports in his/her teaching practice.
3. Justify the appropriate use of pedagogical content knowledge in implementing and evaluating developmentally and culturally appropriate and diverse learning environments that meet the child's unique learning needs.
4. Determine appropriate methods of assessment to continuously monitor children's progress and document children's development and learning.
5. Act with personal and professional integrity as part of a team, taking into account codes of ethics, professional guidelines, and relevant law and policy for elementary education.
6. Effectively use English in both oral and written communication and use information technology skills to support teaching and learning activities.
7. Actively engage in collaborative community projects that support the development of children by building and maintaining strong and constructive relationships with children, their families and other key stakeholders in society.
8. Engage in lifelong learning by following the developments in his/her profession, staying up-to-date and pursuing self-development both professionally and personally and practicing self-assessment at every opportunity.
9. Critically investigate complex problems related to education in general and elementary education in particular within an interdisciplinary framework.
10. Manage personal affairs effectively by developing self-discipline, problem-solving, and time-management skills.
11. Compare the approaches and methods of another discipline quite different from one's major.

Undergraduate Curriculum (2017-2018 and Before)

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
MATH 103	Mathematics for Education Majors	3	0	0	3	5
BIO 101	Life Sciences	3	0	0	3	5
TUR 101	Turkish I	2	0	0	2	2
HIST 101	History of Turkish Republic I	2	0	0	2	2
ENG 101	English for Academic Purposes	2	2	0	3	5
CMPE 101	Introduction to IT	2	0	2	3	5
EDU 101	Introduction to Education	2	2	0	3	6
TOTAL		15	6	2	19	30

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
PHYS 104	Introduction to Natural Sciences	2	2	0	3	5
PSY 104	Psychology	3	0	0	3	5
PHIL 104	Philosophy and Ethics	3	0	0	3	5
TUR 102	Turkish II	2	0	0	2	2
HIST 102	History of Turkish Republic II	2	0	0	2	2
ENG 102	Expository Writing	2	2	0	3	5
EDU 102	Instructional Principles and Methods	2	2	0	3	6
TOTAL		16	6	0	19	30

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
ART 100	Visual Arts and Aesthetics	2	2	0	3	5
LIT 201	Children's Literature	3	0	0	3	5
EDU 201	School, Families and Society	1	2	0	2	4
ECE 203	Child Development and Learning	2	2	0	3	5
EGE 221	Primary School Mathematics	2	2	0	3	6
EGE 251	Turkish Language in Primary Education	3	0	0	3	5
TOTAL		13	8	0	17	30

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
EDU 202	Research Methods	2	0	0	2	3
ECE 242	Language Development and Literacy Education	2	2	0	3	5
EGE 222	Teaching Primary School Mathematics	2	2	0	3	7
EGE 252	Turkish Language Education in Primary Education	2	2	0	3	6
EGE 232	Education of Religion and Ethics	2	0	0	2	3
EDU 200	Observation in Schools	1	4	0	3	6
TOTAL		11	10	0	16	30

Semester 5

Code	Course Title	C	P	L	Cr	ECTS
ELE 307	Teaching English to Young Learners	2	2	0	3	5
EGE 341	Music Education	1	2	0	2	3
EGE 321	Art Education	2	2	0	3	4
EGE 311	Science in Primary Education	2	2	0	3	4
EGE 331	Social Studies in Primary Education	1	2	0	2	3
EGE 381	Practicum	1	4	0	3	6
SF	Secondary Field	3	0	0	3	5
TOTAL		12	14	0	19	30

Semester 6

Code	Course Title	C	P	L	Cr	ECTS
EDU 302	Special Education and Inclusion	2	0	0	2	3
ECE 302	Learning Environments	2	2	0	3	5
EGE 304	Assessment of Learning	2	2	0	3	5
EGE 332	Social Studies Education Methods in Primary Education	2	2	0	3	6
EGE 312	Science Education Methods in Primary Education	2	2	0	3	6
SF	Secondary Field	3	0	0	3	5
TOTAL		13	8	0	17	30

Semester 7

Code	Course Title	C	P	L	Cr	ECTS
TEDU 400	Student Development Seminar	0	0	0	0	1
EDU 401	Community Service	1	2	0	2	3
EGE 441	Motor Development and Physical Education	1	2	0	2	4
EGE 471	Research Project	1	4	0	3	7
EGE 481	Student Teaching I	1	8	0	5	10
SF	Secondary Field	3	0	0	3	5
TOTAL		7	16	0	15	30

Semester 8

Code	Course Title	C	P	L	Cr	ECTS
GPC 212	Guidance and Psychological Counseling	2	2	0	3	6
EDU 404	Turkish Education System & School Management	2	0	0	2	3
EGE 472	Capstone Experience	1	4	0	3	7
EGE 482	Student Teaching II	1	8	0	5	9
SF	Secondary Field	3	0	0	3	5
TOTAL		9	14	0	16	30

Totals expected for graduation		97	80	2	138	240
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Undergraduate Course Descriptions (2017-2018 and Before)

- EGE 221** **(2+2+0) 3 Credits / 6 ECTS**
Primary School Mathematics
(İlkokul Matematiği)
 Structure of the National elementary school mathematics curriculum. NCTM and Common Core State Standards. Learning areas (content strands) and sublearning areas. Skills. Mathematical representations. Fundamental elementary mathematical concepts and their developments. Number concept. Natural numbers. Number systems. Arithmetical operations. Fractions. Percent. Ratio. Proportion. Geometry and development of geometrical thinking. Measurement. Data.
- EGE 222** **(2+2+0) 3 Credits / 7 ECTS**
Teaching Primary School Mathematics
(İlkokulda Matematik Öğretimi)
 Instructional methods and strategies for teaching fundamental concepts of elementary school mathematics. Designing instructional activities which constitutes fundamental concepts. Integrating technology as a teaching tool. Lesson planning from different perspectives and diversification. Instruction and assessment.
- EGE 232** **(2+0+0) 2 Credits / 3 ECTS**
Education of Religion and Ethics
(Din Kültürü ve Ahlak Bilgisi Eğitimi)
 Core concepts regarding religion, culture, and morality. Fundamental tenets of Islam as well as other world religions. Relationship between ethics and individual and society. Methods of religion and ethics curriculum.
- EGE 251** **(3+0+0) 3 Credits / 5 ECTS**
Turkish Language in Primary Education
(Sınıf Öğretmenliğinde Türk Dili)
 Study of the tense and aspect structure of the Turkish verb system and its semantics. Words and phrases. Sentence types in Turkish: simple sentence, compound clauses, if-clauses, coordinate and subordinate clauses. Word and sentence analysis in a variety of texts. Determinate article structure in Turkish. Noun phrase structure and its properties. Textual studies such as selecting level appropriate texts and the analysis of their internal and external structures.
- EGE 252** **(2+2+0) 3 Credits / 6 ECTS**
Turkish Language Education Methods in Primary Education
(Sınıf Öğretmenliğinde Türkçe Eğitimi)
 Reading, writing, listening, speaking, speed reading as well as presentation and comprehension skills. Reading difficulties. Structure of reading texts. Informative and narrative texts. Critical thinking skills through reading and writing. Purposes, types, and rules of reading. Assessment of reading, writing, listening, and comprehension skills.

EGE 304**(2+2+0) 3 Credits / 5 ECTS****Assessment of Learning
(Ölçme ve Değerlendirme)**

Goals, principles and importance of assessment. Assessment of development and learning in early years. Assessment of development and learning in primary education. Sources and types of assessment. Assessment tools. Assessment environments. Observation, documentation, and portfolios. Assessment partnerships with families and professionals.

EGE 311**(2+2+0) 3 Credits / 4 ECTS****Sciences in Primary Education
(Sınıf Öğretmenliğinde Fen Bilimleri)**

Teaching the core concepts in primary education science curriculum based on research and critical thinking and student-centered applications. Characteristics of science, technology, scientific knowledge, and scientific method. Science and technology literacy. Science-technology-society-environment relationships. Development of attitudes towards science. Relationship between science and other courses in the curriculum. Developing scientific process skills and their applications.

EGE 312**(2+2+0) 3 Credits / 6 ECTS****Science Education Methods in Primary Education
(Sınıf Öğretmenliğinde Fen Bilimleri Eğitimi)**

Development of science and nature concepts in children. Importance of science and nature. Development of problem solving and critical thinking, inquiry, observation skills. Teaching basic science concepts to primary education children. Science tools and materials for primary education science teaching. Design of primary education science learning environments. Assessment of science learning.

EGE 321**(2+2+0) 3 Credits / 4 ECTS****Art Education
(Sanat Eğitimi)**

Approaches to teaching art to pre-school and primary grade children. Drawing, painting, printmaking, sculpture, ceramics, installation and plays, video art, photography, use of technology and computers in the art room, outdoor environmental art. Art supplies. Preparing and evaluating of the art program, and art lesson planning. Art room design. Making art with children with special needs and over talented students. Designing learning environments and assessment in art education. Art across the curriculum. The links between art and other subjects. The ideal relationship of the art teacher with students in an art class. Understanding and analyzing children's drawings. Continuous professional growth for the art teacher. The exhibition of works by students.

EGE 331**(1+2+0) 2 Credits / 3 ECTS****Social Studies in Primary Education
(Sınıf Öğretmenliğinde Sosyal Bilgiler)**

Definitions, rationales, purpose and foundations of social studies in primary education. Sources of content for social studies. Planning of instruction in social studies. Instructional methods and techniques in social studies. Instructional materials and tools in social studies. Assessment in social studies. Values and character education. Democracy and citizenship education. Social studies for diverse learners. Controversial issues in social studies.

EGE 332**(2+2+0) 3 Credits / 6 ECTS****Social Studies Methods in Primary Education
(Sınıf Öğretmenliğinde Sosyal Bilgiler Eğitimi)**

Concepts in curriculum development. Approaches to curriculum development. Definitions and foundations of curriculum. Life studies curriculum in Turkey. Social studies curriculum in Turkey. Unit plan design. Lesson plan analysis. Design and implementation. Development of critical thinking and reflection skills.

EGE 341**(1+2+0) 2 Credits / 3 ECTS****Music Education
(Müzik Eğitimi)**

Music culture. Music Appreciation. Music reading. Interval and rhythm in music. Repertory of songs. Genres of music in Turkey and in the world. Transition from traditional music to contemporary music. Playing an instrument. Group singing. Role of music in developing creativity. Influence of music on children's growth. Role of music in education. Music education methods in early childhood and primary education.

EGE 381**(1+4+0) 3 Credits / 6 ECTS****Practicum
(Okul Deneyimi)**

Designing and planning curriculum and learning environments under the supervision of mentor teachers. Teaching as an assistant teacher. Assessing children's learning. Engaging parents. Attending professional teacher development activities.

EGE 441**(1+2+0) 2 Credits / 4 ECTS****Motor Development and Physical Education
(Motor Gelişim ve Beden Eğitimi)**

Theories and principles of motor development. Phases of motor development. Characteristics of motor development in children. Role of physical education on human development. Teaching methods of physical education. Exercises suitable for children's movement development. Warm-up exercises. Individual and pair exercises. Injuries, accidents, and strains during physical activity in physical education classes as well as everyday life. First-aid. The characteristics of the gymnasium for children. Course tools and materials for physical education and their properties. Sports and health. Sports and social life.

EGE 471 (1+4+0) 3 Credits / 7 ECTS
Research Project in Primary Education
(Sınıf Öğretmenliğinde Araştırma Projesi)
 Action research. Case Study method. Qualitative research methods. Quantitative research methods. Mixed methods. Data Collection. Data Analysis. Applying such research methods to a contemporary elementary education issue.

EGE 472 (1+4+0) 3 Credits / 7 ECTS
Capstone Experience in Primary Education
(Sınıf Öğretmenliğinde Bitirme Projesi)
 Putting all the skills and knowledge acquired throughout undergraduate studies into practice. Creating a professional teacher portfolio (content of the portfolio: developmentally appropriate teaching activities, samples of instructional plans, evidence that shows appropriate primary education learning environment design, samples of work related to school, family and community relationships, samples of assessment activities, evidence of participation in professional development activities). Presentation of this professional portfolio.

EGE 481 (1+8+0) 5 Credits / 10 ECTS
Student Teaching I
(Öğretmenlik Uygulaması I)
 Independent student teaching experience with children aged between six and ten in different primary education programs. Instructional planning. Design of learning environments. Teaching. Assessment of learning. Provision of parent involvement. Participation in professional development activities.

EGE 482 (1+8+0) 5 Credits / 9 ECTS
Student Teaching II
(Öğretmenlik Uygulaması II)
 Independent student teaching experience with children aged between six and ten in different primary education programs. Instructional planning. Design of learning environments. Teaching. Assessment of learning. Provision of parent involvement. Participation in professional development activities.

Undergraduate Curriculum (2018-2019 and After)

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
EDUC 101	Introduction to Education	2	0	0	2	3
EDUC 103	Educational Sociology	2	0	0	2	3
HIST 103	History of Turkish Republic I	2	0	0	2	3
GENC 101	Foreign Language I	2	0	0	2	3
TUR 103	Turkish I	3	0	0	3	5
CMPE 103	Information Technologies	3	0	0	3	5
EGEP 101	Fundamental Mathematics in Primary School	3	0	0	3	5
EGEP 103	Geography and Geopolitics of Turkey	2	0	0	2	3
TOTAL		19	0	0	19	30

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
EDUC 102	Educational Psychology	2	0	0	2	3
EDUC 104	Educational Philosophy	2	0	0	2	3
HIST 104	History of Turkish Republic II	2	0	0	2	3
GENC 102	Foreign Language II	2	0	0	2	3
TUR 104	Turkish II	3	0	0	3	5
EGEP 102	Environmental Education	2	0	0	2	4
EGEP 104	Fundamental Science Education in Primary School	3	0	0	3	5
EGEP 106	Turkish History and Culture	2	0	0	2	4
TOTAL		18	0	0	18	30

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
EDUC 203	Instructional Technologies	2	0	0	2	3
EDUC 202	History of Turkish Education	2	0	0	2	3
EDUC ELECT.	Elective I	2	0	0	2	4
GENC ELECT.	Elective I	2	0	0	2	3
EGEP ELECT.	Elective I	2	0	0	2	4
EGEP 201	Drama in Primary School	2	0	0	2	4
EGEP 203	Lab. Applications in Science	0	2	0	1	3
EGEP 205	Teaching Early Literacy	3	0	0	3	6
TOTAL		15	2	0	16	30

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
EDUC 201	Instructional Principles and Methods	2	0	0	2	3
EDUC 204	Research Methods in Education	2	0	0	2	3
EDUC ELECT.	Elective II	2	0	0	2	4
GENC ELECT.	Elective II	2	0	0	2	3
GENC 202	Community Services	1	2	0	2	3
EGEP ELECT.	Elective II	2	0	0	2	4
EGEP 202	Teaching of Play and Physical Activities	3	0	0	3	5
EGEP 204	Teaching of Turkish	3	0	0	3	5
TOTAL		17	2	0	18	30

Semester 5

Code	Course Title	C	P	L	Cr	ECTS
EDUC 301	Classroom Management	2	0	0	2	3
EDUC 303	Morals and Ethics in Education	2	0	0	2	3
EDUC ELECT.	Elective III	2	0	2	0	2
GENC ELECT.	Elective III	2	0	2	0	2
EGEP ELECT.	Elective III	2	0	0	2	4
EGEP 301	Life Studies Education	3	0	0	3	5
EGEP 303	Mathematics Education I	3	0	0	3	4
EGEP 305	Science Education	3	0	0	3	4
TOTAL		19	0	0	19	30

Semester 6

Code	Course Title	C	P	L	Cr	ECTS
EDUC 302	Assessment and Evaluation in Education	2	0	0	2	3
EDUC 304	Turkish Education System and School Management	2	0	0	2	3
EDUC ELECT.	Elective IV	2	0	0	2	4
GENC ELECT.	Elective IV	2	0	0	2	3
EGEP ELECT.	Elective IV	2	0	0	2	4
EGEP 302	Social Studies Education	3	0	0	3	5
EGEP 304	Mathematics Education II	3	0	0	3	4
EGEP 306	Religion and Ethics Education	3	0	0	3	4
TOTAL		19	0	0	19	30

Semester 7

Code	Course Title	C	P	L	Cr	ECTS
EDUC 407	Teaching Practice I	2	6	0	5	10
EDUC 409	Special Education and Inclusion	2	0	0	2	3
EDUC ELECT.	Elective V	2	0	0	2	4
EGEP ELECT.	Elective V	2	0	0	2	4
EGEP 401	Music Education	3	0	0	3	4
EGEP 403	Foreign Language Instruction in Primary School	3	0	0	3	5
TOTAL		14	6	0	17	30

Semester 8

Code	Course Title	C	P	L	Cr	ECTS
EDUC 408	Teaching Practice II	2	6	0	5	12
EDUC 410	Counseling in Schools	2	0	0	2	3
EDUC ELECT.	Elective VI	2	0	0	2	4
EGEP ELECT.	Elective VI	2	0	0	2	4
EGEP 402	Character and Values Education	2	0	0	2	3
EGEP 404	Teaching of Visual Arts	3	0	0	3	4
TOTAL		13	6	0	16	30

Category	C	P	L	Cr	ECTS	Class Hour	Percentage
EDUC	44	12	0	50	88	56	35
GENC	26	2	0	27	42	28	19
EGEP	64	2	0	65	110	66	46
TOTAL	134	16	0	142	240	150	100

Undergraduate Course Descriptions (2018-2019 and After, 1st and 2nd Year Courses)

COMPULSORY COURSES

EGEP 101

(3+0+0) 3 Credits / 5 ECTS

Fundamental Mathematics in Primary School (İlkokulda Temel Matematik)

Number systems and hierarchical model, number systems with closure properties according to four operations, mathematical modeling, problem solving and problem posing with four operations, convert a number from base 10 to any other base, convert a number from different bases to base 10, divisibility rules for 2, 3, 4, 5, and 10 with proofs, greatest common factor, and least common multiple, fractions and four operations with fractions, fractions and ratio, decimal representation of fractions, decimal numbers and four operations, patterns, basic geometric shapes, basic space geometry and their expansions, the concept of measurement and basic units of measurement, and their relation to the purpose and principles of mathematics teaching in addition to primary mathematics curriculum.

EGEP 102

(2+0+0) 2 Credits / 3 ECTS

Environmental Education (Çevre Eğitimi)

Basic ecological concepts and principles, ecosystems, food chains, food webs, habitat, competition, common life and mutual living, energy flow, circulation of matter, increase in population, ecological effect, erosion, soil and water resources, environmental sensitivity, studies conducted about environmental sensitivity, foundations and establishments, environmental education in primary school curricula.

EGEP 103

(2+0+0) 2 Credits / 3 ECTS

Geography and Geopolitics of Turkey (Türkiye Coğrafyası ve Jeopolitiği)

The location and position of Turkey; Turkey's geopolitical and geostrategic situation and characteristics; characteristics of mathematical location, location specific properties (neighbors), countries group features (political, military, economic cultural organizations), Turkey's physical features (climate, hydrographic characteristics, soil structure, vegetation), socio-economic characteristics (population, settlement, agriculture, forestry, animal husbandry, energy, industry, transport, tourism)

EGEP 104

(3+0+0) 3 Credits / 5 ECTS

Fundamental Science Education in Primary School (İlkokulda Temel Fen Bilimleri)

The subject and principles of natural sciences, basic concepts of natural sciences, the place of science among other areas, historical development of science, the purpose of science teaching, general information about science subjects in primary school curricula, and daily usage of science topics.

- EGEP 106** (2+0+0) 2 Credits / 4 ECTS
Turkish History and Culture
(Türk Tarihi ve Kültürü)
 The first homeland of Turks-the first civilizations established In homeland, the life of the Turks before the Huns, Huns: Great Hun State-Tribes immigration; and European Huns-Akhunlar, Tolunoğulları-İnşitler-Karahanlılar-Ghaznavids, Great Seljuk State-Anatolian Seljuk State, Ottoman State Period, Ottoman Empire; Other Turkish States (Azerbaijan-Kazakhstan-Kyrgyzstan-Turkmenistan-Uzbekistan-Turkish Republic of Northern Cyprus and communities), Culture and Civilization.)
- EGEP 201** (2+0+0) 2 Credits / 4 ECTS
Drama in Primary School
(İlkokulda Drama)
 Definitions of the concept of drama; concepts of psychodrama, creative drama, educational drama, sociodrama etc.; relationship between drama and play; history of drama applications in education; structure and stages of drama applications in education; learning environment for drama and teacher competencies; assessment/evaluation in drama; exemplary drama activities in education, developing and applying drama activities in education.
- EGEP 202** (3+0+0) 3 Credits / 5 ECTS
Teaching of Play and Physical Activities
(Oyun ve Fiziki Etkinlikler Öğretimi)
 Theoretical structure related to the curriculum of primary school play and physical activities (Grades 1-4) (structure of the program, basic skills, basic elements of the program, achievements according to classes, teaching methods, classroom management, measurement and evaluation), primary school play and physical activities Applications (course plan, study plans, preparation and application of measurement tools), educational and musical games, examples of modern folk dances, description of the game and general characteristics, game teaching.
- EGEP 203** (0+2+0) 1 Credit / 3 ECTS
Lab. Applications in Science
(Fen Bilimleri Laboratuvar Uygulamaları)
 The aim and importance of laboratory in science teaching, safety in laboratory; scientific method, scientific process skills and how they are gained; laboratory tests for primary school (planning, conducting and evaluating the results of experiments), preparation of experimental worksheets and test reports; experiments which can be conducted with simple and inexpensive materials; group work.
- EGEP 204** (3+0+0) 3 Credits / 5 ECTS
Teaching of Turkish
(Türkçe Öğretimi)
 Contemporary methods and techniques that can be used in teaching Turkish; improving reading, writing, listening, speaking skills; identification and elimination of reading difficulties, structure of reading texts, teaching poems, informative and narrative texts, reading and writing texts, constructing meaning from texts, developing vocabulary, media literacy (visual reading and presentation), reading

and using technology, questions and types about making meaning from texts; developing critical thinking through reading and writing; speed reading and techniques; teaching and methods of main idea; aims, types and rules of reading; evaluation of reading, writing, listening, speaking and understanding; examining the primary school Turkish curriculum and its relation to other courses will be covered.

EGEP 205

(3+0+0) 3 Credits / 6 ECTS

Teaching Early Literacy

(İlkokuma ve Yazma Öğretimi)

Reading and its importance, listening, speaking, visual reading and visual presentation; reading, writing, learning areas and their relationship, the properties of Turkish and its effect on first reading and writing teaching; reading and writing teaching approaches, the aims and principles of first reading and writing teaching, basic characteristics of first grade teachers and students in terms of initial reading and writing instruction; readiness to read and write (student) and preparation (teacher), failure and reasons for teaching and writing in the first reading, tools and materials used in the teaching and writing of the first reading (properties of vehicles, selection, creation and use); methods used in primary reading and writing teaching (definitions, characteristics, classification, applications, superiority and limitations of methods); sound based sentence method (definition, principles, properties, stages and application), reading and writing instruction in accordance with the stages of the sound based sentence method, the development of vocabulary, evaluation of the first reading and writing, the first reading and writing teaching and use of technology.

EGEP 301

(3+0+0) 3 Credits / 5 ECTS

Life Studies Education

(Hayat Bilgisi Öğretimi)

Definitions of the concept of life studies, purpose and scope of life studies education, historical development of life studies education in Turkey and life studies education in other countries, analysis of life studies curricula in terms of objectives, skills, concepts, and learning domains; suggested instructional methods/techniques and their applications in teaching life studies, suggested instructional materials in teaching life studies; democracy and values education in teaching life studies, exemplary activities and practices in life studies curricula, assessment and evaluation in life studies education.

EGEP 302

(3+0+0) 3 Credits / 5 ECTS

Social Studies Education

(Sosyal Bilgiler Öğretimi)

The field of social studies and its characteristics, main purposes of social studies education, social studies literacy, learning domains in social studies, history of social studies and its role in primary school curricula, analysis of social studies curriculum (objectives, skills, learning domains, etc.), suggested instructional methods/techniques and materials in teaching life studies, exemplary activities and practices in social studies curricula; democracy, human rights, and values in social studies education, sample activities from social studies education in Turkey and other countries.

EGEP 303**(3+0+0) 3 Credits / 4 ECTS****Mathematics Education I
(Matematik Öğretimi I)**

The aim and basic principles of mathematics teaching; The history of mathematics education (in the world and Turkey); teaching and learning strategies to be used in mathematics teaching; the scope, purpose and characteristics of the primary school mathematics program; major learning theories and their relations with mathematics learning; important skills in mathematics education, associations, representations, communication, reasoning, problem solving (strategies, stages, types of problems, etc.); use of information technologies, development of the concept of numbers in the child (pre-counting developments, one-to-one matching, cardinal value, merge, separation, comparison, equivalence, minority, multitude, etc.); step value, formation of natural numbers and their structural properties; arithmetic operations, related subjects, achievements and examples of activities in primary school mathematics curriculum.

EGEP 304**(3+0+0) 3 Credits / 4 ECTS****Mathematics Education II
(Matematik Öğretimi II)**

Fractions, student difficulties in learning fractions, different meanings of fractions, fraction models, equivalence, comparison, sorting, operations with fractions, decimal fractions, operations with decimal fractions, geometry, development of geometric thinking in children, subjects of 2 and 3 dimensional geometry and their teaching, measurement and development of the idea of measurement in children, size, area, volume, time measurements, weighing, money, data management, tables and graphs, measurement and evaluation in mathematics education, multiple measurement-evaluation methods and techniques, related subjects in the primary school mathematics curriculum, gains and examples of appropriate activity.

EGEP 305**(3+0+0) 3 Credits / 4 ECTS****Science Education
(Fen Öğretimi)**

Basic concepts of science and science education; science, technology, characteristics of scientific knowledge and scientific method, science and technology literacy, science-technology-society environment relationship, attitudes towards science, science education purposes, historical development of Turkey and the world in science education, constructivist approach and science learning, cognitive development and science education, characteristics of elementary school science programs and their relationship with other courses, developing scientific process skills and sample applications.

EGEP 306**(3+0+0) 3 Credits / 4 ECTS****Religion and Ethics Education
(Din Kültürü ve Ahlâk Bilgisi Öğretimi)**

Basic concepts in religion and ethics teaching: concepts of religion and morality; Islam and other religions; concept of faith: conditions of faith in Islamic religion, basic principles of Islam; worship: the concept of worship; ethics and principles of morality related to individual and society; basic values and teaching of life, examining primary school religious and ethics curriculum; gains, content, teaching approaches, assessment of learning.

EGEP 401**(3+0+0) 3 Credits / 4 ECTS****Music Education
(Müzik Öğretimi)**

Music teaching methods and techniques, note teaching techniques, using rhythm and melody to organize songs for children with orff instruments, effective use of the instrument in song teaching, relationship between game, music, dance, drama and speech, development of musical appreciation with music-aesthetics relationship, associating with other disciplines, activities related to primary music program.

EGEP 402**(2+0+0) 2 Credits / 3 ECTS****Character and Values Education
(Karakter ve Değer Eğitimi)**

Conceptual framework: character, personality, value, virtue, morals, temper, etc.; character development and character education; role of family, environment, and school in character development and character education; description and classification of values; sources of values and individual, social, cultural, religious, and moral foundations of values; approaches and practices in character and values education; intercultural differences and diversity in character and values education; character and values education in relation to educational philosophies; instructional methods/techniques in character and values education; value conflicts and values education in modern and multicultural societies; values education through humanitarian-cultural development process; examples of values education from the history of Turkish education and culture, research and practices in values education in Turkey; teacher as a role model in character and values education.

EGEP 403**(3+0+0) 3 Credits / 5 ECTS****Foreign Language Instruction in Primary School
(İlkokulda Yabancı Dil Öğretimi)**

Comparison of instruction in Turkish and English; main approaches and suggested methods, techniques, and practices in teaching English in primary education; learning domains, objectives, and sample activities in 2nd, 3rd, and 4th grade English curricula.

EGEP 404**(3+0+0) 3 Credits / 4 ECTS****Art Education
(Görsel Sanatlar Öğretimi)**

Functions of visual arts education in mental and emotional aspects, level of development of students according to the steps of graphical development, children's picture reading, children love the visual arts and to enable them to express themselves through art; implementing art events in the context of art history, art criticism and aesthetic disciplines; differentiation in visual, auditory and tactile perception, learning with art field and development of creativity.

ELECTIVE COURSES**EGEP 250****(2+0+0) 2 Credits / 4 ECTS****Disasters and Disaster Management
(Afetler ve Afet Yönetimi)**

Concepts of disaster and risk; disaster risk and mitigation; disaster training and its importance; preparation for disasters, intervention to disasters, disaster recovery; natural and human disasters; effects of disasters on Sustainable Development; climate change and meteorological disasters; studies in reducing disaster damages in Turkey and the world; earthquake regulations; effectiveness in disaster management; disaster management cycle; disaster terminology; coordination in disaster management; emergency and project presentations.

EGEP 251**(2+0+0) 2 Credits / 4 ECTS****Children's Literature
(Çocuk Edebiyatı)**

The development of children's literature in the World and Turkey; the importance of acquainting with qualified children's books in childhood and the function of children's literature works in raising sensitive individuals who have acquired a reading culture; illustrating unqualified children's books with examples and discussing their negative effects on children's developmental characteristics; studies to determine the appropriateness of pre-service teachers' books to children according to their age groups and to which children contribute to their development; identifying the contribution of various literary genres (epic, fairy tale, poem, story, novel etc.) and linguistic tools (census, rhymes, riddles etc.) to children's development.

EGEP 252**(2+0+0) 2 Credits / 4 ECTS****Child Psychology
(Çocuk Psikolojisi)**

Basic concepts in child psychology; history of child psychology; main approaches/methods in child psychology; characteristics of different stages of development (Prenatal, Infancy, Early Childhood, Middle Childhood); child within family structure; child within school structure; adaptation and behavior problems in childhood; student with special needs.

EGEP 253**(2+0+0) 2 Credits / 4 ECTS****Textbook Analysis in Primary School
(İlkokul Ders Kitapları İncelemesi)**

To be able to comprehend the principles to be used in the selection and arrangement of textbooks in primary school; examine the textbooks used in practice in terms of curriculum; examine the theory, approach, philosophy and elements of the program (aim, content, teaching-learning processes, evaluation) and examine the textbooks in terms of these elements and the criteria (scientific, language, content and physical characteristics) that are taken into consideration in preparing the textbook.

EGEP 254**(2+0+0) 2 Credits / 4 ECTS****Primary School Curriculum
(İlkokul Programı)**

Basic concepts related to curriculum; main components, goals (behavioral objectives), and learning domains of primary school curricula; philosophical, historical, psychological, and social foundations of primary school curricula.

EGEP 255**(2+0+0) 2 Credits / 4 ECTS****Alternative Education in Primary School
(İlkokulda Alternatif Eğitim Uygulamaları)**

Geographical, social, and economic factors influencing the Turkish education system, practices and policies on meeting the needs of students in rural and dispersed areas; mobile teaching, advantages and disadvantages of mobile teaching; regional primary boarding schools, advantages and disadvantages of regional primary boarding schools; teaching in multigrade classes, factors leading to multigrade classes, the rationale for teaching in multigrade classes, instructional planning in multigrade classes, classroom management in multigrade classes, assessment/evaluation in multigrade classes, roles of teachers in multigrade classes, exemplary practices of teaching in multigrade classes in different countries.

EGEP 350**(2+0+0) 2 Credits / 4 ECTS****Inclusive Language Teaching
(Kapsayıcı Dil Öğretimi)**

Developing and applying enriched language teaching activities for students who may not develop adequate reading, writing, speaking, listening, and visual literacy skills; methods/techniques of literacy teaching for students whose mother tongue may be different; methods/techniques of literacy teaching for students who might be from different socio-economic statuses with different levels of language readiness, methods/techniques of literacy teaching for students who might not develop adequate language skills due to different factors in school and family (e.g., teacher change, adaptation problems, insufficient conditions at home, domestic violence); teaching Turkish as a foreign/second language to immigrant students and related approaches, methods, techniques, and practices.

EGEP 351**(2+0+0) 2 Credits / 4 ECTS****Education of Children At Risk
(Risk Altındaki Çocuklar ve Eğitimi)**

Risk factors and effects, groups of children caused by risk factors; children living and working on the streets, working children connected to sectors, shattered family children, children in need of protection, crime-oriented children, children who neglected and abused, children at developmental risk, children living in unfavorable environmental conditions and their characteristics, critical elements in their education, measures to be taken, projects implemented in Turkey and other countries of the children at risk.

EGEP 352**(2+0+0) 2 Credits / 4 ECTS****Assessment of in Class Learning****(Sınıf İçi Öğrenmelerin Değerlendirilmesi)**

Assessment and evaluation methods/techniques in education and their characteristics; traditional assessment and evaluation methods/techniques: essays, short-answer questions, true/false questions, multiple-choice questions, matching questions, oral exams; alternative assessment and evaluation methods/techniques: observation, interview, performance evaluation, portfolio, research papers, research projects, peer evaluation, self-evaluation, attitude scales; basic principles of assessment and evaluation; assessment and evaluation of student outcomes and grading.

EGEP 353**(2+0+0) 2 Credits / 4 ECTS****Teaching of Social Skills****(Sosyal Beceri Öğretimi)**

Definitions of the concept of social skill, its dimensions and the relationships among those dimensions; developing students' social skills and related methods and techniques; identifying target social skills; analyzing the social skill, modeling the social skill, helping students role-play and imitate the social skill; assessment and evaluation of social skills generalizing social skills and examining primary school curricula; identifying exemplary social skills and applying sample activities.

EGEP 354**(2+0+0) 2 Credits / 4 ECTS****Child and Education in Turkish Culture****(Türk Kültüründe Çocuk ve Eğitim)**

Definition of culture; the relationship between education and culture; the place of culture in child development and education; development and characteristics of Turkish culture; children in Turkish culture; the place and value of child in Turkish society and family, child education, characteristics and elements of Turkish culture from past to present.

EGEP 355**(2+0+0) 2 Credits / 4 ECTS****Traditional Child Games****(Geleneksel Çocuk Oyunları)**

Traditional children's games and their educational, cultural value; remembering these games which do not exist or in danger of extinction in Turkish culture; definition, importance, rules of these games; games played in groups or with adults; effects of traditional games on developmental areas; Planning and application of these games.

DEPARTMENT OF FOREIGN LANGUAGE EDUCATION

Chair

Prof. Belgin Aydın

Academic Staff

Prof. Belgin Aydın, Asst. Prof. Erdem Aksoy, Asst. Prof. Melike Ünal Gezer, Asst. Prof. Özlem Canaran, Asst. Prof. Pelin İrgin, Asst. Prof. Zeynep Bilki, Dr. Arzu Kanat Mutluoğlu, Ayşe Gül Özay*, Ebru Boynueğri*, Emir Ertunç Havandar*, Mehmet Sak*.

* Research Assistant

Undergraduate Program in English Language Education

The English Language Education undergraduate program within the Department of Foreign Language Education at TED University serves the community with faculty members and research assistant.

The English Language Education program provides training to teacher candidates for teaching levels from kindergarten to university. The candidates can work as English language teachers at various institutions (public or private) and at various levels (kindergarten to university language schools). The program tries to enrich teacher candidates' intellectual capabilities as well as pedagogical knowledge through its diverse course content. The ICT infrastructure at the university is well integrated to curricula to offer candidates a comprehensive framework of technology integration and use. The department hosts up-to-date and real-life related learning environments through distinguished academic staff.

Program Outcomes

Graduates of the English Language Education program will demonstrate the following learning outcomes:

1. Use the source and target language accurately and effectively to access, produce and share knowledge within the communicative context (English: Common European Framework of Reference for Languages, B2 level and up),
2. Manage life-long learning processes in line with their learning needs,
3. Interpret research-based data by defining concepts, theories and cases in their field or a specific field of study,
4. Use information and communication technologies for personal and professional purposes as required in disciplinary areas
5. Produce solutions to current problems by contributing to the development and preservation of universal, local, artistic and cultural values,
6. Develop or adapt language teaching materials considering the individual, social, cultural differences, needs and interests of students,
7. Utilize appropriate pedagogical strategies, methods and techniques considering student needs, their developmental characteristics, individual differences, subject area features and competences,
8. Use a variety of assessment and evaluation methods and techniques to monitor and record the development and learning processes of students as well as to make instructional plans,

9. Develop professional knowledge and skills continuously as an individual and a community member,
10. Act in accordance with principles of democracy, human rights, scientific and professional ethical values regarding personal and professional duties, rights and responsibilities.

Undergraduate Curriculum (2017-2018 and Before)

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
TUR 101	Turkish I	2	0	0	2	2
EDU 101	Introduction to Education	2	2	0	3	6
HIST 101	History of Turkish Republic I	2	0	0	2	2
CMPE 101	Introduction to Information Technologies	2	0	2	3	5
BIO 101	Life Sciences	3	0	0	3	5
MATH 103	Mathematics for Education Majors	3	0	0	3	5
ENG 111	Advanced English for Academic Purposes	3	0	0	3	5
TOTAL		16	4	2	19	30

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
TUR 102	Turkish II	2	0	0	2	2
PSY 104	Psychology	3	0	0	3	5
EDU 102	Instructional Principles and Methods	2	2	0	3	6
PHIL 104	Philosophy and Ethics	3	0	0	3	5
HIST 102	History of Turkish Republic II	2	0	0	2	2
PHYS 104	Introduction to Natural Sciences	2	2	0	3	5
ENG 112	Advanced Writing	3	0	0	3	5
TOTAL		17	4	0	19	30

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
LIT 201	Children's Literature	3	0	0	3	5
ELE 201	Contextual Grammar I	3	0	0	3	5
ELE 203	Listening and Pronunciation	3	0	0	3	5
ELE 205	Language Acquisition	3	0	0	3	5
ELE 207	Linguistics I	3	0	0	3	5
ELE 209	Approaches to ELT	3	0	0	3	5
TOTAL		18	0	0	18	30

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
ELE 202	Contextual Grammar II	3	0	0	3	5
ELE 204	Oral Communication Skills	3	0	0	3	5
ELE 206	English Literature I	3	0	0	3	6
ELE 208	Linguistics II	3	0	0	3	5
ELE 210	ELT Methodology I	2	2	0	3	5
SF	Secondary Field	3	0	0	3	5
TOTAL		17	2	0	18	31

Semester 5

Code	Course Title	C	P	L	Cr	ECTS
EDU 200	Observation in Schools	1	4	0	3	6
EDU 201	School, Families and Society	1	2	0	2	4
ELE 301	English Literature II	3	0	0	3	6
ELE 303	ELT Methodology II	2	2	0	3	5
ELE 305	Curriculum Development in ELT	3	0	0	3	5
ELE 307	Teaching English to Young Learners	2	2	0	3	5
TOTAL		12	10	0	17	31

Semester 6

Code	Course Title	C	P	L	Cr	ECTS
EDU 202	Research Methods	2	0	0	2	3
ART 104	Drama	2	2	0	3	5
ELE 302	Technology-Enhanced Language Learning	3	0	0	3	5
ELE 304	Assessment in ELT	3	0	0	3	6
ELE 306	Second Foreign Language I	2	0	0	2	4
SF	Secondary Field	3	0	0	3	5
TOTAL		15	2	0	16	28

Semester 7

Code	Course Title	C	P	L	Cr	ECTS
TEDU 400	Student Development Seminar	0	0	0	0	1
EDU 401	Community Service	1	2	0	2	3
ELE 401	Materials Adaptation and Development	3	0	0	3	6
ELE 403	Practice Teaching I	1	6	0	4	9
ELE 405	Second Foreign Language II	2	0	0	2	4
EDU 302	Special Education and Inclusion	2	0	0	2	3
SF	Secondary Field	3	0	0	3	5
TOTAL		12	8	0	16	31

Semester 8

Code	Course Title	C	P	L	Cr	ECTS
EDU 404	Turkish Edu. System and School Manag.	2	0	0	2	3
ELE 402	Second Foreign Language III	2	0	0	2	4
ELE 404	Practice Teaching II	1	8	0	5	11
SF	Secondary Field	3	0	0	3	5
TOTAL		10	10	0	15	29
Totals expected for graduation		118	38	2	138	240

Undergraduate Course Descriptions (2017-2018 and Before)

<p>ELE 201 Contextual Grammar I (Bağlamsal Dilbilgisi I)</p> <p>Advanced level language patterns and sentence structures; the relationships between language structures and lexical items; the attribution of meaning by means of these structures; analysis of language structures within a context; different meanings of structures in different contexts, and high level text analyses.</p>	<p>(3+0+0) 3 Credits / 5 ECTS</p>
<p>ELE 202 Contextual Grammar II (Bağlamsal Dilbilgisi II)</p> <p>Descriptive analysis of advanced level structures (e.g. word classes, elements of the sentence, types of sentences, fragments etc.); analysis of the most problematic forms of English grammar; description of the factors that influence use of grammar and vocabulary in speech and writing; accurate use of English grammar and vocabulary in the contexts that require structurally and intellectually complex language use.</p>	<p>(3+0+0) 3 Credits / 5 ECTS</p>
<p>ELE 203 Listening and Pronunciation (Dinleme ve Sesletim)</p> <p>Analysis of authentic listening materials and speech samples used in different discourses; formulating phonetic transcriptions of problematic sounds; higher order listening skills; the fundamentals of listening and phonetics namely vowels, consonants, stress in words, rhythm and intonation; the use of phonetic alphabet for accurate pronunciation.</p>	<p>(3+0+0) 3 Credits / 5 ECTS</p>
<p>ELE 204 Oral Communication Skills (Sözlü İletişim Becerileri)</p> <p>Communication-oriented speaking such as discussions, debates, individual and group presentations; the use of formal and informal language; informative and persuasive presentations; supra-segmental features (pitch, stress and intonation); the use of audio visual aids and techniques.</p>	<p>(3+0+0) 3 Credits / 5 ECTS</p>
<p>ELE 205 Language Acquisition (Dil Edinimi)</p> <p>First and second language acquisition theories; stages of language acquisition and comparison of first and second language acquisition; factors affecting second language acquisition (eg., age, attitude, motivation); comparing language acquisition of children and adults; role of language acquisition in foreign language teaching.</p>	<p>(3+0+0) 3 Credits / 5 ECTS</p>

ELE 206**(3+0+0) 3 Credits / 6 ECTS****English Literature I
(İngiliz Edebiyatı I)**

Cultural history of British and American literature and literary works written in English; fundamental terms and techniques used in text analysis; major genres and styles in literature; important movements and periods; the content and style of various literary texts such as short story, poem, drama and novel representing different periods and genres of English literature; literature's contribution to our understanding of life; critical interpretation of literary arts.

ELE 207**(3+0+0) 3 Credits / 5 ECTS****Linguistics I
(Dilbilim I)**

Basic concepts in linguistic analysis; the nature, structure and use of language; the components of language as a system; phonetics; phonology; semantics.

ELE 208**(3+0+0) 3 Credits / 5 ECTS****Linguistics II
(Dilbilim II)**

Morphology; free and bound morphemes, compounds, inflectional and derivational morphology, morphemic analysis, morphological typology of languages, analysis of the internal hierarchical structure of words; syntax: word categories, phrase and clause structure, transformational- generative grammar, government and binding, minimalist program, argument structure, theta-roles; pragmatics: deixis, implicature, conversational maxims, speech acts and politeness. sociolinguistics; dialects, register, style; discourse: criteria for textuality, types of cohesive devices, discourse connections and functions.

ELE 209**(3+0+0) 3 Credits / 5 ECTS****Approaches to ELT
(İngilizce Öğretiminde Yaklaşımlar)**

Overview of methods and approaches (Grammar Translation Method, Direct Method, Audio-lingual Method, Silent Way, Community Language Learning, Suggestopedia, Communicative Approach, the Natural Approach); analysis of pedagogical implications of methods and approaches; discussion of current issues and practices in ELT (Eclectic Method, Content Based Instruction, etc.).

ELE 210**(2+2+0) 3 Credits / 5 ECTS****ELT Methodology I
(Özel Öğretim Yöntemleri I)**

Language teaching methodology; course and syllabus design; types of syllabus; lesson planning; classroom management; European Language Portfolio and Common European Framework of Reference for Languages.

- ELE 301** (3+0+0) 3 Credits / 6 ECTS
English Literature II
(İngiliz Edebiyatı II)
 Developments in British literature since the Renaissance; historical background for each period; the latest period of the Renaissance, the Restoration Period, the Romantics, the Victorian Age and Twentieth Century; analysis of selected works of the periods.
- ELE 302** (3+0+0) 3 Credits / 5 ECTS
Technology-Enhanced Language Learning
(Teknoloji Odaklı Dil Öğrenimi)
 Introduction to computer-assisted language learning (CALL) and technology-enhanced language learning (TELL). History of CALL/TELL. CALL/TELL and second language acquisition. Principles of using technology in language classes. The role of technology in language learning and teaching. Appropriate and effective evaluation, selection, adaptation, and use of technological tools for language learning and teaching purposes. Technology-enhanced reading, writing, vocabulary, speaking, listening and pronunciation, and integrated language teaching skills.
- ELE 303** (2+2+0) 3 Credits / 5 ECTS
ELT Methodology II
(Özel Öğretim Yöntemleri II)
 Classroom based research, action research; microteaching; introduction to the opportunities for continuing professional development; integration of ELT journals and conferences; discussion of the state-of- the art articles.
- ELE 304** (3+0+0) 3 Credits / 6 ECTS
Assessment in ELT
(İngilizce Öğretiminde Değerlendirme)
 General concepts of testing and evaluation; test preparation; types of tests; alternative assessment methods.
- ELE 305** (3+0+0) 3 Credits / 5 ECTS
Curriculum Development in Language Teaching
(İngilizce Öğretiminde Program Geliştirme)
 The origins of language curriculum development. From syllabus design to curriculum development. Needs analysis. Planning goals and learning outcomes. Course planning and syllabus design. Providing for effective teaching. The role and design of instructional materials. Approaches to evaluation.
- ELE 306** (2+0+0) 2 Credits / 4 ECTS
Second Foreign Language I
(İkinci Yabancı Dil I)
 Basic communication; structures and vocabulary necessary to comprehend simple daily conversational dialogues and reading texts, and to engage in daily simple communication in German/ Spanish language.

- ELE 307** (2+2+0) 3 Credits / 5 ECTS
Teaching English to Young Learners
 (Çocuklara Yabancı Dil Öğretimi)
 The differences between young learners and learners at other ages; classroom management; multiple intelligence; various activity types (e.g., games, songs, and craft); (digital) storytelling; assessment and evaluation.
- ELE 401** (3+0+0) 3 Credits / 6 ECTS
Materials Adaptation and Development
 (Yabancı Dil Öğretiminde Materyal İnceleme ve Geliştirme)
 Theory and principles of ELT materials design (e.g. selecting, adapting, developing and evaluating materials); evaluation of materials and textbooks used in EFL settings; language material and textbook evaluation criteria; relating material design to the current ELT methodology.
- ELE 402** (2+0+0) 2 Credits / 4 ECTS
Second Foreign Language III
 (İkinci Yabancı Dil III)
 Intermediate level oral and written communication skills; complex grammatical structures and intermediate level vocabulary items used in a variety of authentic texts; information about the culture of the target language through authentic materials.
- ELE 403** (1+6+0) 4 Credits / 9 ECTS
Practice Teaching I
 (Okullarda Uygulama I)
 Lesson plan preparation and implementation; receiving feedback from the course instructor about the implementation; receiving learner feedback; sharing and discussing the practice with the supervisor; making necessary adjustments and reporting them.
- ELE 404** (1+8+0) 5 Credits / 11 ECTS
Practice Teaching II
 (Okullarda Uygulama II)
 Lesson plan preparation and implementation; receiving feedback from the course instructor; receiving learner feedback; sharing and discussing the practice with the supervisor; making necessary adjustments and reporting them.
- ELE 405** (2+0+0) 2 Credits / 4 ECTS
Second Foreign Language II
 (İkinci Yabancı Dil II)
 Interactive communication; grammatical structures and vocabulary commonly used in newspapers, magazines, extended dialogues, readings texts, and short stories; information about the culture of the target language through authentic materials.

Undergraduate Curriculum (2018-2019 and After)

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
EDUC 101	Introduction to Education	2	0	0	2	3
EDUC 103	Educational Sociology	2	0	0	2	3
HIST 103	History of Turkish Republic I	2	0	0	2	3
GENC 103	Foreign Language I	2	0	0	2	3
TUR 103	Turkish I	3	0	0	3	5
CMPE 103	Information Technologies	3	0	0	3	5
ELEP 101	Reading Skills I	2	0	0	2	2
ELEP 103	Writing Skills I	2	0	0	2	2
ELEP 105	Listening and Pronunciation I	2	0	0	2	2
ELEP 107	Oral Communication Skills I	2	0	0	2	2
TOTAL		22	0	0	22	30

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
EDUC 102	Educational Psychology	2	0	0	2	3
EDUC 104	Educational Philosophy	2	0	0	2	3
HIST 104	History of Turkish Republic II	2	0	0	2	3
GENC 104	Foreign Language II	2	0	0	2	3
TUR 104	Turkish II	3	0	0	3	5
ELEP 102	Reading Skills II	2	0	0	2	2
ELEP 104	Writing Skills II	2	0	0	2	3
ELEP 106	Listening and Pronunciation II	2	0	0	2	3
ELEP 108	Oral Communication Skills II	2	0	0	2	3
ELEP 110	The Structure of English	2	0	0	2	2
TOTAL		21	0	0	21	30

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
EDUC 203	Instructional Technologies	2	0	0	2	3
EDUC 201	Instructional Principles and Methods	2	0	0	2	3
EDUC ELECT.	Vocational Elective	2	0	0	2	4
GENC ELECT.	General Culture Elective	2	0	0	2	3
ELEP ELECT.	Field Elective	2	0	0	2	4
ELEP 201	Learning and Teaching Approaches in ELT	2	0	0	2	3
ELEP 207	English Literature I	2	0	0	2	4
ELEP 203	Linguistics I	2	0	0	2	3
ELEP 205	Critical Reading and Writing	2	0	0	2	3
TOTAL		18	0	0	18	30

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
EDUC 202	Turkish Education History	2	0	0	2	3
EDUC 204	Research Methods in Education	2	0	0	2	3
EDUC ELECT.	Vocational Elective	2	0	0	2	4
GENC ELECT.	General Culture Elective	2	0	0	2	3
ELEP ELECT.	Field Elective	2	0	0	2	4
ELEP 202	Curriculum in ELT	2	0	0	2	3
ELEP 208	English Literature II	2	0	0	2	4
ELEP 204	Linguistics II	2	0	0	2	3
ELEP 206	Language Acquisition	2	0	0	2	3
TOTAL		18	0	0	18	30

Semester 5

Code	Course Title	C	P	L	Cr	ECTS
EDUC 301	Classroom Management	2	0	0	2	3
EDUC 303	Morals and Ethics in Education	2	0	0	2	3
EDUC ELECT.	Vocational Elective	2	0	0	2	4
GENC ELECT.	General Culture Elective	2	0	0	2	3
ELEP ELECT.	Field Elective	2	0	0	2	4
ELEP 301	Teaching English to Young Learners I	3	0	0	3	5
ELEP 303	Teaching English Language Skills I	3	0	0	3	5
ELEP 305	Teaching Language and Literature I	2	0	0	2	3
TOTAL		18	0	0	18	30

Semester 6

Code	Course Title	C	P	L	Cr	ECTS
EDUC 302	Assessment and Evaluation in Education	2	0	0	2	3
EDUC 304	Turkish Education System and School Management	2	0	0	2	3
EDUC ELECT.	Vocational Elective	2	0	0	2	4
GENC ELECT.	General Culture Elective	2	0	0	2	3
ELEP ELEC	Field Elective	2	0	0	2	4
ELEP 302	Teaching English to Young Learners II	3	0	0	3	5
ELEP 304	Teaching English Language Skills II	3	0	0	3	5
ELEP 306	Teaching Language and Literature II	2	0	0	2	3
TOTAL		18	0	0	18	30

Semester 7

Code	Course Title	C	P	L	Cr	ECTS
EDUC 401	Teaching Practice I	2	6	0	5	10
EDUC 409	Special Education and Inclusion	2	0	0	2	3
EDUC ELECT.	Vocational Elective	2	0	0	2	4
GENC 202	Community Service	1	2	0	2	3
ELEP ELECT.	Field Elective	2	0	0	2	4
ELEP 401	Instructional Design in ELT	3	0	0	3	3
ELEP 403	Translation	3	0	0	3	3
TOTAL		15	8	0	19	30

Semester 8

Code	Course Title	C	P	L	Cr	ECTS
EDUC 402	Teaching Practice II	2	6	0	5	15
EDUC 410	Counselling in Schools	2	0	0	2	3
EDUC ELECT.	Vocational Elective	2	0	0	2	4
ELEP ELECT.	Field Elective	2	0	0	2	4
ELEP 402	Testing and Assessment in ELT	3	0	0	3	4
TOTAL		11	6	0	14	30
Totals expected for graduation		141	14	0	148	240

Undergraduate Course Descriptions (2018-2019 and After, 1st and 2nd Year Courses)

COMPULSORY COURSES

ELEP 101 (2+0+0) 2 Credits / 2 ECTS

**Reading Skills I
(Okuma Becerileri I)**

Comprehending contrasting viewpoints by using various authentic reading texts such as newspapers, journals, reviews and academic texts; mastering higher order reading skills by predicting and identifying main ideas and decoding intersentential cues; equipping students with intensive and extensive reading habits; developing critical thinking skills based on synthesizing, analyzing and evaluating information.

ELEP 103 (2+0+0) 2 Credits / 2 ECTS

**Writing Skills I
(Yazma Becerileri I)**

Developing academic writing skills, distinguishing between specific and general ideas, distinguishing between opinions and facts, identifying audience and purpose, producing paragraphs and essays of advanced level, distinguishing between different types of genres such as description, classification, comparison and contrast, narrative, argumentation, and etc., developing cohesion and coherence, writing as a process, and evaluating the writing of others.

ELEP 105 (2+0+0) 2 Credits / 2 ECTS

**Listening and Pronunciation I
(Dinleme ve Sesletim I)**

Analyzing authentic listening materials and speech samples used in different discourses; basic listening and phonetic skills such as discriminating minimal pairs and formulating phonetic transcriptions of problematic sounds; higher level listening skills and strategies; the fundamentals of listening and phonetics namely vowels, consonants, stress in words, rhythm and intonation as well as the usage of phonetic alphabet for learning and production.

ELEP 107**(2+0+0) 2 Credits / 2 ECTS****Oral Communication Skills I
(Sözlü İletişim Becerileri I)**

Overcoming the difficulties which are likely to occur during informal conversations, class discussions, oral reports and formal speech forms; improving student recognition and use of English language while participating in class discussions, as well as express opinions, debate, and negotiate conversation; synthesizing different oral information, and ideas by organizing, comparing, interpreting, giving descriptions, and stating main ideas of the oral information; developing critical thinking skills to defend opinions by making judgments about the received information, or the validity of ideas.

ELEP 102**(2+0+0) 2 Credits / 2 ECTS****Reading Skills II
(Okuma Becerileri II)**

Making inferences and deductions, and reading between the lines; identifying direct and indirect, literal and non-literal meanings by analyzing the information in the text; responding to texts through short written and verbal personal views; realizing the possible difference between the reader's perceived and writer's targeted meaning.

ELEP 104**(2+0+0) 2 Credits / 3 ECTS****Writing Skills II
(Yazma Becerileri II)**

Writing sophisticated texts of different genres, demonstrating awareness of the demands of academic writing in a variety of genres, identifying plagiarism and avoiding plagiarism in writing, choosing reliable sources (e.g., journal articles, book chapters, newspaper articles, online readings and videos, etc.) relevant to the topic of the writing task, evaluating arguments, critically analyzing and synthesizing information from different sources, responding appropriately to thoughts, opinions and work of others using APA citations and referencing, and fluently drafting, evaluating, and editing own and others' academic texts.

ELEP 106**(2+0+0) 2 Credits / 3 ECTS****Listening and Pronunciation II
(Dinleme ve Sesletim II)**

Exposure to an increased variety of listening texts both informal and academic, expanding listening comprehension and critical analysis, improving listening strategies, demonstrating comprehension of the main idea, major points and important details related to the listening text, increasing skills in note-taking, critically analyzing audio and video content for elements, distinguishing fact from opinion, recognizing the communicative purpose or the attitude and style of the speaker, making inferences based on the text listened, making connections among pieces of information listened, recognizing topic changes or introductions and conclusions in the listening material, etc.

- ELEP 108** (2+0+0) 2 Credits / 3 ECTS
Oral Communication Skills II
(Sözlü İletişim Becerileri II)
 Effective use of English in a variety of communication-oriented activities that require clarity of expression and critical assessment of other's positions including discussions, debates, individual and group presentations, informative and persuasive presentations, and interviews; learning the appropriate use of both formal and informal English language; effective use of supra-segmental features of the language (pitch, stress, and intonation) as well as delivering informative and persuasive presentations with the active use of technology including audio visual aids and techniques.
- ELEP 110** (2+0+0) 2 Credits / 2 ECTS
The Structure of English
(İngilizcenin Yapısı)
 Study of the word and sentence structures of English; simple, compound and complex sentence structures; contextual uses of time, mood, voice and aspect.
- ELEP 201** (2+0+0) 2 Credits / 3 ECTS
Approaches in English Language Learning and Teaching
(İngilizce Öğrenme ve Öğretim Yaklaşımları)
 The functions of learning and teaching English; the purpose of teaching English with reference fundamental principles; history of English language teaching; the reflections of English language teaching on the approaches to learning and teaching English language; main skills in English language teaching; classroom implementation samples; recent trends and issues in English language teaching; components of effective English language teaching; a social, cultural, and economic look into English language teaching.
- ELEP 202** (2+0+0) 2 Credits / 3 ECTS
Curriculum in ELT
(İngilizce Öğretim Programları)
 Basics terms and concepts of curriculum / instructional program; a historical development of English curriculum; curriculum approaches, content, targeted language skills, learning domains and subdomains (subdivisions) of the present day English curriculum; distribution of learning outcomes by grades and limits and their relation with other courses; inter-relationships among English curricula at educational stages from primary and middle to high schools; approaches, methods, techniques, equipment and materials used in implementing English curriculum; testing and assessment approaches; teacher competencies .
- ELEP 203** (2+0+0) 2 Credits / 3 ECTS
Linguistics I
(Dilbilimi I)
 Basic concepts of linguistic analysis; concept of language nature, structure and use with awareness-raising, error analysis of language learners' data, case study and comparative analysis of mother language and foreign language; language components as a system; linguistic competence and action, lower branches of linguistics, types of linguistic knowledge, linguistic universals, linguistic creativity,

linguistic lack of reason, sign languages, artificial languages and intercultural communication; research on brain and language, lateralization and handedness, language evolution, human language functioning, language use and language disorders (eg simultaneous listening test, divided brain, WADA test); phonetics, acoustics, affective and phonetics, speech organs, phonemes, vowels and consonants, international phonetics alphabet, double famous, triple famous, singing style and place.

ELEP 204

(2+0+0) 2 Credits / 3 ECTS

**Linguistics II
(Dilbilimi II)**

Error analysis of the outputs of language learners, case studies and contrastive analysis of L1 and L2, concepts about language nature, structure and use, morphology, bound and free morphemes, blends, inflectional and derivational morphemes, morphological analysis, morphological language typology, analysis of hierarchical deep structure, morphophonemic variants, syntax, phrases, clauses and sentence structure, transformational generative grammar, government and binding, minimalist program, constituent structure and role; pragmatics, reference, implicature, conversational maxims, speech acts and politeness, sociolinguistics, accent, register, style, standards of textuality, cohesive devices, discourse connections, functions, discourse situation, institutional discourse.

ELEP 205

(2+0+0) 2 Credits / 3 ECTS

**Critical Reading and Writing
(Eleştirel Okuma ve Yazma)**

Analyzing and summarizing selected updated written studies in the field of English Language Teaching; Localizing the information from the selected studies after critically analyzing them in their own contexts; Comparing the texts that present different arguments to create their own original relevant texts.

ELEP 206

(2+0+0) 2 Credits / 3 ECTS

**Language Acquisition
(Dil Edinimi)**

First and second language acquisition theories (behaviorism, innatism, information processing, connectivist models, interactionist position); stages and processes of first and second language acquisition; case studies, comparative analysis of first and second language use from lexical data, transcription of second language classroom interactions and comparison of first and second language acquisition using transcriptions; first language acquisition developmental stages, second language form-syntactic developmental stages, second language acquisition processes, learner characteristics and factors individual differences in second language acquisition (eg., the effect of personality, aptitude, intelligence, age, motivation and attitude, learner preferences and beliefs); differences of first and second language learning contexts (eg., natural and instructional settings).

- ELEP 207** (2+0+0) 2 Credits / 4 ECTS
English Literature I
(İngiliz Edebiyatı I)
 The history of British, American literature and literature originally in English, main concepts and techniques used in text analysis, main text types and genre, important periods and literary movements, the content and style of short stories, poems, drama etc. from different periods, the contribution of literature to our understanding of life, critical analysis and evaluation of texts and art.
- ELEP 208** (2+0+0) 2 Credits / 4 ECTS
English Literature II
(İngiliz Edebiyatı II)
 The history of British, American literature and literature originally in English; the periods and main movements in English literature, understanding main concepts, terminology, literary, philosophical and scientific movements by using samples texts from different periods.
- ELEP 301** (3+0+0) 3 Credits / 5 ECTS
Teaching Foreign Language to Young Learners I
(Çocuklara Yabancı Dil Öğretimi I)
 Differences between young language learners (Ages 5-12) and learners at other ages (in terms of learning linguistic skills and sub-skills) and myths about young language learners; language methodologies for young language learners (visual, auditory, and kinesthetic) and strategies (e.g. meta-cognitive, cognitive, and socio-affective); vocabulary, language skills, language structure teaching activities (i.e. puzzle, story, play, and simulation), audio-visual tool design (i.e. picture, realia, caricatures, puppets and songs); selecting, sorting, material adaptation and evaluation of teaching points based on learner language proficiency, cognitive and affective development.
- ELEP 302** (3+0+0) 3 Credits / 5 ECTS
Teaching Foreign Language to Young Learners II
(Çocuklara Yabancı Dil Öğretimi II)
 Different syllabi for young learners – ages 5 to 12- (story-based, content-based, thematic, task-based); effective use of children's literature, classroom management, language presentation and practice according to syllabus type chosen.
- ELEP 303** (3+0+0) 3 Credits / 5 ECTS
Teaching English Language Skills I
(İngilizce Dil Becerilerinin Öğretimi I)
 Different stages and techniques of listening, speaking, pronunciation and vocabulary teaching; the development of language awareness and teaching skills for groups with different age and proficiency levels; lesson planning principles and techniques appropriate for different proficiency levels.

ELEP 304**(3+0+0) 3 Credits / 5 ECTS****Teaching English Language Skills 2
(İngilizce Dil Becerilerinin Öğretimi 2)**

Detailed examination of the different stages and techniques of reading, writing and grammar teaching; the development of language awareness and teaching skills for groups with different age and proficiency levels; lesson planning principles and techniques appropriate for different proficiency levels.

ELEP 305**(2+0+0) 2 Credits / 3 ECTS****Teaching of Language and Literature I
(Dil ve Edebiyat Öğretimi I)**

The use of literature for language instruction is the focus; British and American literary pieces and samples of short stories and novels originally written in English and the differences between these two genres; methodologies for literature use with young and adults with varying proficiencies; completion of literature and language teaching in these two genres (short story and novel) in theory and practice; the analysis of literary texts in terms of linguistic features and content richness; the analysis of techniques of teaching culture via short story and novels: comparative and contrastive native and target language and culture's objects and products; idiomatic expressions and proverbs, expressions carrying cultural values; social structures, relationships and roles; traditions and folkways; beliefs, morals, prohibition and taboos, superstitions; political, historical, and economic background; cultural institutions; figurative/associative connotation, sense of humor.

ELEP 306**(2+0+0) 2 Credits / 3 ECTS****Teaching of Language and Literature II
(Dil ve Edebiyat Öğretimi II)**

The use of literature for language instruction is the focus; British and American literary pieces and samples of poems and theatrical pieces originally written in English and the differences between these two genres; activities directing the attention of learners to richness of literary pieces; the use of poems and theatrical pieces and teaching cultural components; comparative and contrastive analysis of objects and products in the cultures of the native and target languages; proverbs and idiomatic expressions; expressions rich in culture; social structures roles and relationships; traditions and customary practices, beliefs, value and norms, prohibitions and taboos, superstitions; political, historical and economical background; cultural organizations; connotative and metaphoric meanings, use of humor.

ELEP 401**(3+0+0) 3 Credits / 3 ECTS****Instructional Design in English Language Teaching
(İng. Öğretiminde Ders İçeriği Geliştir.)**

Theory and principles of course content and materials design in English language teaching (e.g. content and equipment selection, adaptation, development and evaluation in English language teaching) and basic opinions that are in favor of or against the use of English textbooks; relationship between method, ideology and textbook author; format related to the selection of course content and materials: student's language proficiency, learnability, ease of use, cultural content,

appropriateness of communicative interaction and language use, authentic, real-world tools that help students to interact with themselves and with teachers; adaptation and development of tools for language teaching, adaptation of textbook materials according to specific learning needs and teaching environments, English teacher candidates' designing their teaching and additional materials according to the appropriate method, student level, needs and current school environment; English content and equipment evaluation; current İDE methods on language materials related to the use of the English textbook in the İDÖ classroom environments, textbook evaluation criteria , and content and materials design.

ELEP 402**(3+0+0) 3 Credits / 4 ECTS****Testing in English Language Teaching (ELT)****(İng. Öğretiminde Sınav Hazırlama ve Değ.)**

Exam types and assessment methods used in the teaching of language skills for different age groups and language levels; principles for measuring and evaluating language skills; types of questions used in measuring levels of reading, writing, listening, speaking, vocabulary and grammar; exam preparation techniques and evaluation criteria; preparation of various question examples and exam evaluation practices.

ELEP 403**(3+0+0) 3 Credits / 3 ECTS****Translation****(Çeviri)**

Use of different texts for translation from Turkish to English and English to Turkish; grammatical and linguistic structures as well as context are analyzed during translation; the course also aims to raise the awareness of teacher candidates about the similarities and differences of the two languages; different translation techniques for different text types are emphasized.

ELECTIVE COURSES**ELEP 250****(2+0+0) 2 Credits / 4 ECTS****Language and Society****(Dil ve Toplum)**

Basic concepts in the interaction of language with society and the individual; geographical and social differences in language societies; linguistics diversity; language and culture, language planning.

ELEP 251**(2+0+0) 2 Credits / 4 ECTS****World Englishes and Culture****(Dünya İngilizceleri ve Kültür)**

The use of English as an international language; English as a common language and the different varieties of English in the World; the reflection of English as an international language in English language teaching and teacher education; developing students' awareness of the relation between language and culture and the analysis of the place of culture in language teaching; evaluating the cultural elements by analysing materials such as coursebooks.

ELEP 252 (2+0+0) 2 Credits / 4 ECTS
Pragmatics and Language Teaching
(Edimbilimi ve Dil Öğretimi)
 Knowledge about basics of pragmatics and models for understanding language in use; politeness theory in English language teaching; and materials design for context-specific utterances in English language.

ELEP 253 (2+0+0) 2 Credits / 4 ECTS
English Textbook Analysis
(İngilizce Ders Kitabı İncelemesi)
 Physical, educational, visual design and language features and standards that should be found in the course books; the appropriateness of the coursebook contents for the curriculum; the analysis of the content of some of the coursebooks in terms of content, language, suitability for student level, format, attractiveness, contribution to meaningful learning, ease of use in teaching, etc.

ELEP 254 (2+0+0) 2 Credits / 4 ECTS
Drama in ELT
(İngilizce Öğretiminde Drama)
 The definition and meaning of drama; the terms such as psycho-drama, creative drama, education socio-drama and etc.; the relationship between drama and play; the history of drama practices in education; the structure and stages of drama in education; drama setting and teacher qualities; the assessment of drama; examples from the field that match the educational goal, the development and application of examples.

ELEP 255 (2+0+0) 2 Credits / 4 ECTS
Material Design in English Language Teaching
(İngilizce Öğretiminde Materyal Tasarımı)
 Using field-specific instructional technologies; types of software and purposes of their use; principles of design and development of materials to be used in teaching of the field; determination of material needs; designing two and three dimensional teaching materials; worksheets; slides; development of teaching materials such as VCD, DVD, MP3 and MP4 files etc.; evaluation of classroom applications done by using different teaching materials.

ELEP 256 (2+0+0) 2 Credits / 4 ECTS
Contemporary Approaches in ELT
(İngilizce Öğretiminde Yeni Yaklaşımlar)
 Approaches to different student needs such as course design in English Language Teaching, English as second / foreign / international / special purpose / academic language; current practices such as constructivist approach, content-oriented, task-oriented, problem-focused, holistic language teaching, multiple intelligence and holistic language approach; second language / foreign language teaching and cultural teaching in language teaching, use of technology in language classes, place of communication in the developing world and intercultural interaction.

ELEP 350**(2+0+0) 2 Credits / 4 ECTS****English Vocabulary Teaching
(İngilizce Sözcük Bilgisi Öğretimi)**

English vocabulary focuses on analyzing the relationship between semantics and discourse, and developing the skills of teaching vocabulary with integrated vocabulary skills; students will be given the opportunity to assess the different types of English words, forms of word formation, and different meanings of words in context; elements of vocabulary teaching in the classroom and various text types that can be used in class, resources such as dictionary and corpus and vocabulary teaching techniques are covered; this course also focuses on exams that can be used to measure English vocabulary and teaching / learning strategies that support students' vocabulary learning.

ELEP 351**(2+0+0) 2 Credits / 4 ECTS****English in the Mass Media
(Kitle İletişiminde İngilizce)**

Students will be familiarized with published and online mass communication tools such as newspapers, and magazines; they will recognize the features of language used in mass communication and also they will be able to apply this knowledge in their writing; they will be able to analyse and critically evaluate editorial letters, articles and columns; they will be able to understand the validity and reliability of the news items and articles in mass communication; they will be able to write brief news items, headlines, advertisements, editorial letters by using the language features used in mass communication; and they will also be able to analyse how the target language is used to reflect its own cultural properties by looking into real life samples.

ELEP 352**(2+0+0) 2 Credits / 4 ECTS****Classroom Assessment
(Sınıf İçi Öğrenmelerin Değerlendirilmesi)**

Assessment tools used in education and their characteristics; assessment tools based on traditional approaches: written examinations, short-answer exams, true-false type tests, multiple choice tests, matching tests, oral examinations; tools for multi-faceted recognition of students: observation, interview, performance assessment, student portfolio, research papers, research projects, peer evaluation, self-evaluation, attitude scales; points to be considered in the evaluation of student success; evaluation of learning outcomes and grading.

ELEP 353**(2+0+0) 2 Credits / 4 ECTS****Sociolinguistics and Language Teaching
(Sosyodilbilim ve Dil Öğretimi)**

In this course where sociolinguistics is defined as the investigation of language in social contexts, information about the research topics in sociolinguistics and their types are provided. The students learn that there are different language usages in the society, and the language use changes depending on the region, social status, and ethnic groups. At the end of the course students will be able to understand the relationship between sociolinguistics and language teaching and understand how language changes within society.

ELEP 354**(2+0+0) 2 Credits / 4 ECTS****Discourse Analysis and Language Teaching
(Söylem Çözümlemesi ve Dil Öğretimi)**

English language teacher candidates will be able to analyze naturally occurring language use with reference to language skills and teaching practices in various discourse types and understand the importance of discourse for teaching languages. They can also explain the relationship between analysis of discourse and language teaching.

ELEP 355**(2+0+0) 2 Credits / 4 ECTS****Teaching Integrated Language Skills
(Tümleşik Dil Becerilerinin Öğretimi)**

This course aims to help teacher trainees teach communicative language skills in an integrated way by helping them improve their knowledge and use of teaching methods and techniques, their competence of integrating language skills such as reading, speaking, listening, and writing in a lesson plan for adolescent and adult learners, and their competence of how to integrate grammar, vocabulary, and pronunciation into skill-based lesson plans.

DEPARTMENT OF MATHEMATICS AND SCIENCE EDUCATION

Chair

Asst. Prof. Zerrin Toker

Academic Staff

Asst. Prof. Zerrin Toker, Asst. Prof. Çiğdem Alkaş Ulusoy, Asst. Prof. Elçin Emre Akdoğan, Asst. Prof. Emine Gül Çelebi İlhan, Gizem Güzeller*.

* Research Assistant

Undergraduate Program in Elementary Mathematics Education

Elementary Mathematics Education Program in the Department of Mathematics and Science Education at TED University is an undergraduate program, which educates elementary school mathematics teachers for elementary schools from fifth to eighth grades. The main goal of the program is to train highly qualified elementary teachers who are reflective and critical thinkers and capable of showing leadership in their field as well as contributing to the field of elementary mathematics education at both national and international levels.

Upon successful completion of their studies, students are awarded the Bachelor's degree in Elementary Mathematics Education. Our students who receive an education from a first-rate faculty in state-of-the-art facilities and taking advantage of the rich learning environments provided by the university will be sought after upon graduation and will easily find employment in the school systems in Turkey and the region.

Program Outcomes

Graduates of the Elementary Mathematics Education program will demonstrate the following learning outcomes:

1. Integrate the basic level theoretical and practical mathematics knowledge with elementary mathematics pedagogy.
2. Develop concrete solutions to daily life problems from a mathematical point of view.
3. Critically analyse individual and professional innovations and developments within and outside the field by monitoring them with an interdisciplinary perspective and utilise them efficiently within the teaching-learning process.
4. Use English language efficiently in promoting his/her individual and professional practices.
5. Acquire and analyse information by means of information and communication technology resources in order to accomplish his/her individual and professional goals.
6. Exhibit behavior dedicated to the profession of elementary mathematics teaching, professionalism, life-long learning, ethical values, individual and professional development.
7. Use individual and collaborative skills with all stakeholders of education to support the students' development in community service projects.
8. Observe his/her own progress in the learning and teaching process, utilizes life-long learning skills.

9. Design learning environments that promote individual and collaborative learning appropriate to students' developments and cultural diversity.
10. Utilize diverse assessment methods and tools in order to regularly monitor, record and plan the development and learning of the students.

Undergraduate Curriculum (2017-2018 and Before)

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
MATH 105	Fundamentals of Mathematics	3	0	0	3	5
BIO 101	Life Sciences	3	0	0	3	5
TUR 101	Turkish I	2	0	0	2	2
HIST 101	History of Turkish Republic I	2	0	0	2	2
ENG 101	English for Academic Purposes	2	2	0	3	5
CMPE 101	Introduction to Information Technologies	2	0	2	3	5
EDU 101	Introduction to Education	2	2	0	3	6
TOTAL		16	4	2	19	30

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
MATH 108	Discrete Mathematics	3	0	0	3	5
PHYS 104	Introduction to Natural Sciences	2	2	0	3	5
PHIL 104	Philosophy and Ethics	3	0	0	3	5
TUR 102	Turkish II	2	0	0	2	2
HIST 102	History of Turkish Republic II	2	0	0	2	2
ENG 102	Expository Writing	2	2	0	3	5
EDU 102	Instructional Principles and Methods	2	2	0	3	6
TOTAL		16	6	0	19	30

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
ART 100	Visual Arts and Aesthetics	2	2	0	3	5
LIT 201	Children's Literature	3	0	0	3	5
EDU 201	School, Families and Society	1	2	0	2	4
MATH 209	Analytic Geometry	2	0	0	2	4
MATH 205	Calculus I	3	2	0	4	7
EME 203	History of Mathematics	0	2	0	1	3
TOTAL		11	8	0	15	28

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
EDU 202	Research Methods	2	0	0	2	3
PSY 104	Psychology	3	0	0	3	5
MATH 208	Basic Algebraic Structures	2	2	0	3	6
MATH 206	Calculus II	3	2	0	4	7
EME 220	Middle School Mathematics	2	2	0	3	6
EDU 200	Observation in Schools	1	4	0	3	6
TOTAL		13	10	0	18	33

Semester 5

Code	Course Title	C	P	L	Cr	ECTS
EME 307	Child Development and Learning in the Middle Grades	2	0	0	2	4
MATH 303	Introduction to Differential Equations	3	2	0	3	5
MATH 305	Introduction to Probability & Stat. I	2	2	0	3	4
EME 321	Teaching Middle School Mathematics	2	2	0	3	6
EME 381	Practicum	1	4	0	3	6
SF	Secondary Field I	3	0	0	3	5
TOTAL		13	10	0	17	30

Semester 6

Code	Course Title	C	P	L	Cr	ECTS
EDU 302	Special Education and Inclusion	2	0	0	2	3
EME 302	Technology in Math Education	2	2	0	3	6
MATH 306	Introduction to Probability & Stat. II	2	2	0	3	4
EME 304	Assessment and Evaluation in Mathematics Education	3	0	0	3	6
EME 308	Nature of Mathematical Knowledge for Teaching	2	0	0	2	4
MATH 312	Basic Linear Algebra	2	2	0	3	5
SF	Secondary Field II	3	0	0	3	5
TOTAL		16	6	0	19	33

Semester 7

Code	Course Title	C	P	L	Cr	ECTS
TEDU 400	Student Development Seminar	0	0	0	0	1
EDU 401	Community Service	1	2	0	2	3
EME 471	Research Project	1	4	0	3	7
EME 406	Seminar	0	0	0	0	1
EME 481	Student Teaching I	1	8	0	5	9
SF	Secondary Field III	3	0	0	3	5
TOTAL		6	14	0	13	26

Semester 8

Code	Course Title	C	P	L	Cr	ECTS
GPC 212	Guidance and Psychological Counseling	2	2	0	3	6
EDU 404	Turkish Education System & School Management	2	0	0	2	3
EME 472	Capstone Experience	1	4	0	3	7
EME 482	Student Teaching II	1	8	0	5	9
SF	Secondary Field IV	3	0	0	3	5
TOTAL		9	14	0	16	30

Totals expected for graduation		100	72	2	136	240
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Undergraduate Course Descriptions (2017-2018 and Before)

- MATH 105** **(3+0+0) 3 Credits / 5 ECTS**
Fundamentals of Mathematics
(Matematiğin Temelleri)
 Symbolic logic. Set theory. Cartesian product. Relations. Functions. Injective, surjective and bijective functions. Composition of functions. Equipotent sets. Countability of sets. More about relations: equivalence relations, equivalence classes and partitions. Quotient sets. Order relations: Partial order, Total order, Well ordering. Mathematical induction and recursive definitions of functions.
- MATH 108** **(3+0+0) 3 Credits / 5 ECTS**
Discrete Mathematics
(Ayrık Matematik)
 Basic counting: The sum and product rules, the pigeonhole principle, generalized permutations and combinations. The binomial theorem. Discrete probability. Inclusion-exclusion. Recurrence relations. Introduction to graphs and trees.
- MATH 209** **(2+0+0) 2 Credits / 4 ECTS**
Analytic Geometry
(Analitik Geometri)
 Fundamental principles of Analytic Geometry. Cartesian coordinates in plane and space. Lines in the plane. Review of trigonometry and polar coordinates. Rotation and translation in the plane. Vectors in plane and space. Lines and planes in 3-space. Basics about conics. Basic surfaces in space, cylinders, surface of revolutions, quadric surfaces. Cylindrical and spherical coordinates.
- MATH 208** **(2+2+0) 3 Credits / 6 ECTS**
Basic Algebraic Structures
(Temel Cebirsel Yapılar)
 Binary operations. Groups. The symmetric group. Subgroups. The order of an element. Cyclic groups. Rings. Integral domains. Subrings. Ideals. Fields: \mathbb{Q} , \mathbb{R} , \mathbb{C} , \mathbb{Z}_p . The concept of an isomorphism. The ring of integers and the ring of polynomials over a field: Division and Euclidean algorithms. GCD and LCM. Prime factorization. Quotient structures.
- MATH 205** **(3+2+0) 4 Credits / 7 ECTS**
Calculus I
(Analiz I)
 Functions and their graphs. Limits and continuity. Tangent lines and derivative. Chain rule. Implicit differentiation. Inverse functions. Related rates. Linear approximation. Extreme values. Mean Value Theorem and its applications. Sketching graphs. Indeterminate forms and L'Hospital's rules. Definite integral. Fundamental Theorem Calculus. Substitution and areas between curves.

- MATH 206** (3+2+0) 4 Credits / 7 ECTS
Calculus II
(Analiz II)
 Indefinite Integral. Techniques of integration. Arc length. Volumes and surface areas of solids of revolution. Improper integrals. Sequences and infinite series. Power series. Taylor series. Vectors and analytic geometry in 3-space. Functions of several variables: Limits, continuity, partial derivatives, chain rule, directional derivatives, tangent plane and linear approximations. Extreme values. Lagrange multipliers. Double integrals. Triple integrals.
- MATH 303** (3+2+0) 3 Credits / 5 ECTS
Introduction to Differential Equations
(Diferansiyel Denklemlere Giriş)
 First order differential equations and various applications. Higher order linear differential equations. Power series solutions. The Laplace transform. Solution of initial value problems. Systems of linear differential equations. Introduction Partial Differential Equations.
- MATH 305** (2+2+0) 3 Credits / 4 ECTS
Introduction to Probability and Statistics I
(Olasılık ve İstatistik Teorisine Giriş I)
 Experiments and events. Set theory. Axioms and basic theorems of probability. Finite sample spaces and counting techniques. Independent events. Conditional probability. Random variables and distributions. Expectation, variance, covariance and correlation. Some special distributions.
- MATH 306** (2+2+0) 3 Credits / 4 ECTS
Introduction to Probability Statistics II
(Olasılık ve İstatistik Teorisine Giriş II)
 Random samples. Sample mean and variance. Chebychev`s inequality. Law of large numbers. Central limit theorem. Estimation. Maximum likelihood, unbiased, minimum variance unbiased, consistent and efficient estimators. Sufficiency. Confidence intervals. Hypothesis testing. Introduction to nonparametric methods. Regression and analysis of variance.
- MATH 312** (2+2+0) 3 Credits / 5 ECTS
Basic Linear Algebra
(Temel Lineer Cebir)
 Matrices, determinants and systems of linear equations. Vector spaces, the Euclidian space, inner product spaces, linear transformations. Eigenvalues, Eigenvectors. Diagonalization.
- EME 203** (0+2+0) 1 Credit / 3 ECTS
History of Mathematics
(Matematik Tarihi)
 Mathematics in different civilizations. Contributions of the mathematics to the society. Development of mathematics throughout the ages as a collective activity. Women in mathematics field. Integrating the history of mathematics with mathematics education. Current trends in mathematics.

EME 220**(2+2+0) 3 Credits / 6 ECTS****Middle School Mathematics
(Ortaokul Matematiđi)**

Analysis of the national middle school mathematics curriculum and international standards (NCTM, CCSS). Mathematical Skills. Using concrete materials. Basic concepts of middle school mathematics. Numbers and operations. Geometry and Measurement. Algebraic Reasoning. Probability. Data.

EME 304**(3+0+0) 3 Credits / 6 ECTS****Assessment and Evaluation in Mathematics Education
(Matematik Eđitiminde Ölçme ve Deđerlendirme)**

Basic concepts of assessments and evaluation. Types of classroom assessments and their development. Grading and reporting. Validity and reliability of qualitative and quantitative data collection tools. Views of international organizations (OECD, IAE, NAEP etc.) on education, and investigating a large scale assessments by the implementation of some studies such as PISA, TALIS, TIMSS, and PIRLS. The assessment frameworks of the achievement tests and the questionnaires of the large scale assessments.

EME 307**(2+0+0) 2 Credits / 4 ECTS****Child Development and Learning in the Middle Grades
(Ortaokul Düzeyinde Çocuk Gelişimi ve Öğrenme)**

Characteristics of middle grade students starting from age 8 to 13. Physical, intellectual, social, psychological, moral and ethical development. Understanding young adolescents' unique brain growth and cognitive development. Learning environments appropriate for these characteristics and its design.

EME 321**(2+2+0) 3 Credits / 6 ECTS****Teaching Middle School Mathematics
(Ortaokul Matematik Öğretimi)**

Instructional methods and strategies for teaching fundamental concepts of middle school mathematics. Designing instructional activities which constitutes fundamental concepts. Integrating technology as a teaching tool. Lesson planning from different perspectives and diversification. Instruction and assessment.

EME 302**(2+2+0) 3 Credits / 6 ECTS****Technology in Mathematics Education
(Matematik Eđitiminde Teknoloji)**

Benefits and limitations of using educational technologies in mathematics. Using interfaces of the software of technological tools and resources. Integration of the new and developing educational technology such as web-based software, dynamic software, graphical tools (CBR), simulations, calculators. Design, and critique technology-enhanced mathematical activities.

EME 308	(2+0+0) 2 Credits / 4 ECTS
Nature of Mathematical Knowledge for Teaching (Matematik Öğretiminin Doğası)	
The nature of mathematical knowledge needed in mathematics teaching. Their roles in learning. The nature of mathematical knowledge and how it is connected with teaching. Reasons for misconceptions.	
EME 381	(1+4+0) 3 Credits / 6 ECTS
Practicum (Okul Deneyimi)	
Designing and planning curriculum and learning environments under the supervision of mentor teachers. Teaching as an assistant teacher. Assessing children's learning. Engaging parents. Attending professional teacher development activities as elementary mathematics teacher.	
EME 471	(1+4+0) 3 Credits / 7 ECTS
Research Project (Araştırma Projesi)	
Action research. Case Study method. Qualitative research methods. Quantitative research methods. Mixed methods. Data Collection. Data Analysis. Applying such research methods to a contemporary elementary education issue.	
EME 406	(0+0+0) 0 Credit / 1 ECTS
Seminar (Seminer)	
Become familiar with research in mathematics education. Links between research and practice in mathematics education. Implications for the practice. Critical discussions based on the readings. Guests from the relevant field and virtual seminars from the international and national experts in the field.	
EME 481	(1+8+0) 5 Credits / 9 ECTS
Student Teaching I (Öğretmenlik Uygulaması I)	
Studying individually with children at different development level. Instructional planning. Design of learning environments. Teaching. Assessment of Learning. Participation in professional development activities.	
EME 472	(1+4+0) 3 Credits / 7 ECTS
Capstone Experience (Bitirme Projesi)	
Putting all the skills and knowledge acquired throughout undergraduate studies into practice. Creating a professional teacher portfolio (content of the portfolio: developmentally appropriate teaching activities, samples of instructional plans, evidence that shows appropriate Math. education learning environment design, samples of work related to school, family and community relationships, samples of assessment activities, evidence of participation in professional development activities). Presentation of this professional portfolio.	

Student Teaching II

(Öğretmenlik Uygulaması II)

Studying individually with children at different development level. Instructional planning. Design of learning environments. Teaching. Assessment of Learning. Participation in professional development activities.

Undergraduate Curriculum (2018-2019 and After)

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
EDUC 101	Introduction to Education	2	0	0	2	3
EDUC 103	Educational Sociology	2	0	0	2	3
HIST 103	History of Turkish Republic I	2	0	0	2	3
GENC 101	Foreign Language I	2	0	0	2	3
TUR 103	Turkish I	3	0	0	3	5
CMPE 103	Information Technologies	3	0	0	3	5
MATE 101	Fundamentals of Mathematics I	2	0	0	2	2
MATE 103	Calculus I	2	0	0	2	3
MATE 105	History of Mathematics	2	0	0	2	3
TOTAL		20	0	0	20	30

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
EDUC 102	Educational Psychology	2	0	0	2	3
EDUC 104	Educational Philosophy	2	0	0	2	3
HIST 104	History of Turkish Republic II	2	0	0	2	3
GENC 102	Foreign Language II	2	0	0	2	3
TUR 104	Turkish II	3	0	0	3	5
MATE 102	Fundamentals of Mathematics II	2	0	0	2	4
MATE 104	Calculus II	2	0	0	2	4
MATE 106	Discrete Mathematics	2	0	0	2	5
TOTAL		17	0	0	17	30

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
EDUC 203	Instructional Technologies	2	0	0	2	3
EDUC 201	Instructional Principles and Methods	2	0	0	2	3
EDUC ELECT.	Elective (V_MATE)	2	0	0	2	4
GENC ELECT.	Elective (GC)	2	0	0	2	3
MATE ELECT.	Elective (F_MATE)	2	0	0	2	4
MATE 201	Learning and Teaching Approaches in Mathematics	2	0	0	2	3
MATE 203	Linear Algebra I	2	0	0	2	3
MATE 205	Analytic Geometry	2	0	0	2	4
MATE 207	Calculus III	2	0	0	2	3
TOTAL		18	0	0	18	30

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
EDUC 202	History of Turkish Education	2	0	0	2	3
EDUC 204	Research Methods in Education	2	0	0	2	3
EDUC ELECT.	Elective (V_MATE)	2	0	0	2	4
GENC ELECT.	Elective (GC)	2	0	0	2	3
GENC 202	Community Services	1	2	0	2	3
MATE ELECT.	Elective (F_MATE)	2	0	0	2	4
MATE 202	Middle School Mathematics Curricula	2	0	0	2	3
MATE 204	Linear Algebra II	2	0	0	2	2
MATE 206	Algorithm and Programming	2	0	0	2	2
MATE 208	Probability	2	0	0	2	3
TOTAL		19	2	0	20	30

Semester 5

Code	Course Title	C	P	L	Cr	ECTS
EDUC 301	Classroom Management	2	0	0	2	3
EDUC 303	Morals and Ethics in Education	2	0	0	2	3
EDUC ELECT.	Elective (V_MATE)	2	0	0	2	4
GENC ELECT.	Elective (GC)	2	0	0	2	3
MATE ELECT.	Elective (F_MATE)	2	0	0	2	4
MATE 301	Teaching Numeracy	3	0	0	3	5
MATE 303	Teaching of Geometry and Measurement	3	0	0	3	4
MATE 305	Statistics	2	0	0	2	2
MATE 307	Algebra	2	0	0	2	2
TOTAL		20	0	0	20	30

Semester 6

Code	Course Title	C	P	L	Cr	ECTS
EDUC 302	Assessment and Evaluation in Education	2	0	0	2	3
EDUC 304	Turkish Education System and School Management	2	0	0	2	3
EDUC ELECT.	Elective (V_MATE)	2	0	0	2	4
GENC ELECT.	Elective (GC)	2	0	0	2	3
MATE ELECT.	Elective (F_MATE)	2	0	0	2	4
MATE 302	Teaching of Algebra	3	0	0	3	5
MATE 304	Teaching of Probability and Statistics	3	0	0	3	4
MATE 306	Connection in Mathematics Education	3	0	0	3	4
TOTAL		19	0	0	19	30

Semester 7

Code	Course Title	C	P	L	Cr	ECTS
EDUC 403	Teaching Practice I	2	6	0	5	10
EDUC 409	Special Education and Inclusion	2	0	0	2	3
EDUC ELECT.	Elective (V_MATE)	2	0	0	2	4
MATE ELECT.	Elective (F_MATE)	2	0	0	2	4
MATE 401	Problem Solving in Mathematics	2	0	0	2	3
MATE 403	Misconceptions in Mathematics Education	2	0	0	2	3
MATE 405	Logical Reasoning	2	0	0	2	3
TOTAL		14	6	0	17	30

Semester 8

Code	Course Title	C	P	L	Cr	ECTS
EDUC 404	Teaching Practice II	2	6	0	5	12
EDUC 410	Counseling in Schools	2	0	0	2	3
EDUC ELECT.	Elective (V_MATE)	2	0	0	2	4
MATE ELECT.	Elective (F_MATE)	2	0	0	2	4
MATE 402	Philosophy of Mathematics	2	0	0	2	3
MATE 404	Modeling in Mathematics Education	2	0	0	2	4
TOTAL		12	6	0	15	30

Totals expected for graduation		139	14	0	146	240
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Undergraduate Course Descriptions (2018-2019 and After)

MATE 101 (2+0+0) 2 Credits / 2 ECTS

**Fundamentals of Mathematics I
(Matematiğin Temelleri I)**

Topics in numeracy and algebra strands of mathematics curriculum: Natural numbers, operations with natural numbers, fractions, operations with fractions, decimals, percents, factors and multiples, sets, integers, operations with integers, rational numbers, operations with natural numbers, ratio, ratio and proportion, powers and square roots, algebraic expressions, equality and equations, linear equations, algebraic expressions and identities, inequalities. Fundamental concepts in contents and their properties, relationship between those concepts, discussing the concepts, converting different representations of the concepts to each other.

MATE 102 (2+0+0) 2 Credits / 4 ECTS

**Fundamentals of Mathematics II
(Matematiğin Temelleri II)**

Topics in geometry and statistics and probability strands in mathematics curriculum: Basic geometric concepts and drawings, triangles and rectangles, triangles, measuring length and time, measuring area, geometric shapes, angles, lines and angles, circles, circles and circular area, measuring liquids, transformational geometry, polygons, views of objects from different perspectives, equality and similarity, data collection and evaluation, basic concepts and characteristics of data analysis. Fundamental concepts in contents and their properties, relationship between those concepts, discussing the concepts, converting different representations of the concepts to each other.

- MATE 103** (2+0+0) 2 Credits / 3 ECTS
Calculus I
(Analiz I)
 Sets and number systems; relation, function types, exponential functions and logarithmic functions; limit, continuity concepts and applications; derivative, derivative applications and graphical expressions.
- MATE 104** (2+0+0) 2 Credits / 4 ECTS
Calculus II
(Analiz II)
 Trigonometric functions, trigonometric relations, trigonometric equation solutions; complex numbers and characteristics; Riemann sum, definite integral, indefinite integral, integration methods, applications of integral, improper integral, series and convergence tests.
- MATE 105** (2+0+0) 2 Credits / 3 ECTS
History of Mathematics
(Matematik Tarihi)
 The position of mathematics history in mathematics education; Ancient Egyptian mathematics; Ancient Greek mathematics; Far East mathematics; Islamic world mathematicians; the birth of contemporary mathematics; historical development of mathematical concepts.
- MATE 106** (2+0+0) 2 Credits / 5 ECTS
Discrete Mathematics
(Soyut Matematik)
 Symbolic logic and proof techniques; sets, algebra of sets, partition of sets, product sets; inverse relation, composition of relations, equivalence relations and equivalence classes, ordered relation; partial ordered set, full ordered set; functions, an one-to-one and onto functions, composition of functions, inverse functions, permutations, operations.
- MATE 201** (2+0+0) 2 Credits / 3 ECTS
Learning and Teaching Approaches in Mathematics
(Matematik Öğrenme ve Öğretim Yaklaşımları)
 The nature of mathematics and mathematical thinking; the meaning of mathematics learning and teaching; aim and basic principles of mathematics teaching; history of mathematics teaching; reflections of learning and teaching approaches on mathematics teaching; fundamental skills in mathematics teaching; in-class examples of teaching; current trends and problems in mathematics teaching; components of effective mathematics teaching; looking at mathematics teaching from social, cultural and economic aspects.
- MATE 202** (2+0+0) 2 Credits / 3 ECTS
Middle School Mathematics Curricula
(Ortaokul Matematik Öğretim Programları)
 Fundamental concepts about curriculum; the development of middle school mathematics curriculum from past to present; the approach, content, and skills of current middle school mathematics curriculum; learning and sub-learning areas; distribution and boundaries of learning objectives by

grade levels, relationship of mathematics curriculum with other disciplines; the relationship of middle school mathematics curriculum with elementary and high school mathematics curriculum; methods, techniques, tools and materials used; measurement evaluation approach; teacher qualifications.

MATE 203

(2+0+0) 2 Credits / 3 ECTS

**Linear Algebra I
(Lineer Cebir I)**

Matrices, operations with matrices, special types of matrices; elementary operations, echelon matrix, elementary matrices and inverse of a matrix, rank of a matrix; determinant, properties of determinant function; Systems of linear equations, methods of solving systems of linear equations (Gaussian elimination, Gauss-Jordan reduction, inverse matrix and cramer method).

MATE 204

(2+0+0) 2 Credits / 2 ECTS

**Linear Algebra II
Lineer Cebir II**

Vector spaces, subspaces, linear independence, linear combinations; stretching, base and dimension; linear transformations, core and image of a linear transformation; isomorphics, self-values and self-vectors; characteristic polynomials; diagonalization, inner product spaces, orthogonality of vectors, orthonormal vector sets.

MATE 205

(2+0+0) 2 Credits / 4 ECTS

**Analytic Geometry
(Analitik Geometri)**

Cartesian coordinates in plane and space; vectors in plane and space; lines in the plane; lines and planes in three-dimensional space; reflections by line and plane; the relationships of point-line, line-plane and planes with each other; translation and rotation in plane.

MATE 206

(2+0+0) 2 Credits / 2 ECTS

**Algorithm and Programming
(Algoritma ve Programlama)**

Design of an algorithm; flow diagrams, input-output concepts, loops, decision structures, decision making and development of appropriate algorithms for cyclic problems; applications of programs (such as scratch, code.org) using algorithms and flowcharts by visualization; using appropriate function to create appropriate solution algorithms; developing appropriate solution algorithms using single and double dimensional sequences; coding and applications of generated algorithms in Computer Algebra Systems.

MATE 207

(2+0+0) 2 Credits / 3 ECTS

**Calculus III
(Analiz III)**

Multivariable functions; IRn's topology, limit, continuity, sequences of functions and series; derivative, directional derivative, partial derivative, geometric interpretation of partial derivative, higher order derivatives and chain rule.

MATE 208**(2+0+0) 2 Credits / 3 ECTS****Probability
(Olasılık)**

The fundamental principle of counting; concept of permutation and its applications; concept of combination and its applications; binomial theorem, the concept of probability, fundamental concepts related to probability and axioms of probability; conditional probability and Bayes' theorem; geometric probability problems; random variable concept; probability function, probability density function; expected value and variance of random variables; moment generating functions and moments; some discrete distributions, Bernoulli, binomial, geometric, hypergeometric, Poisson distributions; some continuous distributions, uniform distribution, exponential distribution, normal distribution and properties.

MATE 250**(2+0+0) 2 Credits / 4 ECTS****Computer Assisted Mathematics Teaching
(Bilgisayar Destekli Matematik Öğretimi)**

The importance of technology in mathematics teaching; use of software such as Computer Algebra Systems (CAS) and Dynamic Geometry Systems (DGS), producing and implementing interactive activities through these softwares; evaluation of student products.

MATE 251**(2+0+0) 2 Credits / 4 ECTS****Culture and Mathematics
(Kültür ve Matematik)**

Relationship between mathematics and culture; defining mathematical concepts in their cultural contexts, mathematical thinking structures of different cultures, basic principles of research in the field of ethnomathematics, the relationship between mathematics-anthropology-linguistics; the importance of including ethnomathematic studies in classroom applications; designing in-class mathematical activities for different cultural contexts.

MATE 252**(2+0+0) 2 Credits / 4 ECTS****Mathematics Teaching in Primary School
(İlkokul Matematik Öğretimi)**

The objectives of primary school mathematics teaching, basic principles; analysis of primary mathematics curriculum from the aspects of the aim, content, philosophical approach, teaching methods, evaluation and evaluation techniques; mathematical understanding of primary school students, misconceptions and difficulties in primary school students; measurement and assessment in primary school mathematics.

MATE 253**(2+0+0) 2 Credits / 4 ECTS****Mathematics Textbook Analysis
(Matematik Ders Kitabı İncelemesi)**

Physical, educational, visual design and language expression features and standards that should be included in the textbook; the appropriateness of the content of the textbooks to the program; analysis of current textbooks based on the aspects of content, language, student level, format, attractiveness, contribution to meaningful learning, ease of use in teaching etc.

MATE 254**(2+0+0) 2 Credits / 4 ECTS****Inclusion Practices in Mathematics Education
(Matematik Eğitiminde Kaynaştırma Uygulamaları)**

Definition and basic principles of inclusion; characteristics of inclusion students; social relations of inclusion students with other students and their teaching situations, advantages and disadvantages of being labeled; supporting the inclusion students with individualized education programs in the mathematics lesson; part-time and full-time inclusion applications and evaluation.

MATE 255**(2+0+0) 2 Credits / 4 ECTS****Self-regulation in Mathematics Education
(Matematik Eğitiminde Özdüzenleme)**

Self-regulation and self-regulated learning processes; the purpose and importance of self-regulated learning in mathematics education; characteristics of self-regulated learner in mathematics teaching and self-regulated learning strategies; classroom environments and teaching practices that support self-regulated learning; metacognition; self-regulation in teachers; assessment of metacognition and self-regulation skills.

MATE 301**(3+0+0) 3 Credits / 5 ECTS****Teaching Numeracy
(Sayıların Öğretimi)**

Number system set-up, natural numbers, operations with natural numbers, numbers in other bases, integers, factors and multiples, rules of divisibility, GCF and LCM concepts and applications; ratio and proportion concepts and applications; real numbers, exponents and roots, fractions, decimal representations, percentages; rational and irrational numbers; sets and basic concepts related to sets. Teaching of these concepts (organizing course content-using appropriate instructional materials and strategies etc.); students' knowledge about these issues (understanding, interpreting, understanding difficulties students have related to these concepts, general mistakes, misconceptions and reasons); the relationship of these concepts with daily life and other disciplines.

MATE 302**(3+0+0) 3 Credits / 5 ECTS****Teaching of Algebra
(Cebir Öğretimi)**

Algebraic thinking, importance of algebraic thinking in mathematics teaching; pre-algebra; arithmetic-algebra relationship; generalized arithmetic and functional thinking; basic algebra concepts; different representations in algebra teaching; variable, algebraic expression, equality and equation, linear equations, teaching of identities and inequalities organizing content of instruction, using appropriate materials and strategies, etc.); student knowledge about these subjects (understanding and interpreting students thinking, knowing students' difficulties, mistakes, misconceptions and their reasons); the relationship of these concepts with daily life and other disciplines.

- MATE 303** (3+0+0) 3 Credits / 4 ECTS
Teaching of Geometry and Measurement
(Geometri ve Ölçme Öğretimi)
 Van Hiele thinking levels; basic geometric concepts, geometric structures, geometric shapes; equality and similarity; transformational geometry, projection, pattern and tessellations, fractals; Pythagorean theorem. nature of measuring, time, length, area, volume and angle measurement. Teaching of subjects (organizing content of an instruction, using appropriate teaching materials and strategies, etc.); information about students related to these subjects (understanding and interpreting student thinking; knowing student' difficulties, mistakes, misconceptions and the reasons); the relationship of these concepts with daily life and other disciplines.
- MATE 304** (3+0+0) 3 Credits / 4 ECTS
Teaching of Probability and Statistics
(Olasılık ve İstatistik Öğretimi)
 Basic concepts of probability, types of probability, probability simulations and distributions; data collection, data organization, representation and analysis, concept of distribution, frequency distributions; teaching of central tendency and distribution concepts (organizing content of an instruction, using appropriate materials and strategies, etc.); information about students related to these subjects (understanding and interpreting student's thinking, knowing students' difficulties, mistakes, misconceptions and reasons of them); the relationship of these concepts with daily life and other disciplines.
- MATE 305** (2+0+0) 2 Credits / 2 ECTS
Statistics
(İstatistik)
 Sampling, organizing data and data analysis; sampling distribution and estimation; confidence interval concept; interval estimation for the difference of two mass averages, interval estimation for the ratio of two mass variances, binomial parameter interval estimation for p; hypothesis testing, correlation and regression.
- MATE 306** (3+0+0) 3 Credits / 4 ECTS
Connection in Mathematics Education
(Matematik Öğretiminde İlişkilendirme)
 Establishing relationships between concepts and processes; expressing mathematics concepts and rules with different representations; connecting different mathematical concepts with each other; connecting mathematics with other disciplines; connecting mathematics with everyday life.
- MATE 307** (2+0+0) 2 Credits / 2 ECTS
Algebra
(Cebir)
 Binary operations, definition of group and basic properties, subgroups, permutation groups, cyclic groups, uniform symmetry group of n-gon, rotational permutations, single and double permutations, homomorphisms, Kosets and Lagrange's theorem, isomorphism theorems, the effect of a group on a

set, rings, lower ring and ideals, prime and maximal ideals, ring homomorphisms, arithmetic in rings, polynomial rings, objects; Burnside theorem and its applications, p-groups and related theorems, A_n simplicity for $n > 4$.

MATE 350

(2+0+0) 2 Credits / 4 ECTS

**Activity Development in Mathematics Teaching
(Matematik Öğretiminde Etkinlik Geliştirme)**

The purpose and importance of using activities in mathematics teaching; characteristics of activities used in mathematics teaching; issues to be considered in the preparation and implementation of activities; evaluation of sample activities; activity development; measurement and evaluation in activity based classes.

MATE 351

(2+0+0) 2 Credits / 4 ECTS

**Materials Design in Mathematics Teaching
(Matematik Öğretiminde Materyal Tasarımı)**

Using field-specific instructional technologies; types of software and purposes of their use; principles of design and development of materials to be used in teaching of the field; determination of material needs; designing two and three dimensional teaching materials; worksheets; slides; development of teaching materials such as VCD, DVD, MP3 and MP4 files etc.; evaluation of classroom applications done by using different teaching materials.

MATE 352

(2+0+0) 2 Credits / 4 ECTS

**Out-of-School Learning Environments in Mathematics Teaching
(Matematik Öğretiminde Okul Dışı Öğrenme Ortamları)**

The scope and importance of out-of-school learning; mathematics teaching in out-of-school environments; teaching methods and techniques (project-based learning, environment-based teaching, etc.) appropriate for out-of-school learning; out-of-school learning environments (museums, science centers, zoos, botanical gardens, industrial establishments, national parks, science festivals, science camps, natural environments, rural areas etc.); planning and implementation and evaluation of out-of-school learning activities.

MATE 353

(2+0+0) 2 Credits / 4 ECTS

**Communication in Mathematics Classrooms
(Matematik Sınıflarında İletişim)**

Recognizing that mathematics is a language with its own symbols and terminology, using the symbols and terms of mathematics effectively and correctly, using mathematical language in mathematics itself and in an appropriate and effective way in different disciplines and life, expressing mathematical ideas using different forms of representation such as concrete model, shape, picture, graphic, table, symbol etc. expressing mathematical thoughts verbally and by writing, connecting daily language with mathematical language and symbols, connecting mathematical language with daily language and symbols; interpreting the accuracy and meaning of mathematical ideas.

- MATE 354** (2+0+0) 2 Credits / 4 ECTS
Teaching Mathematics to the Gifted
(Üstün Yetenekli Öğrencilere Matematik Öğretimi)
 Recognition of gifted students in mathematics, advantages and disadvantages of labeling; characteristics of gifted students, development of giftedness in mathematics, program preferences for gifted students, differentiation, enrichment, acceleration for gifted students, supporting gifted students in class, social relations with gifted students; individualized education programs for gifted students.
- MATE 355** (2+0+0) 2 Credits / 4 ECTS
Teaching Mathematics Through Play
(Oyunla Matematik Öğretimi)
 Game and game types; the importance of games in mathematics teaching; theoretical approaches to play; logic, mathematics, intelligence games/puzzles; mathematics and game interaction; examination of some games developed by mathematicians; cultural math games, game theory; technology supported math games.
- MATH 356** (2+0+0) 2 Credits / 4 ECTS
Assessment of In-Class Learning
(Sınıf İçi Öğrenmelerin Değerlendirilmesi)
 Assessment tools used in education and their characteristics; assessment tools based on traditional approaches: written examinations, short-answer exams, true-false type tests, multiple choice tests, matching tests, oral examinations; tools for multi-faceted recognition of students: observation, interview, performance assessment, student portfolio, research papers, research projects, peer evaluation, self-evaluation, attitude scales; points to be considered in the evaluation of student success; evaluation of learning outcomes and grading.
- MATE 401** (2+0+0) 2 Credits / 3 ECTS
Problem Solving in Mathematics
(Matematikte Problem Çözme)
 Problem and problem solving, problem types, the importance of problem solving instruction, Recent developments in problem solving; mathematical problem-solving strategies and the importance of multiple representations in problem solving; examples of problems that can be solved by different problem solving strategies, evaluation of problem solving; definition, process, characteristics and importance of problem posing, classifications of problem posing, problem posing strategies, different problem posing studies, problem posing in middle school mathematics curriculum and textbooks; evaluation of problem posing.
- MATE 402** (2+0+0) 2 Credits / 3 ECTS
Philosophy of Mathematics
(Matematik Felsefesi)
 Ontology and epistemology of mathematics; numbers, sets, functions, etc. mathematical concepts with proposition and the meaning of mathematical expressions; fundamentals of mathematics, methods and philosophical problems related to the nature of mathematics, objectivity in mathematics

and applicability to the real world; studies of pioneers of philosophy of mathematics, such as Frege, Russel, Hilbert, Brouwer and Gödel; flatness and dimension concept, basic theories of mathematics philosophy; Logicism, formalism and intuitionism. Semi-experimentalists and Lakatos; the relationship between mathematics philosophy and mathematics education; social groups in the philosophy of mathematics education.

MATE 403

(2+0+0) 2 Credits / 3 ECTS

**Misconceptions in Mathematics Education
(Matematik Öğretiminde Kavram Yanılgıları)**

Mathematical mistake, difficulty and misconception; types of misconceptions, mathematics concepts and misconceptions in literature related to these concepts; inquiry techniques to find out students' thinking processes, finding solutions to misconceptions according to the characteristics of the subject area and individual differences of students.

MATE 404

(2+0+0) 2 Credits / 4 ECTS

**Modeling in Mathematics Education
(Matematik Öğretiminde Modelleme)**

Mathematical modeling and problem solving; models in mathematics teaching and modeling process; modeling cycle (problem identification, manipulation, estimation and verification), model development steps; principles of model development; modeling activities implementation in mathematics classes and role of teacher; preparing mathematical modeling activities and monitoring student' mathematical thinking processes.

MATE 405

(2+0+0) 2 Credits / 3 ECTS

**Logical Reasoning
(Mantıksal Akıl Yürütme)**

To defend the validity and reliability of the implications; making logical generalizations and inferences; explaining and using mathematical patterns and connections while analyzing a mathematical situation; by using strategies such as rounding, grouping appropriate numbers, using first or last steps, or by developing their own strategies, estimating the results of operations and measurements; estimation based on specific reference point.

FACULTY OF
ENGINEERING



FACULTY OF ENGINEERING

Dean's Statement

TED University Faculty of Engineering, founded in 2012, offers the best of a liberal university atmosphere enriched with the academic and technical resources of a world-class institution. The Faculty is matchlessly organized to create the technological leaders of tomorrow. Our goal is to position our graduates among the problem solvers, project leaders, communicators, and ethical members of the global professional community.

Through innovative curricula, teamwork approaches, and leadership-building experiences, TED University Faculty of Engineering students gain vital communication and critical-thinking skills. We offer our students a student-centered environment. Our faculty members are dedicated to keeping up with the trends in science and technology in their respective fields and pay utmost importance to assure an outstanding teaching and learning quality in the class. Our students have the chance to get a rich educational experience to develop themselves by following minor programs coupled with elective courses while acquiring in-depth knowledge in their chosen field. They also benefit from the diverse cultural and intellectual climate of the TEDU campus located in the heart of Ankara, the capital of the Republic of Turkey.

Students admitted to the Faculty of Engineering programs follow a common core curriculum during the first year. In their first year, the students are offered an undergraduate program to provide them with interdisciplinary skills in the fields of English, computer literacy, mathematics, physics and other elective fields of their interest. Students enrolled in TED University engineering programs have the privilege to decide on their major after finishing their first year courses. This way, our students have an excellent opportunity to mature their decisions by exploring their future professional fields over a longer period of time within the grounds of TEDU. Our students have the chance to choose from five major engineering disciplines, which include Civil Engineering, Computer Engineering, Electrical and Electronics Engineering, Industrial Engineering and Mechanical Engineering. The general background knowledge provided by the first year courses, career orientation seminars offered by the University and their own interests will provide our students with greater insight as to which field of engineering they wish to pursue.

Within a greater societal context, the graduates of TEDU Faculty of Engineering should demonstrate themselves by:

- Applying knowledge, strong reasoning, cognitive and quantitative skills to design and implement original, innovative and sustainable solutions
- Exhibiting strong communication, interpersonal, and resource-management skills as leaders in the profession
- Acting professionally and ethically
- Displaying teamwork skills
- Engaging in life-long learning to face the future challenges

Continuous follow up studies are underway, in collaboration with the TEDU Quality Assurance and Enhancement Unit, to assess whether these targets have been reached and to decide what further actions can be taken.

I invite you to become better acquainted with the TED University Faculty of Engineering through the web pages of our Departments and through a visit to our beautiful campus.

Prof. Güneş ÖZCEBE, Dean

DEPARTMENT OF CIVIL ENGINEERING

Chair

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* Research Assistant

Undergraduate Program in Civil Engineering

Engineering is the application of scientific and technical knowledge along with economic and social principles to real-life problems. Civil engineering is the oldest branch of engineering and aims at increasing the quality of life by striving to provide better solutions for the most fundamental needs of all humans. The civil engineers are involved in the planning, design, construction, and operation of the built environment above- and below-ground, which includes building and housing systems, transportation systems, and systems for the protection and use of air and water resources.

The civil engineering students at TED University will obtain a broad background in mathematics and the physical sciences along with their applications to all areas of civil engineering. The flexible curriculum of the Civil Engineering Department allows students to make their selections from a wide range of elective courses, which includes the areas of civil engineering of most interest to the students, and courses in the humanities and social sciences. Furthermore, a balanced focus on both the depth and breadth of knowledge is the most critical feature of the civil engineering curriculum at TEDU.

The graduates of the civil engineering program of TEDU are expected to solve civil engineering problems within a greater societal context. They will have a professional and ethical conduct and will be able to apply knowledge, strong reasoning, and quantitative skills to design and implement creative and sustainable solutions. They will engage in lifelong learning in meeting the forthcoming challenges facing the profession. Last but not the least, our graduates will exhibit strong communication, interpersonal, and resource-management skills as future leaders in the civil engineering profession.

The first year of the undergraduate program is common to all engineering disciplines. The studies on mechanics, materials and applied mathematics begin in the second year. The third year aims at building the basic theoretical background in major sub-disciplines of civil engineering. These include geotechnical engineering (behavior of soils, design of foundations), structural engineering (analysis and design of reinforced concrete and steel structures), hydraulics engineering (flow of water in pipes, open channels, water resources) and the general systems approach to engineering problems. The students are also exposed to construction engineering and management concepts at an introductory level in the fourth year. The senior civil engineering students have a flexible curriculum. They are mainly offered a variety of elective courses on planning and design of complex civil engineering systems.

Our students have the chance to specialize in a secondary field as they pursue their major program. TED University offers a choice of diverse secondary field programs provided by all faculties.

Program Outcomes

Our graduates are able to:

1. Comprehend science and advanced mathematics subjects fundamental to engineering,
2. Apply knowledge of mathematics, science, and engineering to design and implement original, innovative and sustainable civil engineering systems or processes to meet desired needs within a greater societal context,
3. Identify, formulate, and solve engineering problems,
4. Employ state-of-the-art engineering techniques and computing tools necessary for creative engineering solutions,
5. Design and conduct experiments; analyze and interpret data,
6. Practice good working habits, time management, and self-discipline,
7. Display multidisciplinary teamwork skills,
8. Act professionally and ethically,
9. Appreciate cultural diversity,
10. Respect individual and cultural differences,
11. Demonstrate effective oral and written professional skills in English,
12. Engage in life-long learning to face the future challenges and to achieve an enduring professional development.

Undergraduate Curriculum

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
CMPE 101	Introduction to Information Technologies	2	0	2	3	5
ENG 101	English for Academic Purposes	2	2	0	3	5
MATH 101	Calculus of One Variable	3	2	0	4	7
PHYS 105	Physics I	3	0	2	4	6
HIST 101	History of Turkish Republic I	2	0	0	2	2
CC	Humanities/Literature/Art/Sciences Elective*	3	0	0	3	5
TOTAL		15	4	4	19	30

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
CMPE 112	Fundamentals of Programming I	1	0	4	3	6
ENG 102	Expository Writing	2	2	0	3	5
MATH 102	Multivariable Calculus	3	2	0	4	7
HIST 102	History of Turkish Republic II	2	0	0	2	2
CC	Humanities/Literature/Art/Sciences Elective	3	0	0	3	5
CC	Humanities/Literature/Art/Sciences Elective	3	0	0	3	5
TOTAL		14	4	4	18	30

* Students will select only one course from each category in "Humanities/Literature/Art/Sciences" common core (CC) areas.

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
CE 211	Engineering Mechanics I	3	0	0	3	5
CE 221	Materials Science	3	0	2	4	6
ECON 110	Principles of Economics	3	0	0	3	5
MATH 203	Linear Algebra and Differential Equations	3	0	0	3	5
MATH 210	Numerical Methods in Engineering	0	0	4	2	4
MATH 240	Introduction to Probability and Statistics for Engineers	3	0	0	3	6
TOTAL		15	0	6	18	31

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
CE 200	Computer-Aided Technical Drawing	0	0	4	2	4
CE 212	Engineering Mechanics II	3	0	0	3	5
CE 214	Introduction to Mechanics of Materials	3	0	2	4	6
CE 232	Fluid Mechanics	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
CC	Humanities/Literature/Art Elective	3	0	0	3	5
TOTAL		15	0	6	18	30

Semester 5

Code	Course Title	C	P	L	Cr	ECTS
CE 311	Structural Analysis	3	0	0	3	6
CE 331	Hydromechanics	3	0	2	4	6
CE 341	Soil Mechanics	3	0	2	4	6
CE 399	Summer Practice I	1	0	0	1	2
FE	Free Elective I	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
TOTAL		16	0	4	18	30

Semester 6

Code	Course Title	C	P	L	Cr	ECTS
CE 312	Fundamentals of Steel Design	3	0	0	3	6
CE 314	Reinforced Concrete Fundamentals	3	0	0	3	6
CE 332	Water Resources Engineering	3	0	0	3	6
CE 342	Foundation Engineering I	3	0	0	3	6
SF	Secondary Field	3	0	0	3	5
TOTAL		15	0	0	15	29

Semester 7

Code	Course Title	C	P	L	Cr	ECTS
CE 451	Construction Engineering and Management	3	0	0	3	5
CE 4XX	Departmental Elective I**	3	0	0	3	6
CE 499	Summer Practice II	1	0	0	1	2
SF	Secondary Field	3	0	0	3	5
FE	Free Elective II	3	0	0	3	5
FE	Free Elective III	3	0	0	3	5
TUR 101	Turkish I	2	0	0	2	2
TOTAL		18	0	0	18	30

Semester 8

Code	Course Title	C	P	L	Cr	ECTS
CE 410	Civil Engineering Design	2	2	0	3	10
CE 4XX	Departmental Elective II	3	0	0	3	6
CE 4XX	Departmental Elective III	3	0	0	3	6
SF	Secondary Field	3	0	0	3	5
TEDU 400	Student Development Seminars	0	0	0	0	1
TUR 102	Turkish II	2	0	0	2	2
TOTAL		13	2	0	14	30
Totals expected for graduation		121	10	24	138	240

** Civil Engineering Department offers technical elective courses in three separate groups. These groups are; Group I: CE 411, CE 412, CE 414, CE 442, Group II: CE 431, CE 432, CE 434, CE 436, CE 461; Group III: CE 452, CE 454, CE 455. The students shall take only one elective course from each group.

Courses with Pre-requisites

Course Name	Pre-requisites
CE 211 Engineering Mechanics I	PHYS 101 or PHYS 105
CE 212 Engineering Mechanics II	CE 211
CE 214 Introduction to Mechanics of Materials	CE 211
CE 232 Fluid Mechanics	CE 211
CE 311 Structural Analysis	CE 214 and MATH 210
CE 312 Fundamentals of Steel Design	CE 214
CE 314 Reinforced Concrete Fundamentals	CE 214
CE 331 Hydromechanics	CE 232
CE 332 Water Resources Engineering	CE 331
CE 341 Soil Mechanics	CE 214
CE 342 Foundation Engineering I	CE 341
CE 399 Summer Practice I	Sophomore Standing
CE 410 Civil Engineering Design	CE 342 and (CE 312 or CE 314 or CE 332)
CE 411 Reinforced Concrete Structures	CE 314
CE 412 Steel Structures	CE 312
CE 414 Introduction to Earthquake Resistant Design	CE 212 and CE 311
CE 431 Design of Hydraulic Structures	CE 331
CE 432 Water Supply Engineering Design	CE 332
CE 434 Coastal Engineering	CE 331
CE 436 Integrated Coastal Zone Management	CE 331
CE 442 Foundation Engineering II	CE 342
CE 451 Construction Engineering and Management	Consent of the Department
CE 452 Practical Aspects of Construction Management	CE 451
CE 454 Contractual Aspects of Construction Works	CE 499
CE 461 Principles of Transportation and Traffic Engineering	Senior Standing

CE 499 Summer Practice II	CE 399 or Consent of the Department
CE 454 Contractual Aspects of Construction Works	CE 499
CE 455 Sustainable Construction	CE 499

Undergraduate Course Descriptions

- CE 200** **(0+0+4) 2 Credits / 4 ECTS**
Computer Aided Technical Drawing
(Bilgisayar Destekli Teknik Çizim)
Principles of engineering drawing, lettering, dimensioning and tolerancing, orthographic drawing, pictorial and sectional views. Introduction to computer aided drafting.
- CE 211** **(3+0+0) 3 Credits / 5 ECTS**
Engineering Mechanics I
(Mühendislik Mekaniği I)
Introduction to rigid body mechanics. Equivalent force systems: Concepts of moment, couple, resultant. Equilibrium: Free-body diagram; equations of equilibrium. Structural analysis: Trusses; beams. Shear force and bending moment diagrams by method of sections and by method of integration. Properties of surfaces: Area moment and centroid; moments and product of inertia; principal directions.
Pre-requisite: PHYS 105
- CE 212** **(3+0+0) 3 Credits / 5 ECTS**
Engineering Mechanics II
(Mühendislik Mekaniği II)
Kinematics of particles and rigid bodies: absolute motion, relative motion. Kinetics of particles: equations of motion, work-energy and impulse-momentum. Systems of particles. Kinetics of rigid bodies: Euler`s equation, plane motion of rigid bodies, kinetic energy of rigid bodies. Introduction to the dynamics of vibrating systems.
Pre-requisite: CE 211
- CE 214** **(3+0+2) 4 Credits / 6 ECTS**
Introduction to Mechanics of Materials
(Malzeme Mekaniğine Giriş)
Simple stress and strain. Equilibrium, compatibility and constitutive relations. State of stress and state of strain with emphasis on two dimensional problems. Bending and shear stresses. Deflection of beams. Torsion of circular shafts. Combined stresses. Buckling of columns.
Pre-requisite: CE 211

CE 221**(3+0+2) 4 Credits / 6 ECTS****Materials Science
(Malzeme Bilimi)**

Engineering requirements of materials; the structure of matter; atomic arrangements, structural imperfections. Mechanical properties. Concepts of force, stress, deformation and strain; elasticity; elastic and plastic behavior. Creep, relaxation, brittleness, ductility, hardness, fatigue, toughness, resilience, and damping characteristics of materials. Construction materials; hydraulic cements, mineral aggregates, concrete, ferrous metals, polymers, bituminous materials, timber.

CE 232**(3+0+0) 3 Credits / 5 ECTS****Fluid Mechanics
(Akışkanlar Mekaniği)**

Fundamental principles of fluid mechanics and their application to engineering problems. Fluid statics. Fluid flow concepts. Control-volume analysis. Conservation equations and applications. Dimensional analysis and similitude. Flow of viscous fluids, simple laminar flow systems, turbulence, internal and external flow applications.

Pre-requisite: CE 211

CE 311**(3+0+0) 3 Credits / 6 ECTS****Structural Analysis
(Yapısal Analiz)**

Introduction to structural analysis. Displacement methods: Slope deflection, moment distribution, special topics. Stiffness method, derivation of element stiffness matrices, assembly procedures. Computerized implementation of the stiffness method and use of instructional programs. Large scale structural analysis. Influence lines and moving loads.

Pre-requisites: CE 214 and MATH 210 (Effective Fall 2018-2019)

CE 312**(3+0+0) 3 Credits / 6 ECTS****Fundamentals of Steel Design
(Çelik Tasarımın Temelleri)**

General concepts in steel design. Design methods, codes, safety, and serviceability. Behavior of steel structures. Tension members, compression members, beams, beam-columns, types and behavior of connections in steel structures, bolted and welded connections.

Pre-requisite: CE 214

CE 314**(3+0+0) 3 Credits / 6 ECTS****Reinforced Concrete Fundamentals
(Betonarmenin Temelleri)**

Mechanical behavior of concrete in uniaxial and multiaxial states of stress. Time dependent behavior of concrete. Mechanical behavior of reinforcing steel. Behavior and strength of uniaxially loaded members; confinement. Behavior and strength of members in pure bending. Behavior and strength of members under combined bending and axial load. Behavior and strength of members under combined shear and bending.

Pre-requisite: CE 214

CE 331**(3+0+2) 4 Credits / 6 ECTS****Hydromechanics
(Hidromekanik)**

Laminar and turbulent flows. Friction factor in pipe flow. Computation of flow in single pipes: Hydraulic machinery: turbines and pumps. Pipeline systems and networks. General characteristics and classification of open channel flow: pressure and velocity distribution. Continuity equation. Energy concept. Momentum principle. Uniform flow. Rapidly varied flow gradually-varied flow. Wave hydraulics.

Pre-requisite: CE 232

CE 332**(3+0+0) 3 Credits / 6 ECTS****Water Resources Engineering
(Su Kaynakları Mühendisliği)**

Introduction to hydrology and water resources engineering. Basin and hydrologic processes: precipitation, stream flow, infiltration. Hydrograph analysis. Hydrologic flood routing. Groundwater hydrology. Dams and spillways. Municipal water supply systems. Wastewater and storm-water collection and discharge. Irrigation and drainage.

Pre-requisite: CE 331

CE 341**(3+0+2) 4 Credits / 6 ECTS****Soil Mechanics
(Zemin Mekaniği)**

Introduction to soil mechanics. Formation of soils and basic geology. Engineering problems involving geo- materials and their variability. Basic physical characteristics of soils. Index and classification properties of soils. Water in soils, capillarity, shrinkage/expansion, frost. Flow of water through soil, permeability (hydraulic conductivity), heads, seepage, flow nets. Total and effective stresses in soil mass. Stress distribution. Compressibility of soils, consolidation theory, calculating settlements. Stress-strain behavior (shear strength) of soils. Effects of dynamic loading and local soil conditions leading to earthquake damage.

Pre-requisite: CE 214

CE 342**(3+0+0) 3 Credits / 6 ECTS****Foundation Engineering I
(Temel Mühendisliği I)**

Subsurface exploration. Lateral loads. Earth retaining structures and excavations, braced cuts, dewatering. Performance requirements, applied loads based on codes, and selection of foundations. Shallow foundation design, bearing capacity and settlements, testing and evaluation. Deep foundation design, bearing capacity and settlements, testing and evaluation. Slope stability, natural and man-made slopes. Ground improvement and properties of improved soils.

Pre-requisite: CE 341

CE 399**(1+0+0) 1 Credit / 2 ECTS****Summer Practice I
(Yaz Stajı I)**

Minimum 20 working days of practical work at the construction site of an organization operating on the design, production, maintenance, management of civil engineering structures and systems.

Pre-requisites: Sophomore Standing

CE 410**(2+0+2) 3 Credits / 10 ECTS****Civil Engineering Design
(İnşaat Mühendisliği Tasarımı)**

Design and development of a project for a civil engineering problem under the supervision of an academic advisor. Submission of the results in the form of a project report and oral presentation.

Pre-requisites: CE 342 and (CE 312 or CE 314 or CE 332)

CE 411**(3+0+0) 3 Credits / 6 ECTS****Reinforced Concrete Structures
(Betonarme Yapılar)**

General RC Behavior: Material Behavior, Time Dependent Behavior of Concrete; Review on Flexural Behavior of RC Members; Bi-axial Bending; Moment-Curvature Relationship, Plastic Hinge, Redistribution; Behavior and Strength of Members under Combined Shear and Torsion; Floor Systems-Slabs; Footings; Strut-and-Tie Method; Serviceability and Detailing.

Pre-requisite: CE 314

CE 412**(3+0+0) 3 Credits / 6 ECTS****Steel Structures
(Çelik Yapılar)**

Principles of Plastic Design. Principles of Load and Resistance Factor Design. Tapered Columns. Tapered Beams. Torsion. Introduction to Plate Girders. Beam-Column Connections. Design of Roof Trusses. Framing Systems for Seismic Design. Introduction to Industrial Building Design. Composite Steel Concrete Construction.

Pre-requisite: CE 312

CE 414**(3+0+0) 3 Credits / 6 ECTS****Introduction to Earthquake Resistant Design
(Depreme Dayanıklı Yapı Tasarımına Giriş)**

Causes of earthquakes, characteristics of earthquake ground motions, earthquake magnitude and intensity measurements. Seismic response analysis of simple structures. Derivation of elastic response spectra and earthquake design spectra. Earthquake design criteria. Free and forced vibration analysis of frame structures. Modal spectral analysis and equivalent static lateral force method. Design codes, design applications.

Pre-requisites: CE 212 and CE 311

- CE 431** (3+0+0) 3 Credits / 6 ECTS
Design of Hydraulic Structures
(Hidrolik Yapıların Tasarımı)
 Dam design concepts. Design of overflow and outlet structures. Design of dissipation structures. Design of bottom outlets, gate types. Design of intake structures. Hydraulic losses, vortex formation, control gates and valves, penstock.
 Pre-requisite: CE 331
- CE 432** (3+0+0) 3 Credits / 6 ECTS
Water Supply Engineering Design
(Su Mühendisliğinde Tasarım)
 Pump, valves, friction loss formulae. Water transmission by pipelines. Hydraulics and operation of pumped discharge lines and gravity pipelines. Design of pipelines. Hydraulics, operation and design of water distribution systems. Municipal water requirements, extension of population. Hardy-Cross method. Newton-Raphson method.
 Pre-requisite: CE 332
- CE 434** (3+0+0) 3 Credits / 6 ECTS
Coastal Engineering
(Kıyı Mühendisliği)
 Linear wave theory, wave transformations (shoaling, refraction, breaking, diffraction, reflection), wind-generated waves and their prediction, wave climate, design of rubble mound and vertical wall breakwaters.
 Pre-requisite: CE 331
- CE 436** (3+0+0) 3 Credits / 6 ECTS
Integrated Coastal Zone Management
(Bütünleşik Kıyı Alanları Yönetimi)
 Definition of Coastal Zone; Physical and Ecological Properties of Coastal Zone; Coastal Landforms; Coastal Processes; The Global Ocean and the Climate System; Coastal Structures; Pressures on the Coast; Coastal Pollution; Sea Level Rise; Integrated Coastal Zone Management (ICZM); ICZM Practice in Turkey.
 Co-requisite: CE 331
- CE 442** (3+0+0) 3 Credits / 6 ECTS
Foundation Engineering II
(Temel Mühendisliği II)
 Deep foundations. Piles and pile foundations, types of piles, pile foundation design. Types of sheet pile walls. Single-wall, double-wall and cellular cofferdams. Box open and pneumatic caissons. Underpinning of existing structures.
 Pre-requisite: CE 342

CE 451**(3+0+0) 3 Credits / 5 ECTS****Construction Engineering and Management
(Yapım Mühendisliği ve Yönetimi)**

Introduction to construction project management: Parties and their roles, stages, attributes and goals of construction projects. Quantity measurement calculations: example calculations of a house. Construction machinery, equipment and plants: selection criteria, hourly cost determination and output analysis of excavators. Professional responsibility and ethics, productivity, quality, health and safety issues. Environmental and economic impacts of construction industry.

Prerequisite: CE 399

CE 452**(3+0+0) 3 Credits / 6 ECTS****Practical Aspects of Construction Management
(Yapım Yönetiminin Pratik Yönleri)**

Introduction to management, general description of construction industry, contract systems, types of construction contracts. Review of typical organizational structures for construction companies and projects. Work scheduling by network time analysis, resource analysis and leveling. Main tasks to start up construction projects. Project records, documentation. Communication basics and communication in construction sites. Monitoring and control systems. Procedures and formalities for project completion.

Pre-requisite: CE 451

CE 454**(3+0+0) 3 Credits / 6 ECTS****Contractual Aspects of Construction Works
(İnşaat İşlerinin Sözleşmeye Dayalı Yönleri)**

General information about construction industry. Code of Obligations. Documents in a contract file, types of contracts and contractorship licenses. Public Procurement Law: Tendering process for construction works, control regulations, general and technical specifications of public construction works. Documents kept at site. Progress payments by unit price and percentage methods. Settlement of disputes. Time value analysis of money: comparison of alternatives, replacement and benefit/cost analysis.

Pre-requisites: None

Co-requisite: CE 499

CE 455**(3+0+0) 3 Credits / 5 ECTS****Sustainable Construction
(Sürdürülebilir İnşaat)**

Introduction to sustainability and the role of civil engineering towards the solution of global problems. Green buildings, their evaluation and certification systems, design processes, and economics. Case studies with current technologies.

Co-requisite: CE 499

- CE 461** (3+0+0) 3 Credits / 6 ECTS
Principles of Transportation and Traffic Engineering
(Ulaştırma ve Trafik Mühendisliğinin Temel İlkeleri)
 Introduction to transportation systems. Vehicles, network and terminals as components of transportation systems engineering. Design of transportation facilities emphasizing land transportation. Operations planning of transportation systems and traffic engineering. Models of traffic flow. Traffic analysis at intersections. Basic definitions and computations of level of service. Planning and management techniques.
 Pre-requisites: Senior Standing
- CE 499** (1+0+0) 1 Credit / 2 ECTS
Summer Practice II
(Yaz Stajı II)
 Minimum 20 working days of practical work in an organization operating on the design of civil engineering structures.
 Pre-requisites: CE 399 or Consent of the Department

Graduate Course Descriptions

- CE 515** (3+0+0) 3 Credits / 7.5 ECTS
International Civil Engineering Contract
(Uluslararası İnşaat Mühendisliği Sözleşmeleri)
 Contracts in International Civil Engineering Practice. Assessment of Legal, Commercial and Technical Aspects. Interference and Impact Analyses of Various Contract Types. Fundamentals of Dispute Resolution Methods.
- CE 517** (3+0+0) 3 Credits / 7.5 ECTS
Construction Site Management
(Şantiye Yönetimi)
 Notice to proceed. Construction site team building. Setting up construction site. Site facilities and organization chart. On-site construction management. Subcontractor and procurement management. Progress payments and bonds. Time and cost management. Project closure.
- CE 518** (3+0+0) 3 Credits / 7.5 ECTS
Construction Process and Document Management
(İnşaat Projelerinde Süreç ve Doküman Yönetimi)
 Introduction to process management. Process improvement techniques. Document management. Total quality management. Lean construction examples. Performance management and assessment in process improvement. Enterprise resource planning.

CE 519**(3+0+0) 3 Credits / 7.5 ECTS****Contract and Claim Management
(Sözleşme ve Talep Yönetimi)**

Fundamental principles of contract law. Construction administration. Contract types. Public tender contracts. FIDIC contracts. Time extension and change orders. Delay analysis. Principles of claims. Examples and case studies.

CE 521**(3+0+0) 3 Credits / 7.5 ECTS****International Arbitration
(Uluslararası Tahkim)**

Fundamental principles of International Arbitration. Turkish International Arbitration Law. Domestic Arbitration.

CE 527**(3+0+0) 3 Credits / 7.5 ECTS****Sustainable Construction
(Sürdürülebilir İnşaat)**

Introduction to sustainability in construction. Green buildings. Ecological design. Green building evaluation and certification systems. Design process of green buildings. Green construction operations. Green buildings economics. Case studies with recent technology.

CE 528**(3+0+0) 3 Credits / 7.5 ECTS****Renewable Energy Projects
(Yenilenebilir Enerji Projeleri)**

The importance of renewable energy in energy market and Turkey's renewable energy potential. Renewable energy resources. Basic design principles, structure types, construction techniques and applications of renewable energy projects, environmental impacts of the renewable energy systems, the role of renewables for sustainability. Conditions of renewable energy market in Turkey and worldwide. Government agencies, laws and permissions related with renewable energy in Turkey. Case study of a real renewable energy project invested in Turkey.

DEPARTMENT OF COMPUTER ENGINEERING

Chair

Prof. Tolga Kurtuluş Çapın

Academic Staff

Prof. Tolga Kurtuluş Çapın, Assoc. Prof. Gökçe Nur Yılmaz, Asst. Prof. Aslı Gençtav, Asst. Prof. Naveed Ul Mustafa, Asst. Prof. Orkunt Sabuncu, Asst. Prof. Tayfun Küçükylmaz, Asst. Prof. Venera Adanova, Bedrettin Çetinkaya*, Deniz Merve Gündüz*, Hamid Ahmadlouei*, İbrahim İleri*, Mehmet Bahadır Aşkın*.

* Research Assistant

Undergraduate Program in Computer Engineering

The undergraduate program in computer engineering is designed to give students a balanced background in theoretical fundamentals of the computer engineering discipline and in applications areas, both in computer software and in computer hardware. The program is at the same time a flexible one in that it gives the student the opportunity to specialize in certain areas of computer science and engineering.

The program consists of area courses, complementary courses, mathematics and science courses, humanities and social sciences courses, language courses and free elective courses. The program includes required and elective courses in each of these categories.

The program course requirement is 136 credit hours of formal course work and two industrial training courses. As part of the formal course work the student has to complete a graduation thesis (i.e. senior design project) which has to be defended in front of a jury. Industrial training is done during summer months and involves 40 work days in an actual work environment. This is normally done in two steps, during the summers following the sophomore year and junior year.

The program emphasizes active learning, where most courses involve student work in the form of programming assignments, software projects, lab exercises, etc. The aim is to equip the student not only with the computer engineering body of knowledge but also with skills necessary to do productive work upon graduation.

Program Outcomes

Students graduating from TEDU Computer Engineering Department will:

1. Communicate with technical and non- technical people orally and in writing to share knowledge.
2. Interpret foundational scientific, engineering, management and artistic concepts and principles.
3. Apply mathematical, statistical, computing and engineering concepts and tools to model and solve problems.
4. Follow current trends and developments in their fields to adapt to the changing environment, with and without guidance.
5. Design and conduct experiments, analyzing their output data to create information.
6. Act professionally by following social, ethical and cultural responsibilities.

7. Design and implement a computer system, be it software or hardware or both, to serve specific needs in an efficient, interdisciplinary team work context.
8. Evaluate feasible solutions to complex engineering projects, based on economic, social and ethical constraints.
9. Critique existing literature and produce computer scientific knowledge.

Undergraduate Curriculum

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
CMPE 101	Introduction to Information Technologies	2	0	2	3	5
ENG 101	English for Academic Purposes	2	2	0	3	5
MATH 101	Calculus of One Variable	4	1	0	4	7
CC	Sci/Soc/Hum/Lit/Art Elective	3	0	0	3	5
PHYS 105	Physics I	3	0	2	4	6
HIST 101	History of Turkish Republic I	2	0	0	2	2
TOTAL		16	3	4	19	30

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
ENG 102	Expository Writing	2	2	0	3	5
CC	Sci/Soc/Hum/Lit/Art Elective	3	0	0	3	5
CC	Sci/Soc/Hum/Lit/Art Elective	3	0	0	3	5
MATH 102	Multivariable Calculus	3	1	0	4	7
HIST 102	History of Turkish Republic II	2	0	0	2	2
CMPE 112	Fundamentals of Programming I	2	0	4	3	6
TOTAL		15	3	4	18	30

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
CC	Sci/Soc/Hum/Lit/Art Elective	3	0	0	3	5
CMPE 211	Fundamentals of Programming II	2	0	2	3	6
EE 207	Electrical Circuits and Logic Design	2	0	2	3	6
MATH 203	Linear Algebra and Differential Equations	3	0	0	3	5
CMPE 201	Discrete Structures of Mathematics	3	0	0	3	6
TUR 101	Turkish I	2	0	0	2	2
TOTAL		15	0	4	17	30

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
CC	Sci/Soc/Hum/Lit/Art Elective	3	0	0	3	5
MATH 240	Introduction to Probability and Statistics for Engineers	3	0	0	3	6
CMPE 232	Relational Databases	3	0	0	3	5
CMPE 242	Data Structures and Algorithms I	3	0	0	3	6
CMPE 252	C Programming	2	0	2	3	6
TUR 102	Turkish II	2	0	0	2	2
TOTAL		16	0	2	17	30

Semester 5

Code	Course Title	C	P	L	Cr	ECTS
CMPE 399	Summer Practice I	1	0	0	1	2
CMPE 343	Data Structures and Algorithms II	3	0	0	3	6
CMPE 313	Software Engineering	3	0	0	3	6
CMPE 361	Computer Organization	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
Free	Free Elective	3	0	0	3	5
TOTAL		16	0	0	16	29

Semester 6

Code	Course Title	C	P	L	Cr	ECTS
CMPE 326	Concepts of Programming Languages	3	0	0	3	5
CMPE 322	Theory of Computation	3	0	0	3	6
CMPE 382	Operating Systems	3	0	0	3	5
CMPE	Departmental Elective	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
Free	Free Elective	3	0	0	3	5
TOTAL		18	0	0	18	31

Semester 7

Code	Course Title	C	P	L	Cr	ECTS
CMPE 499	Summer Practice II	1	0	0	1	2
CMPE 491	Senior Project I	1	4	0	3	7
CMPE 451	Microprocessors	2	0	2	3	6
CMPE	Departmental Elective	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
Free	Free Elective	3	0	0	3	5
TOTAL		13	4	2	16	30

Semester 8

Code	Course Title	C	P	L	Cr	ECTS
CMPE 472	Computer Networks	2	0	2	3	6
CMPE 492	Senior Project II	1	4	0	3	8
CMPE	Departmental Elective	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
TEDU 400	Student Development Seminar	0	0	0	0	1
TOTAL		12	4	2	15	30

Totals expected for graduation		121	14	18	137	240
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Courses with Pre-requisites

Course Name	Pre-requisites
CMPE 211 Fundamentals of Programming II	CMPE 112
CMPE 232 Relational Databases	CMPE 112
CMPE 242 Data Structures and Algorithms I	CMPE 211
CMPE 252 C Programming	CMPE 112
CMPE 311 Principles of Object Oriented Languages	CMPE 211
CMPE 312 Web Development	CMPE 232
CMPE 313 Software Engineering	CMPE 211
CMPE 318 Software Design	CMPE 211
CMPE 320 Numerical Computations	CMPE 112 and MATH 203
CMPE 322 Theory of Computation	CMPE 242 or CMPE 221
CMPE 325 Information Security and Cryptography	CMPE 211
CMPE 326 Concepts of Programming Languages	CMPE 211
CMPE 343 Data Structures and Algorithms II	CMPE 242 or CMPE 221
CMPE 350 Embedded Systems	EE 207
CMPE 361 Computer Organization	EE 207 or EE 222
CMPE 362 Digital Image Processing	MATH 203
CMPE 382 Operating Systems	CMPE 361
CMPE 399 Summer Practice I	CMPE 211
CMPE 426 Concepts of Programming Languages	CMPE 242
CMPE 465 Introduction to Computer Vision	MATH 203
CMPE 472 Computer Networks	CMPE 112
CMPE 490 Introduction to Research in Computer Engineering	Consent of the Department
CMPE 492 Senior Project II	CMPE 491
CMPE 499 Summer Practice II	CMPE 242 or CMPE 221

Courses with Co-requisites

Course Name	Co-requisites
CMPE 491 Senior Project I	CMPE 313
CMPE 451 Microprocessors	CMPE 361
CMPE 325 Information Security and Cryptography	CMPE 472

Undergraduate Course Description

- CMPE 101** (2+0+2) 3 Credits / 5 ECTS
Introduction to Information Technologies
(Bilgi Teknolojilerine Giriş)
 Information technology concepts. The computer and its peripheral units. Widely used software. Information storage and retrieval. Information input and output. Networks and networking. Internet. Windows environment. Linux environment. HTML. Computer graphics and multimedia. Computer security.
- CMPE 112** (1+0+4) 3 Credits / 6 ECTS
Fundamentals of Programming I
(Programlamanın Temelleri I)
 Variables. Assignment statements. Built-in data types. Conditions. Loops. Arrays. Input & output management.
- CMPE 201** (3+0+0) 3 Credits / 6 ECTS
Discrete Structures of Mathematics
(Matematiğin Ayrık Yapıları)
 Logic. Theorems and proofs. Set theory. Algorithms and Complexity. Number Theory. Relations. Functions. Mathematical induction. Rules of counting. Permutation and combination. Pigeonhole principle. Discrete probability. Graphs and trees. Boolean Algebra. Theory of Computation. Counting. Permutation and combination. Binomial coefficients. Pigeonhole principle. Discrete probability. Graphs and trees.
- CMPE 211** (2+0+2) 3 Credits / 6 ECTS
Fundamentals of Programming II
(Programlamanın Temelleri II)
 Classes. Objects. Operator overloading. Packaging. Linked lists. Queues. Stacks. Searching and sorting algorithms.
 Pre-requisite: CMPE 112
- CMPE 232** (3+0+0) 3 Credits / 5 ECTS
Relational Databases
(İlişkisel Veritabanları)
 Database system concepts and architecture. Relational data model and SQL. Database normalization. File structures and indexing. Transaction processing and concurrency control.
 Pre-requisite: CMPE 112
- CMPE 242** (3+0+0) 3 Credits / 6 ECTS
Data Structures and Algorithms I
(Veri Yapıları ve Algoritmalar I)
 Design and Analysis of algorithms. Stacks and queues. Elementary sorts. Mergesort. Quicksort. Priority queues. Heaps. Symbol tables. Binary search trees. Balanced search trees. Hash tables.
 Pre-requisite: CMPE 211

- CMPE 252** (2+0+2) 3 Credits / 6 ECTS
C Programming
(C Programlama)
Computer architecture. Input and output. Functions and prototypes. Pointers. Strings. Structures. File handling. Preprocessor. Basic software deployment.
Pre-requisite: CMPE 112
- CMPE 310** (3+0+0) 3 Credits / 5 ECTS
Rapid Application Development
(Hızlı Uygulama Geliştirme)
The concept of agile business and rapid development of software. Support the high-speed changes in the business. Methods needed to quickly, effectively and accurately create software. Various methods of rapid development that can be applied to generate requirements, validate a solution, or even create a new operational system.
- CMPE 311** (3+0+0) 3 Credits / 5 ECTS
Principles of Object Oriented Languages
(Nesne Tabanlı Dillerin Prensipleri)
Class fundamentals. Inheritance. Delegation. Methods. Types and objects. Design patterns.
Pre-requisite: CMPE 211
- CMPE 312** (3+0+0) 3 Credits / 5 ECTS
Web Development
(Web Geliştirme)
The Internet and the World Wide Web. Overview of the .NET development platform. Overview of Java. Object-oriented concepts in Java and C#. Introduction to ASP.NET and web forms. Advanced web forms. XML/Web services. .NET security. CLR. Design considerations.
Pre-requisite: CMPE 232
- CMPE 313** (3+0+0) 3 Credits / 6 ECTS
Software Engineering
(Yazılım Mühendisliği)
Software project management: metrics, estimation, planning. Software requirement analysis techniques. Software design techniques. Software implementation. Software quality assurance. Software testing. Software maintenance. Review of CASE technology.
Pre-requisite: CMPE 211
- CMPE 315** (3+0+0) 3 Credits / 5 ECTS
Computer Game Design
(Bilgisayar Oyunu Tasarımı)
Game idea. Game concept. Game world. Game play. Action-challenge refinement. Core mechanics. Game balance. Game genres.

- CMPE 316** (2+0+2) 3 Credits / 5 ECTS
Game Programming
(Oyun Programlama)
 Game Engine Components; Game Components; Game APIs; Prefabs; Assets; Loading assets; Scripting; Collisions; Lighting; Materials; Textures; Shaders.
- CMPE 317** (2+0+2) 3 Credits / 5 ECTS
Mobile Application Development
(Mobil Uygulama Geliştirme)
 Mobile development frameworks. Design considerations. Blackberry OS. Blackberry development tools. Java ME. Android OS. Android development tools. User interface and event management for Blackberry OS and Android OS. Networking. GPS. Accelerometer. Storage. SQLite.
- CMPE 318** (3+0+0) 3 Credits / 5 ECTS
Software Design Patterns
(Yazılım Tasarım Örüntüleri)
 Definition of design pattern. Need for using design patterns. Classification of design patterns (creational, structural, behavioral). Reuse of patterns. Case studies and sample applications.
 Pre-requisite: CMPE 211
- CMPE 320** (3+0+0) 3 Credits / 5 ECTS
Numerical Computations
(Sayısal Hesaplamalar)
 The characteristics of floating point arithmetic. Error analysis. Approximation of roots of equations. Interpolation. Numerical differential integration. Solution of linear and non-linear equations. Numerical solution of differential equations.
 Pre-requisite: CMPE 112 and MATH 203
- CMPE 321** (3+0+0) 3 Credits / 5 ECTS
Artificial Intelligence
(Yapay Zeka)
 History. Programming languages for AI. Introduction to Lisp programming. Problem solving with computers. Search strategies, game playing. Knowledge and reasoning. Knowledge representation. First-order logic, inference. Learning, inductive and statistical learning methods, Robotics systems.
- CMPE 322** (3+0+0) 3 Credits / 6 ECTS
Theory of Computation
(Hesaplama Kuramı)
 Deterministic finite automata. Non-deterministic finite automata. Regular expressions. Context free grammars. Push down automata. Turing machine. Decidability and undecidability. P and NP classes. Fundamental problems.
 Pre-requisite: CMPE 242 or CMPE 221

- CMPE 323** (3+0+0) 3 Credits / 5 ECTS
System Simulation and Modeling
(Sistem Simülasyonu ve Modelleme)
 Model types. Simulation types. Complexity types. Simulation input modeling. Input data collection. Input modeling strategy. Random variate generation. Inverse transform method. Acceptance-rejection method. Composition method. Relocate and rescale method. Specific distributions.
- CMPE 324** (3+0+0) 3 Credits / 5 ECTS
Knowledge Engineering
(Bilgi Mühendisliği)
 Overview of AI. Overview of knowledge-based systems. Knowledge acquisition methods. Knowledge representation techniques. Backward, forward and hybrid chaining in rule-based production systems. Conflict resolution. Treatment of uncertainty. Rule and decision-tree induction. Case studies.
- CMPE 325** (3+0+0) 3 Credits / 5 ECTS
Information Security and Cryptography
(Bilgi Güvenliği ve Kriptoloji)
 Specification of security objectives. Security policies. Threats, risks, and impacts. Essentials of data security and cryptography. Encryption techniques. Encryption standards. Confidentiality using symmetric encryption. Public key cryptography. Message authentication and hash functions. Digital signatures and authentication protocols. System security: intrusion detection, malicious software, boundary protection and firewalls.
 Pre-requisite: CMPE 211
 Co-requisite: CMPE 472
- CMPE 326** (3+0+0) 3 Credits / 5 ECTS
Concepts of Programming Languages
(Programlama Dili Kavramları)
 Fundamental programming language concepts, pointer arithmetic, dynamic memory allocation, strongly and dynamically typed languages, subprograms and parameter passing methods, abstract data types, encapsulation.
 Pre-requisite: CMPE 211
- CMPE 330** (3+0+0) 3 Credits / 5 ECTS
Information Systems Analysis and Design
(Bilişim Sistemlerinin Analizi ve Tasarımı)
 Fundamentals of information systems. Managing information system resources. Analysis of organizational problems and role of the information systems in an organization. Application of database and interface design principles to the implementation of information systems. Centralization and decentralization of the information system facilities. Solving organizational decision-making problems. Use of decision- support problem-solving tools. Business information systems.

- CMPE 343** (3+0+0) 3 Credits / 6 ECTS
Data Structures and Algorithms II
(Veri Yapıları ve Algoritmalar II)
 Undirected graphs. Directed graphs. Minimum spanning trees. Shortest paths. Maximum flow and minimum cut. Radix sorts. Tries. Substring search. Regular expressions. Data compression. Reductions. Intractability.
 Pre-requisite: CMPE 242 or CMPE 221
- CMPE 350** (3+0+0) 3 Credits / 5 ECTS
Embedded Systems
(Gömülü Sistemler)
 Basic components of a single-board computer. Microprocessors and micro controllers. Microprocessor based systems. Machine coding, assembly language programming and high-level languages. Computer architecture and assembly language. Hardware-software design. From gates to registers. Review of digital electronics. Memories, and input and output (I/O) ports. Basic I/O protocols. Interrupts.
 Pre-requisite: EE 207
- CMPE 360** (3+0+0) 3 Credits / 5 ECTS
Computer Graphics
(Bilgisayar Grafiği)
 Advanced application of computer graphics techniques. Shading. Deformation. Ray tracing. Radiosity. Texture mapping. Fractal representation. 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.
- CMPE 361** (3+0+0) 3 Credits / 5 ECTS
Computer Organization
(Bilgisayar Organizasyonu)
 Computer abstraction. Performance measurement. Instructions. Arithmetic for computers. Pipelining. Peripherals. Multiprocessors.
 Pre-requisite: EE 207 or EE 222
- CMPE 362** (3+0+0) 3 Credits / 5 ECTS
Digital Image Processing
(Görüntü İşleme)
 Image model sampling and quantization. Basic relationships between pixels and image geometry. Two-dimensional Fourier transforms. Image enhancement. Spatial and frequency domain methods. Image restoration. Image segmentation.
 Pre-requisite: MATH 203

- CMPE 363** (3+0+0) 3 Credits / 5 ECTS
Multimedia
(Çoklu Ortam)
 Media, multimedia and their importance. Applications of multimedia. Text, animation, audio, image, and video media types. Representing media. The importance of media data compression. Streaming media.
- CMPE 380** (3+0+0) 3 Credits / 5 ECTS
Systems Programming
(Sistem Programlama)
 Advanced systems programming topics in multitasking. Process synchronization. Inter-process communication. Operating system mechanisms and interaction. Task handling. Task synchronization mechanisms. Task communication mechanisms. File system interaction. System functions. Current open standards.
- CMPE 382** (3+0+0) 3 Credits / 5 ECTS
Operating Systems
(İşletim Sistemleri)
 History. Computer hardware. Address space. Files. Input/output. Protection. The kernel. System calls. Processes and threads. Memory management. File systems. Multiple processor systems. Security.
 Pre-requisite: CMPE 361
- CMPE 399** (1+0+0) 1 Credits / 2 ECTS
Summer Practice I
(Yaz Stajı I)
 Summer internship done over 20 consecutive working days at a computer firm or an IT department. Presentation of experiences, and systems and software developed over the internship.
 Pre-requisite: CMPE 211
- CMPE 414** (3+0+0) 3 Credits / 5 ECTS
Information Retrieval
(Bilgi Erişimi)
 Basic information retrieval models; vocabulary, posting lists, inverted indexes; scoring; vector space model; probabilistic information retrieval; text and vector space classification; support vector machines (SVM) and machine learning; clustering; Web search.
- CMPE 426** (3+0+0) 3 Credits / 5 ECTS
Concepts of Programming Languages
(Programlama Dili Kavramları)
 Fundamental programming language concepts, pointer arithmetic, dynamic memory allocation, strongly and dynamically typed languages, subprograms and parameter passing methods, abstract data types, encapsulation.
 Pre-requisite: CMPE 242

- CMPE 451** (2+0+2) 3 Credits / 6 ECTS
Microprocessors
(Mikroişlemciler)
 Introduction to processor design. The ARM architecture. ARM assembly language programming. ARM organization and implementation. The ARM instruction set. ARM processor cores. Memory hierarchy. Embedded ARM applications.
 Co-requisite: CMPE 361
- CMPE 465** (3+0+0) 3 Credits / 5 ECTS
Introduction to Computer Vision
(Bilgisayarlı Görmeye Giriş)
 Foundations of Computer Vision. Low-level computer vision topics: image formation and representation, color, camera geometry and calibration, filtering and edge detection. Mid-level vision topics: interest point detection, segmentation, texture analysis, stereo image analysis. High-level vision topics: object recognition, scene recognition, object and human tracking, human activity analysis.
 Pre-requisite: MATH 203
- CMPE 467** (3+0+0) 3 Credits / 5 ECTS
Human Computer Interaction
(İnsan Bilgisayar Etkileşimi)
 Foundations of human-computer interaction. Human performance models. Human-centered software evaluation. Human-centered software development. Graphical user-interface design. Human-computer interaction aspects of multimedia systems. Human-computer interaction aspects of collaboration and communication.
- CMPE 472** (2+0+2) 3 Credits / 6 ECTS
Computer Networks
(Bilgisayar Ağları)
 Communication model. Protocol architecture. OSI. TCP/IP. Wide area networks. ATM. Switching. Cellular wireless networks. Local area networks. High speed LANs. Wireless LANs. Internetworking. IPv6. TCP congestion control. UDP. Network security.
 Pre-requisite: CMPE 112
- CMPE 490** (2+0+2) 3 Credits / 6 ECTS
Introduction to Research in Computer Engineering
(Bilgisayar Mühendisliğinde Araştırmaya Giriş)
 Introduction to research practices in computer engineering. Working on a research problem as an independent study, under supervision of a faculty member. Preparation of academic papers based on the results of the research study.
 Pre-requisite: Consent of the Department

CMPE 491 (1+4+0) 3 Credits / 8 ECTS
Senior Project I
(Bitirme Projesi I)
 Project proposal. Literature review. Requirement analysis. Design.
 Co-requisite: CMPE 313

CMPE 492 (1+4+0) 3 Credits / 8 ECTS
Senior Project II
(Bitirme Projesi II)
 Testing document. Project implementation. Quality processes (verification and validation).
 Pre-requisite: CMPE 491

CMPE 499 (1+0+0) 1 Credit / 2 ECTS
Summer Practice II
(Yaz Stajı II)
 Works done and experiences gained throughout the summer internship.
 Pre-requisite: CMPE 242 or CMPE 221

Graduate Course Description

CMPE 512 (3+0+0) 3 Credits / 7.5 ECTS
Fundamentals of Programming I
(Programlamanın Temelleri I)
 Variables. Assignment statements. Built-in data types. Conditions. Loops. Arrays. Input & output management. Functions.

CMPE 517 (3+0+0) 3 Credits / 7.5 ECTS
Mobile and Pervasive Computing
(Mobil ve Yaygın Bilişim)
 Pervasive Computing Applications. Smart Home - Smart Cities - Smart Industrial Automation – Pervasive Health. Context-aware Systems. Pervasive Computing Architectures (Service-Oriented and Event-Driven). Synchronous and Asynchronous Messaging Systems. Sensor Networks. Pervasive Communication Technologies. Semantic Web. Wearable Computing.

CMPE 521 (3+0+0) 3 Credits / 7.5 ECTS
Data Structures and Algorithms I
(Veri Yapıları ve Algoritmalar I)
 Union-Find. Analysis of algorithms. Stacks and queues. Elementary sorts. Mergesort. Quicksort. Priority queues. Elementary symbol tables. Binary search trees. Balanced search trees. Geometric applications of BSTs. Hash tables. Searching applications.

CMPE 522 (3+0+0) 3 Credits / 7.5 ECTS
Data Structures and Algorithms II
(Veri Yapıları ve Algoritmalar II)
 Undirected graphs. Directed graphs. Minimum spanning trees. Shortest paths. Maximum flow and minimum cut. Radix sorts. Tries. Substring search. Regular expressions. Data compression. Reductions. Intractability. Linear programming.

CMPE 541	(3+0+0) 3 Credits / 7.5 ECTS
Data Mining (Veri Madenciliği)	
Basic Principles of Data Mining. Data Storage and Processing Technologies. Pre-processing. Knowledge representation. Attribute oriented analysis. Association Rules. Clustering, Classification, Regression. Prediction. Mining Real Data.	
CMPE 542	(3+0+0) 3 Credits / 7.5 ECTS
Machine Learning (Makine Öğrenmesi)	
Supervised learning; unsupervised learning; reinforcement learning; regression; learning theory; neural networks; support vector machines; nearest neighbors; bias-variance tradeoff; validation; kernel methods; VC dimension.	
CMPE 557	(3+0+0) 3 Credits / 7.5 ECTS
Business Processes Modeling (İş Süreçleri Modelleme)	
Business processes modeling concept. Modelling grammar and tools. Petri net and process flow charts. Business processes management notation and different perspectives.	
CMPE 558	(3+0+0) 3 Credits / 7.5 ECTS
Business Processes Automation (İş Süreçleri Otomasyonu)	
Business process management. Service oriented software architecture. Business intelligence. Business processes automation. Business process patterns. Business processes management technologies. Examples and case studies.	
CMPE 559	(3+0+0) 3 Credits / 7.5 ECTS
Complex Event Processing (Karmaşık Olay İşleme)	
Analysis and processing of events information flow. Interrelated event patterns originating from different sources. Context determination. Quick and correct decision making.	
CMPE 560	(3+0+0) 3 Credits / 7.5 ECTS
Computer Graphics (Bilgisayar Grafiği)	
Computer graphics techniques and applications. Rendering. Reflection, Ray Tracing. Light reflection. Texture mapping. Fractal visualization. Animation. Graphics for user interfaces and windowing systems.	
CMPE 562	(3+0+0) 3 Credits / 7.5 ECTS
Digital Image Processing (Görüntü İşleme)	
Image model sampling and quantization. Basic relationships between pixels and image geometry. Two- dimensional Fourier transforms. Image enhancement. Spatial and frequency domain methods. Image restoration. Image segmentation.	

CMPE 564**(3+0+0) 3 Credits / 7.5 ECTS****Computational Photography
(Hesaplama Fotoğrafi)**

Computational photography combines computer graphics and computer vision to create new types of photographs. The goal of the course is to combine image capture and image processing techniques to expand the limitations of the digital photography and to describe related algorithms. Major topics: Cameras and image formation, color perception, the foundations of image processing (filters, convolution, edge detection), image synthesis, image editing (image warping, image morphing, image blending and composition, image completion / inpainting , image matting), texture synthesis and transfer, panorama, mosaics, high dynamic range imaging, tone mapping, image-based lighting, photo quality assessment.

CMPE 565**(3+0+0) 3 Credits / 7.5 ECTS****Computer Vision
(Bilgisayarlı Görme)**

The basic concepts of Computer Vision and its relation to human visual perception. The analysis of image and video data. Image formation and representation, segmentation, texture analysis and synthesis, edge, corner and boundary extraction, feature extraction, contour and region analysis, camera geometry and calibration, stereo image analysis, three- dimensional reconstruction, object and scene recognition, tracking, human activity recognition and inference.

CMPE 566**(3+0+0) 3 Credits / 7.5 ECTS****Speech and Language Processing
(Bilgisayarlı Görme)**

Regular expressions and automata. N-gram models. Part-of-speech tagging. Speech synthesis. Speech recognition. Computational phonetic science. Features and unification. Computational semantics.

CMPE 567**(3+0+0) 3 Credits / 7.5 ECTS****Human-Computer Interaction
(İnsan-Bilgisayar Etkileşimi)**

Foundations of human-computer interaction. Human performance models. Human-centered software evaluation. Human-centered software development. Graphical user-interface design. Human-computer interaction aspects of multimedia systems. Human-computer interaction aspects of collaboration and communication.

CMPE 568**(3+0+0) 3 Credits / 7.5 ECTS****Selected Topics in Human-Computer Interaction
(Seçilmiş İnsan-Bilgisayar Etkileşim Konuları)**

Selected Topics in Human-Computer Interaction is a course that studies the state of the art in the field. Students analyze selected scientific articles, discuss the achieved results and present the work to other students in class.

CMPE 569**(3+0+0) 3 Credits / 7.5 ECTS****Physically Based Modeling and Simulation
(Fiziksel Tabanlı Modelleme ve Simülasyon)**

Describing natural phenomena by mathematical equations and geometric representations. Modeling motions (dynamics) using accurate physics equations and numerical solutions. Partial-differential equations. Particle and mass-point systems. Stability and constraints. Collision-detection algorithms. Rigid-body simulation. Deformable-solid simulation. Basics of cloth and fluid simulation. Trade-off discussion.

CMPE 570**(3+0+0) 3 Credits / 7.5 ECTS****Virtual Reality
(Sanal Gerçeklik)**

Virtual scene modeling. Three dimensional user interfaces. Three dimensional perception. Stereoscopic display technologies. Virtual and augmented reality technologies.

DEPARTMENT OF ELECTRICAL - ELECTRONICS ENGINEERING

Chair

Prof. Erdem Yazgan

Academic Staff

Prof. Erdem Yazgan, Assoc. Prof. Mirbek Turduev, Asst. Prof. Aykut Yıldız, Asst. Prof. Hatice Çiçek Boztuğ Yerci, Asst. Prof. Hüseyin Uğur Yıldız, Asst. Prof. Mehmet Karaca, Asst. Prof. Muhsin Caner Gökçe, Abdullah Akaydın*, Emre Bor*, Gülce Turhan*, Parisa Naghinazhadahmadi*, Seyedehnasim Seyedpour Esmaeilzad*, Zeynep Sıdıka Seven*.

* Research Assistant

Undergraduate Program in Electrical - Electronics Engineering

Electrical - Electronics Engineering is, in general, an engineering discipline covering the issues related to the design, development, maintenance, protection, control, economics and management of systems operating with strong (electricity) and weak (electronic) currents; and offers solutions and products in many areas, such as communication, energy, defense industry and the health sector. Therefore, we always encounter an application of Electrical - Electronics Engineering, wherever energy is used.

Electrical - Electronics Engineering, forming a common interdisciplinary platform with various areas, is a part of not only technical but also social and economic development and progress. Due to its constantly changing and evolving feature, it needs engineers who keep themselves up-to-date on new technologies. Electrical - Electronics engineers and researchers carry great responsibilities and duties due to the fact that they are a society who not only use the existing knowledge and technologies, but also self-devise and self-produce new technologies and constantly keep pace with the technological advancements that take place.

The objective of our department is to conduct a "student-centered", innovative and interactive program adopting new teaching-learning techniques and adapt to the modern world, in joint cooperation with other disciplines. Our academic curriculum enables our students to have a strong professional background, as well as to be involved in various interdisciplinary areas through minor and double major programs.

Our Mission is;

- To raise graduates who are capable of critical thinking, lifelong learning, working in cooperation, learning and applying the rules of professional conduct and ethics, adapting to emerging situations and approaches, communicating effectively, and possessing a broad vision,
- To produce, implement and disseminate knowledge by conducting high-impact research.

Program Outcomes

Students graduating from the Electrical and Electronics Engineering Department will be able to:

1. Apply the knowledge of electrical and electronics engineering, mathematics and science to engineering problems.
2. Apply appropriate IT technologies and relate to at least one computer programming language.

3. Communicate effectively in English and Turkish, orally and in writing, as individuals and multi-disciplinary teams in a professional, ethical and responsible manner.
4. Design and conduct experiments, and collect, analyze and interpret data.
5. Identify, model and solve engineering problems by utilizing modern techniques, skills and tools.
6. Design a system, component or process, using engineering design processes, to meet desired specifications within real-life constraints, such as economic, sustainability and environmental factors.
7. Recognize contemporary issues, and social, cultural, global, environmental and ethical responsibilities as an engineer.
8. Respect personal, social and cultural differences in professional practice and function effectively in multidisciplinary teams.
9. Engage in life-long learning to keep abreast of professional and personal development.
10. Manage personal and professional affairs effectively, through problem solving, entrepreneurial and time-management skills.
11. Recognize project management, risk management and change management issues.

Undergraduate Curriculum

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
CMPE 101	Introduction to Information Technologies	2	0	2	3	5
ENG 101	English for Academic Purposes	2	2	0	3	5
MATH 101	Calculus of One Variable	3	2	0	4	7
PHYS 105	Physics I	3	0	2	4	6
HIST 101	History of Turkish Republic I	2	0	0	2	2
CC	Sci/Soc/Hum/Lit/Art	3	0	0	3	5
TOTAL		15	4	4	19	30

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
CMPE 112	Fundamentals of Programming I	2	0	3	3	6
ENG 102	Expository Writing	2	2	0	3	5
MATH 102	Multivariable Calculus	3	2	0	4	7
HIST 102	History of Turkish Republic II	2	0	0	2	2
CC	Sci/Soc/Hum/Lit/Art	3	0	0	3	5
CC	Sci/Soc/Hum/Lit/Art	3	0	0	3	5
TOTAL		15	4	3	18	30

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
MATH 203	Linear Algebra and Differential Equations	3	0	0	3	5
EE 201	Circuit Theory I	3	0	2	4	8
EE 205	Software Tools for Electrical Engineering	0	0	3	1	4
CC	Sci/Soc/Hum/Lit/Art	3	0	0	3	5
Free	Free Elective	3	0	0	3	5
TUR 101	Turkish I	2	0	0	2	2
TOTAL		14	0	5	16	29

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
MATH 204	Vector and Complex Calculus	3	0	0	3	5
EE 202	Circuit Theory II	3	0	2	4	8
EE 222	Digital Logic Design	2	0	2	3	6
EE 252	Microelectronic Devices and Circuits	3	0	0	3	5
CC	Sci/Soc/Hum/Lit/Art Elective	3	0	0	3	5
TUR 102	Turkish II	2	0	0	2	2
TOTAL		16	0	4	18	31

Semester 5

Code	Course Title	C	P	L	Cr	ECTS
EE 311	Signals and Systems	3	0	0	3	5
EE 341	Electromagnetic Theory I	3	0	0	3	5
EE 351	Analog Electronics	3	0	2	4	8
EE 361	Electromechanical Energy Conversion	2	0	2	3	5
SF	Secondary Field	3	0	0	3	5
EE 399	Summer Practice I	1	0	0	1	2
TOTAL		15	0	4	17	30

Semester 6

Code	Course Title	C	P	L	Cr	ECTS
EE 304	Probability and Random Processes	3	0	0	3	5
EE 312	Communication Systems I	3	0	0	3	5
EE 332	Feedback Control Systems	3	0	0	3	5
EE 342	Electromagnetic Theory II	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
Free	Free Elective	3	0	0	3	5
TOTAL		18	0	0	18	30

Semester 7

Code	Course Title	C	P	L	Cr	ECTS
EE 491	Senior Project I	1	0	4	3	7
EE	Departmental Elective	3	0	0	3	5
EE	Departmental Elective	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
Free	Free Elective	3	0	0	3	5
EE 499	Summer Practice II	1	0	0	1	2
TEDU 400	Student Development Seminars	0	0	0	0	1
TOTAL		14	0	4	16	30

Semester 8

Code	Course Title	C	P	L	Cr	ECTS
EE 492	Senior Project II	1	0	4	3	10
EE	Departmental Elective	3	0	0	3	5
EE	Departmental Elective	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
TOTAL		13	0	4	15	30
Totals expected for graduation		119	8	29	137	240

Courses with Pre-requisites

Course Name	Pre-requisites
EE 201 Circuit Theory I	MATH 101 and PHYS 105
EE 202 Circuit Theory II	EE 201
EE 252 Microelectronic Devices and Circuits	EE 201
EE 304 Probability and Random Processes	MATH 101
EE 307 Electrical Circuits	MATH 101
EE 312 Communication Systems I	EE 311
EE 332 Feedback Control Systems	EE 311
EE 341 Electromagnetic Theory I	MATH 204
EE 342 Electromagnetic Theory II	EE 341
EE 351 Analog Circuit Design	EE 252
EE 361 Electromechanical Energy Conversion	EE 201
EE 399 Summer Practice I	EE 201
EE 403 Numerical Methods for Engineering	MATH 203
EE 404 Measurement and Instrumentation	EE 311 or EE 304
EE 411 Digital Signal Processing	EE 311
EE 413 Communication Systems II	EE 312
EE 414 Wireless Communications	EE 312
EE 415 Communication Electronics	EE 351
EE 416 Optical Communications	EE 341
EE 417 Introduction to Photonics	EE 341
EE 418 Optoelectronics	EE 252
EE 431 Digital Control Systems	EE 332
EE 432 Nonlinear Control Systems	EE 332
EE 441 Microwave Engineering	EE 341
EE 442 Microwave Electronics	EE 441
EE 443 Introduction to Radar Systems	EE 341
EE 444 Antenna Engineering	EE 341
EE 451 Digital Electronics	EE 252

EE 452 Digital Integrated Circuits	EE 352
EE 453 Analog Integrated Circuits	EE 351
EE 461 Power Electronics	EE 351
EE 462 Power System Analysis	EE 361
EE 463 Utilization of Electrical Energy	EE 361
EE 471 High Voltage Techniques	EE 202 and EE 341
EE 492 Senior Project II	EE 491

Undergraduate Course Description

EE 201 (3+0+0) 3 Credits / 6 ECTS

**Circuit Theory I
(Devre Teorisi I)**

Fundamentals of electric circuits, variables and lumped circuit elements. Kirchhoff's laws. Resistive circuits. Methods of circuit analysis. Operational amplifiers (opamps). Energy storage elements. Analysis of first and second order circuits. Steady-state alternating current analysis.

Pre-requisite: MATH 101

Co-requisite: EE 203

EE 202 (3+0+2) 4 Credits / 8 ECTS

**Circuit Theory II
(Devre Teorisi II)**

Phasor techniques for AC steady-state analysis of electrical circuits. Steady-state power. Three-phase circuits. Magnetically coupled circuits. Frequency response techniques. Laplace transform and its applications. Linear time-invariant dynamic circuits: state equations, natural frequencies, complex frequency domain analysis. Two-port circuits. Experiments on opamp circuits, impedance measurement, active and passive filters, three-phase circuits, power calculations, rectifier diodes, Zener diodes, bipolar junction transistors (BJT), field effect transistors (FET).

Pre-requisite: EE 201

EE 205 (0+0+3) 1 Credit / 4 ECTS

**Software Tools for Electrical Engineering
(Elektrik-Elektronik Mühendisliği için Yazılım Araçları)**

MATLAB Environment, Built-in MATLAB Functions, Manipulating Matrices, Plotting, User Defined Functions, User Controlled Input and Outputs, Logical Functions, Repetition Structures, Matrix Algebra.

EE 207 (2+0+2) 3 Credits / 6 ECTS

**Electrical Circuits and Logic Design
(Elektrik Devreler ve Mantıksal Tasarım)**

Electrical Circuits and Logic Design is a course that provides basic information about digital circuits along with a thorough discussion on logic design, digital system design, and basic computer design available to second year students. The course material include the following topics: Number systems and conversions, data representation, analysis and design of combinational logic circuits, Boolean algebra, logic gates, minimization techniques, HDL, sequential logic, flip-flops, registers, clocked circuits, clock generation, counters, shift registers, arithmetic circuits.

- EE 222** (2+0+2) 3 Credits / 6 ECTS
Digital Logic Design
(Sayısal Mantık Tasarımı)
 Number systems and Boolean Algebra. Binary logic and gates. Combinatorial and sequential circuit design. Registers and counters. Programmable logic.
- EE 252** (3+0+0) 3 Credits / 5 ECTS
Microelectronic Devices and Circuits
(Mikroelektronik Aygıtlar ve Devreler)
 Energy band structure of materials: conductors, insulators, and semiconductors. Basic semiconductor concepts. Physics and models of p-n junction diodes, bipolar junction transistors (BJT), and metal oxide semiconductor field effect transistors (MOSFET). Transistor biasing and small-signal models. Dynamic models for diodes and transistors.
 Pre-requisite: EE 201
- EE 304** (3+0+0) 3 Credits / 5 ECTS
Probability and Random Processes
(Olasılık ve Rassal Süreçler)
 Basic Concepts of Probability Theory, Discrete Random Variables, One Random Variables, Pairs of Random Variables, Long-Term Averages, Bernoulli and Poisson Random Processes, Analysis and Processing of Random Signals, Markov Chains.
 Pre-requisite: MATH 101
- EE 307** (2+0+2) 3 Credits / 6 ECTS
Electrical Circuits
(Elektrik Devreleri)
 Fundamentals of electric circuits, variables and lumped circuit elements. Kirchhoff's laws. Resistive circuits. Methods of circuit analysis. Operational amplifiers. Energy storage elements. Analysis of first order circuits. Basic semiconductor concepts. Models of p-n junction diodes, bipolar junction transistors (BJT), and metal oxide semiconductor field effect transistors (MOSFET). Logic gates: Inverters, input and output circuits, Not-AND (NAND) and Not-OR (NOR) gates.
 (Offered for non-EE students)
 Pre-requisite: MATH 101
- EE 309** (2+0+2) 3 Credits / 4 ECTS
Fundamentals of Electrical and Electronics Engineering
(Elektrik ve Elektronik Mühendisliğinin Temelleri)
 Basic electrical and electronic components and circuits. Circuit analysis. Analysis of first order circuits. Phasors. Steady-state alternating current analysis. Fundamentals of electromechanical energy conversion. Alternating current power. Three phase. Transformers. Electrical safety.
 (Offered for non-EE students)

EE 311**(3+0+0) 3 Credits / 5 ECTS****Signals and Systems
(Sinyaller ve Sistemler)**

Continuous-Time and Discrete-Time Signals and Systems, Linear Time-Invariant Systems, Fourier Series Analysis for Continuous-Time and Discrete-Time Signals and Systems, Continuous-Time Fourier Transform, Discrete-Time Fourier Transform, Sampling Theory, z-Transform.

EE 312**(3+0+0) 3 Credits / 5 ECTS****Communication Systems I
(Haberleşme Sistemleri I)**

Fourier Theory and Communication Signals: Filters, Low-Pass and Band-Pass Signals, Phase and Group Delay, Amplitude Modulation: Double Sideband-Suppressed Carrier, Single-Sideband Modulation Methods, Frequency Division Multiplexing, Phase and Frequency Modulation: Phase-Locked Loop, Superheterodyne Receivers, Random Variables and Processes: Power Spectral Density, Transmission of a Random Process Through a Linear Filter, Noise in Analog Modulation.

Pre-requisite: EE 311

EE 332**(3+0+0) 3 Credits / 5 ECTS****Feedback Control Systems
(Geri Beslemeli Kontrol Sistemleri)**

Basic concepts of open loop feedback. Mathematical models of dynamical systems: State equations, transfer functions, block diagrams. Stability: Bounded-input, bounded-output, Routh-Hurwitz and Nyquist stability criteria, gain and phase margin. Bode plots. Root locus method. State-space techniques: Controllability, observability, pole placement and estimator design. Sensitivity and robustness.

Pre-requisite: EE 311

EE 341**(3+0+0) 3 Credits / 5 ECTS****Electromagnetic Theory I
(Elektromanyetik Teori I)**

Electrostatic Fields: Coulomb's Law, Gauss' Law, Electric Potential, Boundary Conditions, Capacitance, Electrostatic Force and Energy, Poisson's and Laplace's Equation, Image method, Steady Electric Currents, Static Magnetic Fields: Biot-Savart Law, Ampere's Law, Vector Magnetic Potential, Inductance, Magnetostatic Force and Energy.

Pre-requisite: MATH 204

EE 342**(3+0+0) 3 Credits / 5 ECTS****Electromagnetic Theory II
(Elektromanyetik Teori II)**

Faraday's Law of Induction, Wave Concept, Maxwell's Equations, Plane Waves, Polarization, Poynting's Vector, Principles of Reflection and Refraction of Plane Waves, Introduction to Transmission Lines, Waveguides, Antennas and Radiation.

Pre-requisite: EE 341

- EE 351** (3+0+2) 4 Credits / 8 ECTS
Analog Circuit Design
(Analog Devre Tasarımı)
 Basic single-stage transistor amplifiers. Low and high frequency response of amplifiers. Multi-stage amplifiers. Differential amplifiers. Current mirrors. Feedback amplifiers and stability. Power amplifiers and regulators. Experiments on single-stage multistage amplifiers, frequency response of amplifiers, differential amplifiers, feedback amplifiers, power amplifiers, regulated DC power supplies, and audio amplifiers.
 Pre-requisite: EE 252
- EE 361** (2+0+2) 3 Credits / 5 ECTS
Electromechanical Energy Conversion
(Elektromekanik Enerji Dönüşümü)
 Magnetic circuits. Transformers. Electromechanical energy conversion principles. Direct current machines and generators. Principles of alternating current machine operation. Synchronous machines and generators. Induction machines. Single phase machines. Special machines.
 Pre-requisite: EE 201
- EE 399** (1+0+0) 1 Credit / 2 ECTS
Summer Practice I
(Yaz Stajı I)
 Minimum 20 working days of practical work in an organization operating on the design, production, maintenance, management of electrical or electronics systems.
 Pre-requisite: EE 201
- EE 403** (3+0+0) 3 Credits / 5 ECTS
Numerical Methods for Engineering
(Mühendislik için Sayısal Yöntemler)
 Numerical error analysis. Solution of nonlinear equation. Solution of linear and nonlinear system of equations. Numerical approximation and interpolation. Numerical differentiation and integration. Solution of ordinary and partial differential equations.
 Pre-requisite: MATH 203
- EE 404** (3+0+0) 3 Credits / 5 ECTS
Measurement and Instrumentation
(Ölçüm ve Enstrümantasyon)
 Basic principles and instrument characteristics. Measurement errors, basic statistics, noise and its control. Dynamic characteristics of instruments, time and frequency domain responses. System identification with correlation techniques. Amplifiers, filters, analog-to-digital and digital-to-analog converters. Position, strain, pressure and motion sensors. Flow sensors.
 Pre-requisite: EE 311 or EE 304

EE 411**(3+0+0) 3 Credits / 5 ECTS****Digital Signal Processing
(Sayısal Sinyal İşleme)**

Discrete-time signals and systems. Discrete-time Fourier transform. Z-transform. Sampling. Linear time-invariant systems. Structures for discrete-time systems. Filter design techniques: Infinite impulse response (IIR) and finite impulse response (FIR) filters. Fast Fourier transform methods.

Pre-requisite: EE 311

EE 413**(2+0+2) 3 Credits / 5 ECTS****Communication Systems II
(Haberleşme Sistemleri II)**

Sampling Process, Pulse Amplitude Modulation, Quantization, Pulse Code Modulation, Baseband Transmission of Digital Signals: Matched Filter Detection, Probability of Error Due to the Noise, Intersymbol Interference, Nyquist Channel M-ary Pulse Amplitude Modulation, Band-pass Transmission of Digital Signals: Phase and Amplitude Shift Keying, M-ary Data Transmission Systems, Analysis on Noise Performance, Information and Forward Error Correction: Entropy, Source Coding Theorem, Lossless Data Compression, Channel Capacity, Error Correcting Codes.

Pre-requisite: EE 312

EE 414**(3+0+0) 3 Credits / 5 ECTS****Wireless Communications
(Kablosuz Haberleşme)**

Cellular Communications: Frequency Reuse, Handoff Interference, Trunking, Coverage, Capacity, Mobile Radio Wave Propagation: Link Budget Analysis, Shadowing, Fading, Multipath, Spread Spectrum, Multiple Access Schemes: FDMA, TDMA, CDMA, Diversity, Equalization, Channel Coding, Next Generation Wireless Networks, Systems and Standards: 1G/2G/3G/4G/5G Systems.

Pre-requisite: EE 312

EE 415**(3+0+0) 3 Credits / 5 ECTS****Communication Electronics
(Haberleşme Elektronikliği)**

Basic Communications Systems. Amplifiers and Oscillators. Mixing and Heterodyning, Phased Locked Loops, High Speed Analog and Digital Circuits, Nonlinearity, Transmitters and Receivers.

Pre-requisite: EE 351

EE 416**(3+0+0) 3 Credits / 5 ECTS****Optical Communications
(Optik Haberleşme)**

Review of basic optics. Characteristics of optical fibers. Optical waveguides. Optical sources and transmitters. Optical detectors, optical amplifiers. Noise and dispersion in optical systems. Optical link design.

Pre-requisite: EE 341

- EE 417** (3+0+0) 3 Credits / 5 ECTS
Introduction to Photonics
(Fotoniğe Giriş)
 This course explores the fundamentals of photonics theory, concepts, and applications. In particular the course covers principles and applications of ray optics, matrix optics, wave optics, Maxwell's electromagnetic waves, fourier optics, diffraction, interference, lens and mirrors, mono- and polychromatic light, electromagnetic optics, absorption, dispersion, polarization optics, crystal optics, solar cells.
 Pre-requisite: EE 341
- EE 418** (3+0+0) 3 Credits / 5 ECTS
Optoelectronics
(Optoelektronik)
 Optical processes in semiconductors, absorption and radiation, spontaneous and stimulated emission, transition rates and carrier lifetime, principles of light emitting diodes, lasers, photodetectors, photodiodes, modulators and solar cells.
 Pre-requisite: EE 252
- EE 431** (2+0+2) 3 Credits / 5 ECTS
Digital Control Systems
(Sayısal Kontrol Sistemleri)
 Discrete time system models in control. Discrete equivalents to continuous transfer functions. Sampled data systems. Design of digital control systems by transform techniques and state-space methods. Quantization effects. Parameter estimation for discrete time systems.
 Pre-requisite: EE 332
- EE 432** (3+0+0) 3 Credits / 5 ECTS
Nonlinear Control Systems
(Doğrusal Olmayan Kontrol Sistemleri)
 State space analysis. Sustained oscillations graphical methods: method of isocline, Lienard's method. Stability in nonlinear systems. Lyapunov's method. Popov and circle criteria. Analytical techniques for periodic phenomena. Variable structure systems.
 Pre-requisite: EE 332
- EE 441** (2+0+2) 3 Credits / 5 ECTS
Microwave Engineering
(Mikrodalga Mühendisliği)
 Transmission lines. Rectangular and circular waveguides. Impedance transformations and matching techniques. Scattering matrix of microwave networks. Solid state microwave devices.
 Pre-requisite: EE 341
- EE 442** (3+0+0) 3 Credits / 5 ECTS
Microwave Electronics
(Mikrodalga Elektronik)
 Planar Transmission Lines, Passive Microwave Elements, Series and Parallel Resonant Circuits, Periodic Structures, k-Beta Diagrams, Microwave Filter Design, and Realization, Microwave Amplifier Design.
 Pre-requisite: EE 441

EE 443**(3+0+0) 3 Credits / 5 ECTS****Introduction to Radar Systems
(Radar Sistemlerine Giriş)**

Radar range equation. Radar transmitters, antennas, and receivers. Concepts of matched filtering, pulse compression, and radar ambiguity function. Radar target detection in a noise background. Target radar cross-section models. Effects of the operating environment, radio wave propagation and clutter. Moving target indication (MTI) and pulsed Doppler processing. Range, angle, and Doppler resolution/accuracy, fundamental tracking concepts.

Pre-requisite: EE 341

EE 444**(2+0+2) 3 Credits / 5 ECTS****Antenna Engineering
(Anten Mühendisliği)**

Basic antenna parameters. Radiation fields of an antenna. Linear wire antennas. Ground interference effects. Antenna arrays. Aperture type antennas. Microstrip antennas.

Pre-requisite: EE 341

EE 451**(2+0+2) 3 Credits / 6 ECTS****Digital Electronics
(Sayısal Elektronik)**

Diode and transistor models used in digital circuits. Logic gates: Inverters, input and output circuits, Not-AND (NAND) and Not-OR (NOR) gates. Static and dynamic logic circuits. Regenerative circuits. Static and dynamic memories. Analog-to-digital (A/D) and digital-to-analog (D/A) converters.

Pre-requisite: EE 252

EE 452**(3+0+0) 3 Credits / 5 ECTS****Digital Integrated Circuits
(Sayısal Tümlleşik Devreler)**

Fundamental structures of very large integrated (VLSI) systems. Analysis and design of digital integrated circuits with complementary metal oxide semiconductor (CMOS) technology. Structured design. Design rules, layout procedures. Timing. Testability.

Pre-requisite: EE 451

EE 453**(3+0+0) 3 Credits / 5 ECTS****Analog Integrated Circuits
(Analog Tümlleşik Devreler)**

Analysis and design of bipolar junction transistor (BJT) and metal oxide semiconductor (MOS) multi-transistor amplifiers. Analog integrated circuit building blocks. Biasing circuits. complementary metal oxide semiconductor (CMOS) operational amplifiers. Active loads and references. Amplifiers and output stages.

Pre-requisite: EE 351

- EE 461** (3+0+0) 3 Credits / 5 ECTS
Power Electronics
(Güç Elektroniği)
 Power switches and their characteristics. Power diodes, thyristors, power transistors, and power metal oxide semiconductor field effect transistors (MOSFET). Single and three phase controlled rectifiers. Alternating current voltage controllers. Direct current-direct current (DC-DC) converters. Pulse width modulation inverters.
 Pre-requisite: EE 351
- EE 462** (3+0+0) 3 Credits / 5 ECTS
Power System Analysis
(Güç Sistem Analizi)
 Basic structure of electrical power systems. Electrical characteristics of transmission lines, transformers and generators. Representation of power systems. Symmetrical three-phase faults. Symmetrical components for short circuit calculation. Unsymmetrical faults.
 Pre-requisite: EE 361
- EE 463** (3+0+0) 3 Credits / 5 ECTS
Utilization of Electrical Energy
(Elektrik Enerjisinin Kullanımı)
 Basic operating principles and classification of electrical motor drives. Solid state direct current motor control. Solid state alternating current motor control. Dynamic behavior of electrical machines. Electric braking. Starting of electrical machines. Intermittent loads. Drive applications. Modern methods of reactive power compensation.
 Pre-requisite: EE 361
- EE 471** (3+0+0) 3 Credits / 5 ECTS
High Voltage Techniques
(Yüksek Gerilim Tekniği)
 Basics of high voltage engineering, stress and strength, Gaseous isolation property, ionization, Electrical breakdown and discharge in gases, Electronegative gases and gas insulators, Types of discharges, Breakdown mechanisms in isolation materials Lightning mechanism, Generation of high voltages, Measurement of high voltages and losses High voltage applications.
 Pre-requisites: EE 202 and EE 341
- EE 491** (1+0+4) 3 Credits / 7 ECTS
Senior Project I
(Bitirme Projesi I)
 Design, simulation and implementation of an electrical or electronic circuit, system or software performing a specified task in electrical engineering. Building blocks of project design: project management, design tools, simulation standards, quality concepts, ethics, etc.
 Pre-requisite: 24 EE Credits

EE 492

(1+0+4) 3 Credits / 10 ECTS

**Senior Project II
(Bitirme Projesi II)**

Design, simulation and implementation of an electrical or electronic circuit, system or software performing a specified task in electrical engineering. Building blocks of project design: project management, design tools, simulation standards, quality concepts, ethics, etc.

Pre-requisite: EE 491

EE 499

(1+0+0) 1 Credits / 2 ECTS

**Summer Practice II
(Yaz Stajı II)**

Minimum 20 working days of practical work in an organization operating on the design, production, maintenance, management of electrical or electronics systems.

Graduate Course Description

EE 521

(3+0+0) 3 Credits / 7.5 ECTS

**Signals and Systems
(İşaretler ve Sistemler)**

Analog and discrete time signals and systems. Linear time-invariant systems. Fourier series. Fourier transform. Discrete-time Fourier transform. Frequency response. Sampling theorem. Laplace transform. Z-Transform.

EE 522

(3+0+0) 3 Credits / 7.5 ECTS

**Discrete Time Signal Processing
(Sayısal İşaret İşleme)**

Discrete-time signals and systems. Discrete-time Fourier transform. Z-transform. Sampling. Linear-time invariant systems. Structures of discrete-time systems. Filter design techniques: infinite and finite response filters. Fast Fourier transform methods.

EE 531

(3+0+0) 3 Credits / 7.5 ECTS

**Machine Learning
(Makine Öğrenmesi)**

Statistical introduction to machine learning. Classifiers. Supervised learning. Unsupervised learning. Reinforcement learning. Performance evaluation, comparison and hybrid use of learning algorithms. Regression. Artificial neural networks.

EE 532

(3+0+0) 3 Credits / 7.5 ECTS

**Pattern Recognition
(Örüntü Tanıma)**

Patterns. Introduction to pattern recognition systems. Bayesian decision theory. Classifiers and discriminant functions. Normal distributions. Maximum likelihood predictor. Non-parameteric estimation methods. Nearest neighbour method. Distance metrics. Linear discriminant function. Independent component analysis.

DEPARTMENT OF INDUSTRIAL ENGINEERING

Chair

Assoc. Prof. Mehmet Rüştü Taner

Academic Staff

Assoc. Prof. Mehmet Rüştü Taner, Asst. Prof. Ali İrfan Mahmutoğulları, Asst. Prof. Ece Zeliha Demirci, Asst. Prof. Kamyar Kargar Mohammadinezhad, Asst. Prof. Serhat Gül, Asst. Prof. Vedat Bayram, Ali Koç*, Arsham Atashi Khoei*, Melissa Müslim*, Sırma Karakaya*.

* Research Assistant

Undergraduate Program in Industrial Engineering

In our day of increasing domestic and global competition, industrial engineering takes on leading duties in helping profit and non-profit organizations to become low cost, high productivity, and sustainable manufacturing or service organizations.

Industrial Engineering offers effective solutions in the form of decision support systems to aid in the design and management of a wide range of operations. These include production planning, supply chain management, logistics, product and process design, process measurement and improvement, research and development, quality assurance and reliability, strategic management and finance. At the same time the profession continuously finds application opportunities in new areas, which further support its significance. In recent years, Industrial Engineers have found application and work opportunities in areas of social importance such as health, energy, humanitarian logistics, and sustainable production to help seek answers to contemporary problems.

Program Outcomes

Students graduating from the Industrial Engineering Department of TEDU will:

1. Comprehend concepts of mathematics and basic sciences,
2. Be able to apply concepts of engineering,
3. Be able to design and conduct experiments,
4. Be able to analyze and interpret data,
5. Be able to design and/or improve a system, component, or process effectively by applying notions of optimality to meet desired needs,
6. Function in interdisciplinary teams through good working habits, time management, and self-regulation,
7. Be able to identify, formulate, and solve engineering problems and design alternatives,
8. Demonstrate professional and ethical responsibility,
9. Use an advanced level of English in interpersonal communication and self-development,
10. Demonstrate effective written and oral communication skills,
11. Be able to express a creative thought on and critical assessment of events and ideas to shape their professional practice in a global/societal context,

12. Recognize the need for, and have the ability to engage in life-long learning,
13. Be able to interpret contemporary issues,
14. Use the techniques, skills, and modern engineering tools necessary for engineering practice,
15. Recognize and appreciate different cultures and respect individual and cultural differences.

Undergraduate Curriculum

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
MATH 101	Calculus of One Variable	3	2	0	4	7
PHYS 105	Physics I	3	0	2	4	6
CMPE 101	Introduction to Information Technologies	2	0	2	3	5
ENG 101	English for Academic Purposes	2	2	0	3	5
HIST 101	History of Turkish Republic	2	0	0	2	2
CC	Sci./Soc.Sci/Hum/Lit/Art	3	0	0	3	5
TOTAL		15	4	4	19	30

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
MATH 102	Multivariable Calculus	3	2	0	4	7
CMPE 112	Fundamentals of Programming I	2	0	3	3	6
ENG 102	Expository Writing	2	2	0	3	5
HIST 102	History of Turkish Republic II	2	0	0	2	2
CC	Sci./Soc.Sci/Hum/Lit/Art	3	0	0	3	5
CC	Sci./Soc.Sci/Hum/Lit/Art	3	0	0	3	5
TOTAL		15	4	3	18	30

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
ME 221	Manufacturing Processes	3	0	0	3	6
MATH 203	Linear Algebra and Differential Equations	3	0	0	3	5
MATH 230	Introduction to Probability Theory	3	0	0	3	6
ECON 110	Principles of Economics	3	0	0	3	5
TUR 101	Turkish I	2	0	0	2	2
CC	Sci./Soc.Sci/Hum/Lit/Art	3	0	0	3	5
TOTAL		17	0	0	17	29

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
IE 212	Lean Process Design	3	0	0	3	6
IE 222	Engineering Economy & Cost Analysis	3	0	0	3	6
IE 232	Mathematical Modeling and Optimization I	3	0	0	3	6
MATH 232	Introduction to Statistics	3	0	0	3	6
TUR 102	Turkish II	2	0	0	2	2
CC	Sci/ Soc.Sci/Hum/Lit/Art	3	0	0	3	5
TOTAL		17	0	0	17	31

Semester 5

Code	Course Title	C	P	L	Cr	ECTS
IE 311	Manufacturing and Service Operations Planning I	3	0	0	3	6
IE 331	Mathematical Modeling and Optimization II	3	0	0	3	6
IE 341	Simulation	2	0	2	3	7
IE 399	Summer Practice I	1	0	0	1	2
CMPE 232	Relational Databases	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
TOTAL		15	0	2	16	31

Semester 6

Code	Course Title	C	P	L	Cr	ECTS
IE 312	Manufacturing and Service Operations Planning II	3	0	0	3	6
IE 316	Quality Planning and Control	3	0	0	3	7
IE 332	Mathematical Modeling and Optimization III	3	0	0	3	6
IE	Industrial Engineering Elective I	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
TOTAL		15	0	0	15	29

Semester 7

Code	Course Title	C	P	L	Cr	ECTS
IE 491	Senior Project I	1	4	0	3	6
IE 499	Summer Practice II	1	0	0	1	2
IE	Industrial Engineering Elective II	3	0	0	3	5
TEDU 400	Student Development Seminars	0	0	0	0	1
F	Free Elective I	3	0	0	3	5
F	Free Elective II	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
TOTAL		14	4	0	16	29

Semester 8

Code	Course Title	C	P	L	Cr	ECTS
IE 492	Senior Project II	1	4	0	3	6
IE	Industrial Engineering Elective III	3	0	0	3	5
F	Free Elective III	3	0	0	3	5
F	Free Elective IV	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
TOTAL		16	4	0	18	31

Totals expected for graduation		124	16	10	136	240
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Courses with Pre-requisites

Course Name	Pre-requisites
IE 232 Mathematical Modeling and Optimization I	MATH 203 or MATH 112
IE 311 Manufacturing and Service Operations Planning I	IE 232
IE 312 Manufacturing and Service Operations Planning II	MATH 230 and IE 232
IE 316 Quality Planning and Control	MATH 232
IE 331 Mathematical Modeling and Optimization II	IE 232
IE 332 Mathematical Modeling and Optimization III	MATH 230
IE 341 Simulation	MATH 232
IE 399 Summer Practice I	IE 212
IE 423 Optimization Models in Finance	IE 222 and IE 232 and IE 332 and MATH 232
IE 441 Stochastic Processes	MATH 230
IE 451 Decision and Risk Analysis	MATH 230
IE 491 Senior Project I	18 IE Credit
IE 492 Senior Project II	IE 491
IE 499 Summer Practice II	IE 399

Undergraduate Course Descriptions

IE 212

(3+0+0) 3 Credits / 6 ECTS

Lean Process Design (Yalın Süreç Tasarımı)

Definition and brief history of production. Classification of processes in manufacturing and service organizations: service-process matrix, product-process matrix, layout types. Process analysis tools: process maps, Gantt chart, Pareto chart, operation chart. Process measurement. Lean production and lean thinking. Lean process design and improvement: operations purpose, design for manufacturability and assembly, tolerance and specifications, setup and tools, work design, waste detection and elimination, pull-push systems, just-in-time inventory, continuous improvement, value stream mapping.

IE 212

(3+0+0) 3 Credits / 6 ECTS

Lean Process Design (Yalın Süreç Tasarımı)

Definition and brief history of production. Classification of processes in manufacturing and service organizations: service-process matrix, product-process matrix, layout types. Process analysis tools: process maps, Gantt chart, Pareto chart, operation chart. Process measurement. Lean production and lean thinking. Lean process design and improvement: operations purpose, design for manufacturability and assembly, tolerance and specifications, setup and tools, work design, waste detection and elimination, pull-push systems, just-in-time inventory, continuous improvement, value stream mapping.

- IE 222** (3+0+0) 3 Credits / 6 ECTS
Engineering Economy and Cost Analysis
 (Mühendislik Ekonomisi ve Maliyet Analizi)
 Basics of financial accounting. Preparation of balance sheet, income statement and flow of funds statement. Definition of costs and cost analysis. Economic analysis for engineering decisions. Interest, time value of money, and methods for evaluation of alternatives. Techniques for evaluating the worth of investment opportunities. Sensitivity and risk analysis. After tax economic analysis, and methods of financing.
- IE 232** (3+0+0) 3 Credits / 6 ECTS
Mathematical Modeling and Optimization
 (Matematiksel Modelleme ve Optimizasyon I)
 Linear programming models. Graphical solutions. Interpretation of solutions. The simplex method, duality, sensitivity analysis, and related topics.
 Pre-requisite: MATH 203 or MATH 112
- IE 311** (3+0+0) 3 Credits / 6 ECTS
Manufacturing and Service Operations Planning I
 (İmalat ve Hizmet Operasyonları Planlaması I)
 Aggregate production planning. Master production schedule. Capacity planning and material requirements planning. Machine scheduling.
 Pre-requisite: IE 232
- IE 312** (3+0+0) 3 Credits / 6 ECTS
Manufacturing and Service Operations Planning II
 (İmalat ve Hizmet Operasyonları Planlaması II)
 "Project management: budgeting and resource assignment. Inventory planning under stochastic demand. ABC Classification of items. Capacity planning: work force planning, shift scheduling and rostering. Revenue management. Customer relations management: strategies and techniques for attracting and retaining customers and statistical inference with data mining techniques. Process efficiency with Data Envelopment Analysis. Enterprise resource planning: information architecture including data flow models and entity relationship diagrams in manufacturing and service organizations. Planning in public and non-governmental organizations.
- IE 316** (3+0+0) 3 Credits / 7 ECTS
Quality Planning and Control
 (Kalite Planlaması ve Kontrolü)
 Principles of quality control systems. Process control. Specification and tolerances. Process capability studies, and control charts. Acceptance sampling plans. Cost aspects of quality decisions.
 Pre-requisite: MATH 232
- IE 331** (3+0+0) 3 Credits / 6 ECTS
Mathematical Modeling and Optimization II
 (Matematiksel Modelleme ve Optimizasyon II)
 Integer programming. Cutting plane algorithms and branch and bound techniques. Nonlinear programming. Network models.
 Pre-requisite: IE 232

- IE 332** (3+0+0) 3 Credits / 6 ECTS
Mathematical Modeling and Optimization III
(Matematiksel Modelleme ve Optimizasyon III)
 Decision making under uncertainty. Dynamic programming. Introduction to stochastic processes. Queuing models and applications. Markov chains and Markov processes. Game theory.
 Pre-requisite: MATH 230
- IE 341** (2+0+2) 3 Credits / 7 ECTS
Simulation
(Benzetim)
 Simulation methodology and model building. Modeling with a simulation language. Random number and random variate generation. Basic issues in the design, verification and validation of simulation models. Analysis of simulation output.
 Pre-requisite: MATH 232
- IE 399** (1+0+0) 1 Credits / 2 ECTS
Summer Practice I
(Yaz Stajı I)
 Minimum 20 consecutive working days of practice in a manufacturing system. Observation and system analysis.
 Pre-requisite: IE 212
- IE 413** (3+0+0) 3 Credits / 5 ECTS
Operations Scheduling
(Operasyonel Çizelgeleme)
 Introduction to scheduling. Selected problems from a variety of manufacturing and service applications. Common modeling and solution methods and approaches. Project scheduling. Job shop scheduling. Flowshop scheduling. Lot sizing and scheduling. Reservation systems, timetabling, workforce and crew scheduling.
- IE 414** (3+0+0) 3 Credits / 5 ECTS
Inventory Planning Problems
(Envanter Planlama Problemleri)
 Economic Order Quantity model and extensions. Inventory control policies for stochastic demand. Joint replenishment problem. Introduction to multi-echelon inventory problems.
- IE 415** (3+0+0) 3 Credits / 5 ECTS
Modeling and Design of Production Systems
(Üretim Sistemlerinin Tasarımı ve Modellenmesi)
 Analysis of the dynamics of production systems. Performance measures in production systems. Comparison of pull and push systems. Impact of uncertainty and variation in production systems.
- IE 423** (3+0+0) 3 Credits / 5 ECTS
Optimization Models in Finance
(Finansta Optimizasyon Modelleri)
 Introduction to Mathematical Programming models used in computational finance. Asset-Liability Management, Arbitrage and Asset Detection with Linear Programming, Mean-variance models with

Quadratic Programming, Portfolios with Combinatorial Constraints with Mixed Integer Programming; Asset-Liability Management using Risk Measures with Stochastic Programming; Multi-period Portfolio Optimization, Binomial Pricing with Dynamic Programming; Robust Profit Opportunities in Risky Portfolios, Robust Portfolio Selection with Robust Optimization. Introduction to Mathematical Programming models used in computational finance. Asset-Liability Management, Arbitrage and Asset Detection with Linear Programming, Mean-variance models with Quadratic Programming, Portfolios with Combinatorial Constraints with Mixed Integer Programming; Asset-Liability Management using Risk Measures with Stochastic Programming; Multi-period Portfolio Optimization, Binomial Pricing with Dynamic Programming; Robust Profit Opportunities in Risky Portfolios, Robust Portfolio Selection with Robust Optimization.

Pre-requisite: IE 222, IE 232, IE 332 and MATH 232

IE 435

(3+0+0) 3 Credits / 5 ECTS

Heuristic Search

(Sezgisel Yöntemler)

Introduction and categorization of heuristics. Overview of basic heuristic search procedures. Metaheuristics. Simulated annealing. Tabu search. Genetic algorithms. Ant colony algorithms. Evaluation of heuristic performance. Computational complexity of heuristics.

IE 438

(3+0+0) 3 Credits / 5 ECTS

Discrete Optimization

(Kesikli Optimizasyon)

Modeling, relaxing and bounding techniques. Fundamental easy-to-solve problems. Branch-and-bound, cutting planes method, branch and price and column generation methods. Dynamic programming. Meta-heuristics such as tabu search, genetic algorithms and variable neighborhood search. Application examples.

IE 441

(3+0+0) 3 Credits / 5 ECTS

Stochastic Processes

(Stokastik Süreçler)

Introduction to stochastic processes. Conditional expectation. Poisson processes. Markov processes.

Pre-requisite: MATH 230

IE 444

(3+0+0) 3 Credits / 5 ECTS

Forecasting Methods

(Tahmin Yöntemleri)

Statistical forecasting methods. Time series decomposition. Regression. Exponential smoothing. Box-Jenkins ARIMA models.

IE 451

(3+0+0) 3 Credits / 5 ECTS

Decision and Risk Analysis

(Karar ve Risk Analizi)

Modeling of the decision problem: Structuring decisions, influence diagrams, decision trees, risk profiles, sensitivity analysis. Modeling uncertainty: Probability concepts, value of information, Monte Carlo simulation. Modeling preferences: Risk, utility theory, prospect theory.

Pre-requisite: MATH 230

IE 454**(3+0+0) 3 Credits / 5 ECTS****Multi-Objective Decision Analysis
(Çok Hedefli Karar Analizleri)**

Quantitative decision analysis methods. Value hierarchies and value functions. Characterization of preferences under certainty and uncertainty. Analytical hierarchy process. Expected value analysis. Utility theory. Modeling risk attitudes in multi-attribute decisions, certainty equivalent calculations, group decisions.

IE 461**(3+0+0) 3 Credits / 5 ECTS****Supply Chain Management
(Tedarik Zinciri Yönetimi)**

Process view of a supply chain. Supply chain drivers and metrics. Network design. Inventory management. Sourcing decisions. Coordination.

IE 464**(3+0+0) 3 Credits / 5 ECTS****Distribution Logistics
(Dağıtım Lojistiği)**

Distribution network design. Single-echelon/single-item and multi-echelon/multi-item location problems. Short haul and long haul transportation problems. Traveling sales person and vehicle routing problems, implementation areas.

IE 466**(3+0+0) 3 Credits / 5 ECTS****Humanitarian Logistics
(İnsani Yardım Lojistiği)**

Introduction to humanitarian operations. Disaster management cycle. Decision problems faced in preparing for, responding to, and recovering from disasters. Modeling and solution methodologies. Location, routing, allocation, inventory models. The activities and challenges in the humanitarian supply chain for the procurement, warehousing and distribution of the aid. Uncertainty and human behavior in disasters. Practical examples, projects, case studies and games.

IE 471**(2+2+0) 3 Credits / 5 ECTS****Computational Tools for Industrial Engineers
(Endüstri Mühendisleri için Hesaplama Araçları)**

Introduction to computational tools that are particularly useful for industrial engineers. Algebraic modeling of selected Integer/Linear programs with GAMS and AMPL. Modeling mathematical programs with Excel. Mathematical and statistical modeling with Python, R and Matlab/Octave. Solving LP, MIP and NLP models with GLPK, Gurobi, Excel Solver and OpenSolver Add-in. Implementing selected optimization algorithms in Matlab/Octave, Python, R. Shaping and analyzing data to extract insights, visualizing findings to communicate results. Analyzing and visualizing data using Excel, R, Matlab/Octave. Preliminary Statistical Analysis with R and Matlab/Octave. Automating statistical analysis and its visualization.

IE 482**(3+0+0) 3 Credits / 5 ECTS****Decision Making in Health Care
(Sağlık Hizmetlerinde Karar Verme)**

Application of industrial engineering and operations research methods in healthcare delivery, medical decision making, and public health planning.

IE 484	(3+0+0) 3 Credits / 5 ECTS
Introduction to Defense Analysis (Savunma Analizine Giriş)	
Yön-eylem araştırması araç ve tekniklerinin savunmayla ilgili problemlere uygulamaları. Savunma ile ilgili alıcı, sistem ve silahların önemli tasarım özelliklerini de kapsayan askeri yön-eylem araştırmasına giriş. Güdümlü mühimmat ve alıcıların bulunduğu durumlarda bilgi ve teknolojinin etkileri.	
IE 491	(1+4+0) 3 Credits / 6 ECTS
Senior Project I (Bitirme Projesi I)	
Identification, definition, and formulation of a complex real-life industrial engineering problem in a manufacturing or service organization. System analysis. Conceptual systems design.	
Pre-requisite: 18 IE Credit	
IE 492	(1+4+0) 3 Credits / 6 ECTS
Senior Project II (Bitirme Projesi II)	
System design: synthesis and implementation. Model validation. Solution methods. Alternative solution proposals and scenario analysis. Implementation strategies.	
Pre-requisite: IE 491	
IE 499	(1+0+0) 1 Credit / 2 ECTS
Summer Practice II (Yaz Stajı II)	
Minimum 20 consecutive working days of summer practice in a manufacturing or a service system. System analysis. Identification and formulation of an industrial engineering problem.	
Pre-requisite: IE 399	

Graduate Course Descriptions

IE 517	(3+0+0) 3 Credits / 7.5 ECTS
Production Planning (Üretim Planlama)	
Integrated production planning. Master production schedule. Materials requirements planning. Capacity planning. Lot sizing. Inventory management. Make or buy decisions.	
IE 518	(3+0+0) 3 Credits / 7.5 ECTS
Service Management (Hizmet Yönetimi)	
Introduction to service systems. Classification of service systems. Analysis of flow type systems. Workforce capacity planning. Shift planning and workforce scheduling. Revenue management. Customer Relationship Management.	

IE 519**(3+0+0) 3 Credits / 7.5 ECTS****Operations Scheduling
(Operasyon Çizelgeleme)**

Introduction to scheduling. Selected problems from various manufacturing and service applications. Common methods and approaches used to model and solve these problems. Project scheduling. Job shop scheduling. Flow shop scheduling. Lot sizing and scheduling. Reservation systems, timetabling, workforce and crew scheduling.

IE 527**(3+0+0) 3 Credits / 7.5 ECTS****Logistics
(Lojistik)**

Introduction to logistics. Logistics network design. Location problems. Warehouse design and management. Long distance freight transportation problems. Traveling salesperson problem. Vehicle routing problem.

IE 529**(3+0+0) 3 Credits / 7.5 ECTS****Inventory Management in Supply Chains
(Tedarik Zincirlerinde Envanter Yönetimi)**

Basic concepts, methods and design of supply chains, Inventory classification. Full time production strategies. Deterministic and probabilistic inventory planning methods. Planning, coordination, information sharing in supply chains. Supply chain contracts, collaborations and advantages. Supply strategies.

IE 537**(3+0+0) 3 Credits / 7.5 ECTS****Mathematical Programming for Engineering Management
(Mühendislik Yönetimi için Matematiksel Programlama)**

Fundamentals of operations research modelling. Linear Programming. Simplex method. Duality theory. Sensitivity analysis. Integer programming. Dynamic programming.

IE 538**(3+0+0) 3 Credits / 7.5 ECTS****Discrete Optimization
(Kesikli Optimizasyon)**

Modeling, relaxing and bounding techniques; fundamental easy-to-solve problems; matching and assignment problems; dynamic programming; complexity theory; branch-and-bound method; meta-heuristics such as tabu search, genetic algorithms and variable neighborhood search; application examples.

IE 539**(3+0+0) 3 Credits / 7.5 ECTS****Multi-Criteria Decision Making
(Çok Kriterli Karar Verme)**

Multi-objective decision making with mutually exclusive alternatives. Multi-criteria benefit and utility theories. Multi-objective ranking and classification. Multi-objective mathematical programming. Evolutionary multi-objective optimization. Interactive methods and applications.

- IE 547** (3+0+0) 3 Credits / 7.5 ECTS
Modelling and Analysis of Uncertainty
(Belirsizlik Modelleme ve Analizi)
 Probability and fundamental theorems of probability. Conditional probability. Random variables. Discrete and continuous distributions. Expected value. Hypothesis tests. Variance analysis. Simple and multiple regression. Correlation analysis.
- IE 548** (3+0+0) 3 Credits / 7.5 ECTS
Decision Analysis
(Karar Analizi)
 Introduction to decision analysis. Concept of probability and decision making under uncertainty. Decision trees. Group and strategic decision making. Quantitative decision making methods, quantitative analysis, simulation methods. Analytic hierarchy process. Management decision support systems.
- IE 549** (3+0+0) 3 Credits / 7.5 ECTS
Risk Management
(Risk Yönetimi)
 Risk definition and analysis. Types of uncertainty. Sources of uncertainty. Risk prediction, assessment and control. Quantitative risk assessment models. Making probabilistic inferences. Probabilistic scenario and sensitivity analysis. Monte-Carlo simulation. Decision making under uncertainty.
- IE 558** (3+0+0) 3 Credits / 7.5 ECTS
Business Process Flow Management
(İş Süreçleri Akış Yönetimi)
 Products, processes and performance. Process flow metrics. Flow time analysis. Flow speed and analysis. Flow variability management. Lean operations. Process synchronization and improvement.
- IE 559** (3+0+0) 3 Credits / 7.5 ECTS
Revenue Management
(Gelir Yönetimi)
 Pricing. Price optimization, Price Differentiation, Revenue Management, Capacity Determination and Assignment, Overbooking Strategies, Discount Management.

DEPARTMENT OF MECHANICAL ENGINEERING

Chair

Prof. Selin Aradağ Çelebioğlu

Academic Staff

Prof. Selin Aradağ Çelebioğlu, Prof. Kemal Levend Parnas, Assoc. Prof. Yiğit Taşcıoğlu, Asst. Prof. Ayşe Çağıl Kandemir, Asst. Prof. Kutluk Bilge Arıkan, Asst. Prof. Omer Music, Asst. Prof. Onur Baş, Asst. Prof. Şehram Dizeci, Bilgehan Bozkurt*, Mehmet Öksüz*, Oğuzhan Ulucak*, Saeid Hosseinpour Dashatan*.

* Research Assistant

Undergraduate Program in Mechanical Engineering

Mechanical engineers design, develop, manufacture, manage, and control mechanical and thermal systems and their components, from the nanoscale on. One of the broadest of all engineering disciplines-and thus offering flexible career options- mechanical engineering requires a solid grasp of mechanics, kinematics, materials, thermodynamics, and energy.

Department of mechanical engineering places its priority on the education of students who will become the young mechanical engineers and decision makers of tomorrow. To this effect, the department commits itself to create a learning environment based on a curriculum for delivering the principles and state-of-the-art of profession. Modern principles of mechanical engineering are relayed through a comprehensive education including a hands-on type of a laboratory experience. Computers, electronics and numerical simulation tools are also integral part of this curriculum. Creativity and designing of products is in the essence of this program in the form of novel design courses and design projects in various courses in an interdisciplinary environment. Students are encouraged to take part in educational activities where they can express their creative talents as well as their technical information acquired in courses.

The course requirements for the Bachelor of Science Degree in Mechanical Engineering at TEDU total a minimum of 138 credit hours of formal course work which includes 36 credit hours of common core, 64 credit hours of major and 15 credit hours of minor courses. Student development seminars and practical training are also compulsory.

Program Objectives

The Mechanical Engineering Department at TED University aims at graduating BS students who;

1. Are prepared for engineering practice or to enroll in engineering graduate degree programs,
2. Have mastered the fundamental notions and principles of mechanical engineering discipline, are able to independently learn various applications, examine and critically evaluate them,
3. Are innovative and open to team work, perform effectively through oral- written communication, are sociable and well rounded,
4. Are aware of their professional and ethical responsibilities, update their knowledge and abilities to compete in the global enterprise.

Program Outcomes

Our graduates are able to:

Knowledge and Understanding

1. Comprehend science and advanced mathematics subjects fundamental to engineering,
2. Apply knowledge of mathematics, science, and engineering (mechanics, thermodynamics, materials science) to mechanical engineering problems,
3. Implement social, scientific, and professional codes of ethical conduct,
4. Comprehend contemporary issues and the broad education necessary to discuss the impact of engineering solutions in a global and societal context,
5. Recognize and appreciate different cultures and respect individual and cultural differences.

Intellectual Skills

1. Design and conduct experiments, as well as to analyze and interpret data.
2. Design thermal and mechanical systems, components, or processes to meet desired needs,
3. Identify, formulate, and solve engineering problems (open ended problems / system design).
Transferable (Generic) Skills
4. Use the English language proficiently in knowledge sharing and professional communication,
5. Practice good working habits, time management, and self-discipline,
6. Formulate solutions to complex problems in multi-disciplinary teams,
7. Demonstrate effective oral, written and visual communication skills,
8. Engage in lifelong learning for continued personal, social, and professional development.

Practical Skills

1. Employ modern engineering techniques, skills, and computing tools necessary for engineering practice (use laboratory and workshop equipment to generate data, prepare technical drawings, prepare technical reports, give technical presentations, take notes effectively, write computer programs, use computational tools and packages).

Undergraduate Curriculum

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
CMPE 101	Introduction to Information Technologies	2	0	2	3	5
ENG 101	English for Academic Purposes	2	2	0	3	5
MATH 101	Calculus of One Variable	3	2	0	4	7
PHYS 105	Physics I	3	0	2	4	6
HIST 101	History of Turkish Republic I	2	0	0	2	2
CC	Sci/Soc/Hum/Lit/Art	3	0	0	3	5
TOTAL		15	4	4	19	30

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
CMPE 112	Fundamentals of Programming I	1	0	4	3	6
ENG 102	Expository Writing	2	2	0	3	5
MATH 102	Multivariable Calculus	3	2	0	4	7
HIST 102	History of Turkish Republic II	2	0	0	2	2
CC	Sci/Hum/Lit/Art	3	0	0	3	5
CC	Sci/Hum/Lit/Art	3	0	0	3	5
TOTAL		14	4	4	18	30

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
MATH 203	Linear Algebra and Differential Equations	3	0	0	3	5
MATH 210	Numerical Methods in Engineering	0	0	4	2	4
ME 200	Computer Aided Technical Drawing	0	0	4	2	4
ECON 110	Principles of Economics	3	0	0	3	5
ME 211	Materials Science	3	0	0	3	6
TOTAL		9	0	8	13	24

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
MATH 240	Introduction to Probability and Statistics for Engineers	3	0	0	3	6
ME 224	Design and Manufacturing	3	0	0	3	6
ME 242	Dynamics	3	0	0	3	6
ME 264	Thermodynamics	3	0	0	3	6
CC	Sci/Soc/Hum/Lit/Art	3	0	0	3	5
TOTAL		15	0	0	15	29

Semester 5

Code	Course Title	C	P	L	Cr	ECTS
ME 301	Measurement and Instrumentation	1	0	4	3	5
ME 345	Mechanics of Materials	3	0	0	3	5
ME 353	Fluid Mechanics	3	0	0	3	5
FREE	Free Elective I	3	0	0	3	5
MINOR	Minor Elective	3	0	0	3	5
ME 399	Summer Practice I	1	0	0	1	2
TOTAL		14	0	4	16	27

Semester 6

Code	Course Title	C	P	L	Cr	ECTS
ME 302	Experimental Engineering	1	0	4	3	5
ME 324	Machine Design I	3	0	0	3	5
ME 362	Heat Transfer	3	0	0	3	5
ME 336	Modeling and Control of Dynamic Systems	3	0	0	3	5
FREE	Minor Elective	3	0	0	3	5
MINOR	Free Elective II	3	0	0	3	5
TOTAL		16	0	4	18	30

Semester 7

Code	Course Title	C	P	L	Cr	ECTS
ME 464	Applied Thermal Systems	3	0	0	3	6
ME	Departmental Elective I	3	0	0	3	5
ME	Departmental Elective II	3	0	0	3	5
MINOR	Minor Elective	3	0	0	3	5
FREE	Free Elective III	3	0	0	3	5
TUR 101	Turkish I	2	0	0	2	2
ME 499	Summer Practice II	1	0	0	1	2
TEDU 400	Student Development Seminars	0	0	0	0	1
TOTAL		18	0	0	18	31

Semester 8

Code	Course Title	C	P	L	Cr	ECTS
ME 492	Senior Project	0	0	8	4	12
ME	Departmental Elective III	3	0	0	3	5
MINOR	Minor Elective	3	0	0	3	5
MINOR	Minor Elective	3	0	0	3	5
TUR 102	Turkish II	2	0	0	2	2
TOTAL		11	0	8	15	29

Totals expected for graduation		118	8	32	138	240
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Courses with Pre-requisites

Course Name	Pre-requisites*
ME 224 Design and Manufacturing	ME 200 and ME 211
ME 241 Introduction to Solid Mechanics	PHYS 101 or PHYS 105
ME 242 Dynamics	ME 241 and PHYS 105
ME 324 Machine Design I	ME 345
ME 336 Modelling and Control of Dynamic Systems	ME 242
ME 345 Mechanics of Materials	ME 241
ME 353 Fluid Mechanics	ME 242
ME 362 Heat Transfer	ME 264 and MATH 203
ME 399 Summer Practice I	Sophomore Standing
ME 423 Machine Design II	ME 324
ME 425 Mechanical Vibrations	ME 242 and MATH 203
ME 435 Mechatronics	ME 336 and EE 309
ME 436 Modern Control Theory	ME 336
ME 441 Applied Finite Element Method	ME 345 and MATH 210
ME 444 Fundamentals of Metal Forming	ME 345 and ME 211
ME 446 Fundamentals of Composite Materials	ME 211
ME 453 Introduction to Aeronautics	ME 353
ME 455 Applied Fluid Mechanics	ME 353 and ME 362
ME 460 Energy Systems	ME 362
ME 464 Applied Thermal Systems	ME 264
ME 492 Senior Project	Senior Standing
ME 499 Summer Practice II	ME 399

* All pre-requisites except ME 241 effective Fall 2018-2019

Undergraduate Course Descriptions

- ME 200** (0+0+4) 2 Credits / 4 ECTS
Computer Aided Technical Drawing
(Bilgisayar Destekli Teknik Resim)
 Principles of computer aided technical drawing. Drawing 3D parts and solid modeling, dimensioning and tolerancing. Sectioning and multi-view projections. Assembly modelling and assembling parts. Surface modeling. Creating explode view and rendering of assembly drawing. Introduction to kinematical modeling and animation.
- ME 211** (3+0+0) 3 Credits / 6 ECTS
Materials Science
(Malzeme Bilimi)
 Materials and properties. Atomic bonding and arrangement. Structural imperfections. Atom movements. Elastic and viscoelastic deformation of materials. Equilibrium diagrams. Metals and their properties. Modification of properties of materials through changes in structure. Advanced materials and their properties.
- ME 221** (3+0+0) 3 Credits / 6 ECTS
Manufacturing Processes
(İmalat Süreçleri)
 Fundamentals of manufacturing technologies with a special emphasis on manufacturing of metallic parts. Casting, metal forming and metal cutting processes. Manufacturing processes for non-metallic materials and micro-electronics. Economic process design considerations. Material selection for manufacturing. Manufacturing automation.
- ME 224** (3+0+0) 3 Credits / 6 ECTS
Design and Manufacturing
(Tasarım ve Üretim)
 Basics of mechanical design: visual thinking, engineering drawing and machine anatomy. Basics of manufacturing: processes, materials, and thermo-fluid aspects. Use of computers in various phases of design and manufacturing. Exposure to CAD systems and basic machine shop techniques.
 Pre-requisites: ME 200 and ME 211
- ME 241** (3+0+0) 3 Credits / 6 ECTS
Introduction to Solid Mechanics
(Katı Mekaniğine Giriş)
 Fundamental concepts of mechanics: vector operations, forces and couples, free body diagrams, equilibrium. Friction. Distributed forces. Normal and shear forces and moment diagrams. Mechanics of deformable bodies: stress/ strain, generalized Hooke's law. Engineering applications: axial loads, torsion of circular rods, bending and shear stresses in beams, deflection of beams, combined stresses.
 Pre-requisite: PHYS 101 or PHYS 105

- ME 242** (3+0+0) 3 Credits / 6 ECTS
Dynamics
(Dinamik)
Dynamics of particles: Rectilinear and curvilinear motion, Newton's laws, momentum and angular momentum methods. Work and energy. Dynamics of rigid bodies; kinematics, Euler's Laws, angular momentum. Work and energy methods for rigid bodies.
Pre-requisite: ME 241
- ME 264** (3+0+0) 3 Credits / 6 ECTS
Thermodynamics
(Termodinamik)
The thermodynamic system and its properties, thermodynamic processes; work and heat interactions. Systems approach. The First Law for systems and for flow processes; Properties of pure substances; Ideal Gas Law; Control volume analysis; the Second Law and entropy. Irreversibility and availability.
- ME 301** (1+0+4) 3 Credits / 5 ECTS
Measurement and Instrumentation
(Ölçme ve Ölçme Düzenekleri)
Principles and methods of measurement, instrumentation and experimentation. Basic sensing devices, and fundamental engineering measurements, experiment planning, data analysis, report writing. Performing and reporting on experiments chosen to illustrate a variety of important experimental methods while familiarizing with basic instrumentation.
Co-requisite: EE 309
- ME 302** (1+0+4) 3 Credits / 5 ECTS
Experimental Engineering
(Deneysel Mühendislik)
Performing and preparing report on a series of experiments chosen to illustrate a variety of important experimental methods covering mechanics, materials, thermodynamics, fluid mechanics, heat transfer and dynamical systems.
- ME 324** (3+0+0) 3 Credits / 5 ECTS
Machine Design I
(Makine Elemanları I)
Principles of mechanical engineering design: Load analysis, materials; deflections and stability; stress analysis; stress concentrations, failure theories of ductile and brittle materials, fatigue, impact. Analysis and design of machine elements: shafts, joints and springs.
Pre-requisite: ME 345
- ME 336** (3+0+0) 3 Credits / 5 ECTS
Modeling and Control of Dynamic Systems
(Dinamik Sistemlerin Modellenmesi ve Denetimi)
Introduction to automatic control. Modeling of dynamic systems. Response analysis using Laplace transform method. Transfer functions and block diagrams. Feedback control systems. Typical actuators

and transducers. Control Laws. Tuning methods of PID control. Root-Locus analysis. Frequency response analysis.

Pre-requisite: ME 242

ME 345 (3+0+0) 3 Credits / 5 ECTS
Mechanics of Materials
(Mukavemet)

Combined stress due to bending, torsion, shear and axial load. Mohr circle. Design of beams and shafts for strength. Statically indeterminate problems. Introduction to energy methods. Buckling of columns. Failure modes: plastic deformation, fracture, fatigue, creep.

Pre-requisite: ME 241

ME 353 (3+0+0) 3 Credits / 5 ECTS
Fluid Mechanics
(Akışkanlar Mekaniği)

Fundamental principles of fluid mechanics and their application to engineering problems. Fluid statics. Fluid flow concepts. Control-volume analysis. Conservation equations and applications. Dimensional analysis and similitude.

Pre-requisite: ME 241

ME 362 (3+0+0) 3 Credits / 5 ECTS
Heat Transfer
(Isı Transferi)

Steady and transient, one and multi-dimensional heat conduction in systems: numerical methods and special applications. Internal and external laminar and turbulent forced convection, natural convection and condensation. Heat transfer by radiation. Heat exchangers and design of heat transfer systems.

Pre-requisites: ME 264 and MATH 203

ME 399 (1+0+0) 1 Credits / 2 ECTS
Summer Practice I
(Yaz Stajı I)

Minimum 20 working days of practical work in an organization operating on the design, production, maintenance, management of mechanical or thermal systems.

Pre-requisites: Sophomore standing

ME 423 (3+0+0) 3 Credits / 5 ECTS
Machine Design II
(Makine Elemanları II)

Analysis and design of machine elements such as spur, helical, bevel and worm gears; shafts and associated parts such as keys, pins, splines, couplings; clutches, brakes and flywheels; belts; chains; torque converters. Design project involving a mechanical component or device including all detail drawings, assembly drawings and cost analysis.

Pre-requisite: ME 324

ME 425**(3+0+0) 3 Credits / 5 ECTS****Mechanical Vibrations
(Mekanik Titreşimler)**

Free and forced vibrations of linear one degree of freedom systems. Vibration measurement. Systems with two or more degrees of freedom. Critical speeds. Modal analysis. Design for vibration suppression and control. Vibration measurement.

Pre-requisites: ME 242 and MATH 203

ME 433**(3+0+0) 3 Credits / 5 ECTS****Theory of Machines
(Makine Teorisi)**

Introduction to mechanisms. Kinematic analysis of mechanisms. Simple and planetary gear trains. Static and dynamic force analysis of mechanisms. Fundamentals of vibrations. Modeling of vibrating systems. Free and forced vibrations of single degree-of-freedom systems.

Pre-requisite: ME 242

ME 435**(3+0+0) 3 Credits / 5 ECTS****Mechatronics
(Mekatronik)**

Introduction to mechatronics. Microcomputer based control systems. Interfaces, sensors and actuators. Basic control electronics. Discrete time systems. Design of discrete controllers. Real time programming for control. Design case studies.

Pre-requisites: ME 336 and EE 309

ME 436**(3+0+0) 3 Credits / 5 ECTS****Modern Control Theory
(Modern Denetim Kuramı)**

Introduction to MIMO systems. State-space representation methods. State-space analysis of continuous time systems. Modal analysis, eigenvalues, eigenvectors. Free and forced solution methods of state- space models. State-space analysis of discrete time systems. Controllability and observability concepts. Pole placement methods by state variable feedback. Design of observers. Introduction to optimal control.

Pre-requisite: ME 336

ME 441**(2+2+0) 3 Credits / 5 ECTS****Applied Finite Element Analysis
(Uygulamalı Sonlu Elemanlar Analizi)**

Introduction to Finite Element Method (FEM). Commercial software packages. Linear FEM applications: linear elasticity, beam bending, stress concentration. Non-linear FEM applications: plasticity, contact analysis, Hertzian contact stresses, friction.

Pre-requisites: ME 345 and MATH 210

- ME 444** **3+0+0) 3 Credits / 5 ECTS**
Fundamentals of Metal Forming
(Metal Şekillendirmenin Esasları)
 Materials in forming. Theory of plasticity. Materials characterization. Analysis methods. Bulk metal forming processes. Sheet metal forming processes. Forming and measuring equipment. Energy and resource efficient forming.
 Pre-requisites: ME 345 and ME 211
- ME 446** **(3+0+0) 3 Credits / 5 ECTS**
Fundamentals of Composite Materials
(Kompozit Malzemelerin Temel Özellikleri)
 Introduction to composite materials. Classification of composite materials and their applications. Production and characterization methods for composite materials. Structure- mechanical property relationship.
 Pre-requisite: ME 211
- ME 447** **(3+0+0) 3 Credits / 5 ECTS**
Nanomaterials and Nanotechnology
(Nanomalzemeler ve Nanoteknoloji)
 Introduction to nanomaterials and nanotechnology. Nanomaterials and their applications. Discussion of production and characterization methods of nanomaterials. Comparing physical properties of nano-, micro-ranged materials with their macro-ranged counterparts.
- ME 453** **(3+0+0) 3 Credits / 5 ECTS**
Introduction to Aeronautics
(Havacılığa Giriş)
 Fundamentals of Aerodynamics. Equations of motion. Aircraft performance. Static/Dynamic stability and principles of control.
 Pre-requisite: ME 353
- ME 455** **(3+0+0) 3 Credits / 5 ECTS**
Applied Fluid Mechanics
(Uygulamalı Akışkanlar Mekaniği)
 Laminar and Turbulent pipe flow. General External Flow characteristics. Lift and Drag forces on immersed bodies. Introduction to Boundary layer flow. Fundamentals of compressible flow. One dimensional flow in a variable area duct. System characteristics of turbomachines.
 Pre-requisite: ME 353
- ME 460** **(3+0+0) 3 Credits / 5 ECTS**
Energy Systems
(Enerji Sistemleri)
 Energy awareness. Engineering economics and thermodynamics for use in analysis and understanding of energy consumption and production technologies which include: power plants, engines, renewables, residential heating, commercial energy usage, radioactivity, air/water/land pollution, environmental impacts and regulations in society.
 Pre-requisite: ME 362

ME 464**(3+0+0) 3 Credits / 6 ECTS****Applied Thermal Systems
(Uygulamalı Isıl Sistemler)**

Engineering design and thermal systems. Pipeline systems, pipe networks. Pumps, pump systems and power. Mathematical modeling, analysis and simulation of thermal systems. Optimization of thermal systems. Heat exchangers. Application of thermodynamics principles on thermal energy cycles.

Pre-requisite: ME 264

ME 492**(0+0+8) 4 Credits / 12 ECTS****Senior Project
(Bitirme Projesi)**

Design and development of a project for a mechanical engineering problem under the supervision of an academic advisor; submission of the results in the form of a project report and oral presentation.

Pre-requisites: Senior Standing

ME 499**(1+0+0) 1 Credit / 2 ECTS****Summer Practice II
(Yaz Stajı II)**

Minimum 20 working days of practical work in an organization operating on the design, production, maintenance, management of mechanical or thermal systems.

Pre-requisite: ME 399

Graduate Course Description

ME 531**(3+0+0) 3 Credits / 7.5 ECTS****Modeling and Simulation
(Modelleme ve Simulasyon)**

Data collection and analysis in physical systems. Input data analysis strategies. Random number generation. System identification and comparison by simulation. Discrete-event simulation. Event-programming approach. Process-interaction approach. Simulation programming languages. Distributed simulations and distributed event simulation languages. Behavior modelling.

ME 532**(3+0+0) 3 Credits / 7.5 ECTS****Control Systems
(Kontrol Sistemleri)**

Transfer functions and block diagrams. Fundamentals of physical system modeling. Fundamentals of control systems. Sensitivity analysis. Basic control actuators and controllers. Stability. Steady state responses and errors. Transient response. Frequency response.

DEPARTMENT OF SOFTWARE ENGINEERING

Chair

Assoc. Prof. Tansel Dökeroğlu

Academic Staff

Assoc. Prof. Tansel Dökeroğlu, Asst. Prof. Bilgin Avenoğlu, Asst. Prof. Emin Kuğu, Asst. Prof. Ulaş Güleç, Mehmet Taha Şahin*.

* Research Assistant

Undergraduate Program in Software Engineering

1. To have sufficient background in subjects specific to mathematics, science and engineering discipline; To be able to use theoretical and applied knowledge in these areas in complex engineering problems, especially software engineering problems,
2. To be able to identify, define, formulate and solve complex engineering problems by choosing and applying appropriate analysis and modeling methods, presenting the data that will present the relevant information when reading the problem definition and concretizing it with appropriate examples.
3. To be able to design a complex system, process, device or product under realistic constraints and conditions to meet certain requirements by applying modern design methods,
4. To be able to develop, select and use modern techniques and tools required for the analysis and solution of complex problems encountered in Software Engineering applications by using information technologies effectively,
5. Ability to collect data, analyze and interpret results for the investigation of research topics or complex engineering problems specific to the software engineering discipline,
6. To be able to work effectively in intra-disciplinary and multi-disciplinary teams, to work individually.
7. To be able to communicate effectively in Turkish, oral and written, writing effective reports and understanding written reports, preparing design and production reports, making effective presentations,
8. Being able to access information with the awareness of the necessity of lifelong learning, to follow the developments in science and technology and to be able to constantly renew himself,
9. To behave in accordance with the principles of professional ethics, to have knowledge about the standards used in software engineering applications and to anticipate the legal consequences of the applications,
10. Understanding the importance of negotiation, effective work, leadership and good communication with stakeholders in the software development environment and reflecting this on your behavior,
11. Understanding and applying the theories, models and techniques that form the basis of the analysis, design, validation, development and maintenance processes of software systems.

Program Outcomes

Our graduates are able to:

Software engineers are needed in almost every sector, and defense, finance, energy, education, health and space activities are prominent sectors. The foreign dependency rate of our country's defense systems in terms of both hardware and software is quite high. It is obvious, especially in our geography, that international relations cannot always be maintained in harmony. In any crisis, the first action to be taken by the countries we are dependent on within the scope of the above mentioned issues will be to apply an embargo on these systems. This has been clearly exemplified in the F-35 fighter jet project in the recent past. In order to maintain existing systems and to reduce external dependency, if possible, to eliminate it completely, manpower trained in software development is needed.

Almost every weapon system today comes with a maintenance maintenance software. The survival of these weapon systems is possible with the presence of the maintenance maintenance software that comes with it. In order to carry out the aforementioned activities, there is a need for software engineers who can develop software using different infrastructures and architectures and carry out maintenance activities.

Our principle has become great in the production of Unmanned Aerial Vehicles (UAV) especially in the last 5 years and has developed the Armed UAV (UAV) technology, which is owned by a limited number of countries. The management of such systems that require autonomous management is all realization thanks to computer software. The developments and capacity increase in these systems will reveal the need for software developers. With the Software Engineering program to be opened at TED University, it aims to train software engineers who can develop new technologies as well as supporting manpower who can work in existing technologies.

Developed software has a life span of 5 to 10, and during this period, technology, legislation and hardware change. Adaptation to these changes is possible thanks to educated, constantly improving and researching software developers.

In the last 20 years, companies operating in information technologies, social media and software such as Microsoft, Oracle, Apple, Google, Amazon, Samsung, Facebook, Twetter, Turkcell, Vodafone and Avea among the biggest employment and income generating companies in the country and abroad. comes out.

Software Engineering program graduates;

- In software companies operating in the defense industry,
- In public critical infrastructure systems,
- In all kinds of software projects to be developed nationally for different sectors,
- In multinational software projects,
- In software companies operating globally abroad,
- Companies engaged in research and development activities in cyber security,
- In higher education institutions,
- In companies operating in the fields of gaming and mobile programming,
- Companies operating on artificial intelligence and decision support systems will be employed as analyst, designer, software developer, tester, project manager, R&D director.

Undergraduate Curriculum

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
CMPE 101	Introduction to Information Technologies	2	0	2	3	5
ENG 101	English for Academic Purposes	2	2	0	3	5
MATH 101	Calculus of One Variable	3	2	0	4	7
CC	Sci/Soc/Hum/Lit/Art Elective	3	0	0	3	5
PHYS 105	Physics I	3	0	2	4	6
HIST 101	History of Turkish Republic I	2	0	0	2	2
TOTAL		15	4	4	19	30

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
ENG 102	Expository Writing	2	2	0	3	5
CC	Sci/Soc/Hum/Lit/Art Elective	3	0	0	3	5
CC	Sci/Soc/Hum/Lit/Art Elective	3	0	0	3	5
MATH 102	Multivariable Calculus	3	2	0	4	7
HIST 102	History of Turkish Republic II	2	0	0	2	2
CMPE 112	Fundamentals of Programming I	1	0	4	3	6
TOTAL		14	4	4	18	30

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
CC	Sci/Soc/Hum/Lit/Art Elective	3	0	0	3	5
CMPE 211	Fundamentals of Programming II	2	0	2	3	6
SENG 211	Introduction to Software Engineering	3	0	0	3	5
MATH 203	Linear Algebra and Differential Equations	3	0	0	3	5
CMPE 201	Discrete Structures of Mathematics	3	0	0	3	6
TUR 101	Turkish I	2	0	0	2	2
TOTAL		16	0	2	17	30

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
CC	Sci/Soc/Hum/Lit/Art Elective	3	0	0	3	5
MATH 240	Introduction to Probability and Statistics for Engineers	3	0	0	3	6
CMPE 232	Relational Databases	3	0	0	3	5
CMPE 242	Data Structures and Algorithms I	3	0	0	3	6
SENG 212	Software Requirements Engineering	3	0	0	3	6
TUR 102	Turkish II	2	0	0	2	2
TOTAL		17	0	0	17	30

Semester 5

Code	Course Title	C	P	L	Cr	ECTS
SENG 399	Summer Practice I	1	0	0	1	2
SENG 311	Object Oriented Analysis and Design	3	0	0	3	6
SENG 321	Concepts of Programming Languages	3	0	0	3	6
SENG 331	Software Design Patterns	3	0	0	3	6
SF	Secondary Field	3	0	0	3	5
Free	Free Elective	3	0	0	3	5
TOTAL		16	0	0	16	30

Semester 6

Code	Course Title	C	P	L	Cr	ECTS
SENG 312	Software Validation and Verification	2	0	2	3	5
SENG 322	Software Project Management	3	0	0	3	5
CMPE 382	Operating Systems	3	0	0	3	5
SENG	Departmental Elective	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
Free	Free Elective	3	0	0	3	5
TOTAL		17	0	2	18	30

Semester 7

Code	Course Title	C	P	L	Cr	ECTS
SENG 499	Summer Internship II	1	0	0	1	2
SENG 491	Senior Project I	1	4	0	3	8
SENG 411	Human Computer Interaction	3	0	3	3	5
SENG	Departmental Elective	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
Free	Free Elective	3	0	0	3	5
TOTAL		14	4	3	16	30

Semester 8

Code	Course Title	C	P	L	Cr	ECTS
CMPE 472	Computer Networks	2	0	2	3	6
SENG 492	Senior Project II	1	4	0	3	8
SENG	Departmental Elective	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
SF	Secondary Field	3	0	0	3	5
TEDU 400	Student Development Seminar	0	0	0	0	1
TOTAL		12	4	2	15	30

Totals expected for graduation		121	16	17	136	240
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Courses with Pre-requisites

Course Name	Pre-requisites
SENG 211 Introduction to Software Engineering	CMPE 112
SENG 212 Software Requirements Engineering	CMPE 112
SENG 311 Object Oriented Analysis and Design	CMPE 211
SENG 321 Concepts of Programming Languages	CMPE 211
SENG 331 Measurement and Instrumentation	CMPE 211
SENG 342 Software Quality Assurance	SENG 211
SENG 352 Software Architectures	SENG 211
SENG 399 Summer Practice I	SENG 211
SENG 411 Software Process Modeling	SENG 211
SENG 441 Human Computer Interaction	CMPE 211
SENG 491 Senior Project I	SENG 311
SENG 492 Senior Project II	Sophomore Standing
SENG 499 Summer Internship I	SENG 211

Undergraduate Course Descriptions

SENG 211 **(3+0+0) 3 Credits / 6 ECTS**

Introduction to Software Engineering
(Yazılım Mühendisliğine Giriş)

Fundamental of software engineering, software types, software development process models, requirements engineering concepts, system modeling, design and implementation, software testing, software maintenance, quality and configuration management, project management.

Pre-requisite: CMPE 112

SENG 212 **(3+0+0) 3 Credits / 6 ECTS**

Software Requirements Engineering
(Yazılım Gereksinimleri Mühendisliği)

Kinds of software requirements, quality measurements, requirements elicitation, requirements analysis and negotiation, requirements prioritization, requirements validation, requirements management, requirements identification techniques, change management, requirements documentation, quality attributes of requirements documents.

Pre-requisite: CMPE 112

SENG 310 **(3+0+0) 3 Credits / 5 ECTS**

Rapid Application Development
(Hızlı Uygulama Geliştirme)

The concept of agile business and rapid development of software, to support the high-speed changes in the business, methods needed to quickly, effectively and accurately create software that responds to the changing business environment. Various methods of rapid development that can be applied to generate requirements, validate a solution, or even create a new operational system.

SENG 311 (3+0+0) 3 Credits / 6 ECTS
Object Oriented Analysis and Design
(Nesneye Dayalı Analiz ve Tasarım)
 Fundamentals of object-orientation, object-oriented (OO) modeling using UML, Experimentation in OO analysis: identification of use cases and objects, experimentation in OO design: class hierarchies, implementation in OO programming, design pattern (overview), case study to reinforce the underlying concepts.
 Pre-requisite: CMPE 211

SENG 312 (2+0+2) 3 Credits / 5 ECTS
Concepts of Programming Languages
(Yazılım Doğrulama ve Geçerleme)
 Fundamental concepts of mechanics: vector operations, forces and couples, free body diagrams, equilibrium. Friction. Distributed forces. Normal and shear forces and moment diagrams. Mechanics of deformable bodies: stress/ strain, generalized Hooke's law. Engineering applications: axial loads, torsion of circular rods, bending and shear stresses in beams, deflection of beams, combined stresses.

SENG 321 (3+0+0) 3 Credits / 6 ECTS
Concepts of Programming Languages
(Programlama Dili Kavramları)
 Dynamics of particles: Rectilinear and curvilinear motion, Newton's laws, momentum and angular momentum methods. Work and energy. Dynamics of rigid bodies; kinematics, Euler's Laws, angular momentum. Work and energy methods for rigid bodies.
 Pre-requisite: CMPE 211

SENG 322 (3+0+0) 3 Credits / 5 ECTS
Software Project Management
(Yazılım Proje Yönetimi)
 Software project management: introduction to project planning, team organization, software cost estimation, software metrics, risk analysis and management, resource management, project monitoring and control, contract management, personnel management, software quality assurance, software configuration management, software project management tools, project management processes, assessing development standards.

SENG 331 (3+0+0) 3 Credits / 6 ECTS
Measurement and Instrumentation
(Yazılım Tasarım Örüntüleri)
 Advanced Object-Oriented Modeling using UML (Unified Modeling Language), Inheritance, polymorphism and Interfaces, reusable software, creational design patterns (factory, builder, singleton), structural design patterns (adapter, bridge, decorator, facade, proxy), behavioral design patterns (command, iterator, memento, observer, Strategy, visitor) case studies.
 Pre-requisite: CMPE 221

- SENG 342** (3+0+0) 3 Credits / 5 ECTS
Software Quality Assurance
(Yazılım Kalite Güvencesi)
 Software quality assurance methods, test plans and strategies, unit level and system level testing, software reliability, peer review methods, software quality metrics, and configuration control responsibilities in quality assurance.
 Pre-requisite: SENG 211
- SENG 352** (3+0+0) 3 Credits / 6 ECTS
Software Architectures
(Yazılım Mimarileri)
 Introduction to software architectures, architectural types, modeling of software architectures, architectural evaluation methods, software production lines, model-driven architectures, service-driven architectures, architectural display languages, pattern-based development, interface-based development, contemporary software architectures, microservice architectures, cloud computing services.
 Pre-requisite: SENG 211
- SENG 399** (1+0+0) 1 Credit / 2 ECTS
Summer Practice I
(Yaz Stajı I)
 Summer internship done over 20 consecutive working days at a computer firm or an IT department. Presentation of experiences, and systems and software developed over the internship.
 Pre-requisite: SENG 211
- SENG 411** (3+0+0) 3 Credits / 5 ECTS
Human Computer Interaction
(İnsan Bilgisayar Etkileşimi)
 The principles of Human Computer Interaction (HCI). Human capabilities and constraints. Interaction methods. Usability principles. Analysis of users and tasks. Prototype development, Color and typography studies. HCI design principles. Heuristics of usability. Interface evaluation methods. Advanced and contemporary HCI technologies.
 Pre-requisite: CMPE 211
- SENG 441** (3+0+0) 3 Credits / 6 ECTS
Software Process Modeling
(Yazılım Süreç Modellemesi)
 Software engineering process infrastructure, Measurement and analysis of software processes, Software engineering process improvement, Quality analysis and control, Levels of process definition, Life-cycle model characteristics, Individual software process, Team process, Process tailoring, Effect of external factors (contract and legal requirements, standards, and acquisition practices) on software process.
 Pre-requisite: SENG 211

SENG 491 (1+4+0) 3 Credits / 8 ECTS
Senior Project I
(Bitirme Projesi I)
A project proposal, literature review, requirement analysis and design.
Pre-requisites: SENG 311

SENG 492 (1+4+0) 3 Credits / 8 ECTS
Senior Project II
(Bitirme Projesi II)
Minimum 20 working days of practical work in an organization operating on the design, production, maintenance, management of mechanical or thermal systems.
Pre-requisites: Sophomore standing

SENG 499 (1+0+0) 1 Credit / 2 ECTS
Summer Internship II
(Yaz Staji II)
Analysis and design of machine elements such as spur, helical, bevel and worm gears; shafts and associated parts such as keys, pins, splines, couplings; clutches, brakes and flywheels; belts; chains; torque converters. Design project involving a mechanical component or device including all detail drawings, assembly drawings and cost analysis.
Pre-requisite: SENG 211

BASIC SCIENCES UNIT



BASIC SCIENCES UNIT

TED University Faculty of Arts and Sciences includes The Basic Sciences Unit to organize and administer the common core courses. Directed by Prof. Dr. Şinasi Ellialtıođlu, this unit is in charge with the task of designing and offering elective courses that include all the natural sciences, mathematics, social and human sciences, communications, art and literature, Turkish and history.

Director

Prof. Şinasi Ellialtıođlu

Academic Staff

Şinasi Ellialtıođlu, Rukiye Aslihan Aksoy Sheridan, Burcu Asena Salman, Enfal Sartaş*, Ahmet İnam**, Aslı Bayar**, Aylin Yılmaz**, Ayşen Gençtürk**, Cüneyt Can**, Çiğdem Erçelebi**, Duygu Onay Çöker**, Eda Ertok**, Emel Telatar**, Erdem Murat Çelikler**, Esin Tarhan Över**, Evrim Zeybek**, Fahri Dikkaya**, Fatma Akın**, Hasan Hüseyin Kazan**, Hüseyin Kurtuluş Özgen**, İlkur Aka**, Liudmila Nosova Kural**, Melike Ünal**, Merve Demirtaş Alkaç**, Mustafa Onur Duman**, Nur Gülümser İlker**, Nuria Saraç**, Onur Önol**, Pelin Mutlu**, Pınar Ekinci**, Reyhan Özek**, Seçil Toros**, Sadiye Sena Dinçyürek**, Sinan Kaan Yerli**, Tolga Boduccuođlu**.

* Research Assistant

** Part Time

Undergraduate Course Descriptions

ART 100

(2+2+0) 3 Credits / 5 ECTS

Visual Arts and Aesthetics

(Görsel Sanatlar ve Estetik)

Overview of the visual arts as transmitters of cultural, humanistic and aesthetic values, painting, photography and film, architecture and the third dimension, music, literature, performance, popular art and everyday aesthetics, classic sources, contemporary sources.

ART 104

(2+2+0) 3 Credits / 5 ECTS

Drama

(Drama)

The definition of creative drama in education, its development and features, the aim and method of drama as a creative art, drama as an art and aesthetic education, creative drama in education in Turkey, its effect on the rearing of creative individuals, the definition of psychodrama, evaluation and measurement approaches for creative drama and creative drama as a tool for guidance and psychological counselling services.

- ART 110** (3+0+0) 3 Credits / 5 ECTS
Introduction to Art
(Sanata Giriş)
 This course aims to develop students' ability to express themselves effectively and appropriately, to familiarize students with major periods of art history from Neolithic to the Roman Period. A chronological outline of each period will be given in accordance with the social and political developments that played an important role in the changing structure of art.
- ART 120** (3+0+0) 3 Credits / 5 ECTS
Artistic Experience through Berger
(Berger ile Sanatsal Deneyim)
 The artistic behavior, and creative act of an art critic and literary figure through own revelations, in films done by self and in films as the self is reflected in. The multiplicity of creative positions as instances disseminating through artist's immediate response and construction in visual media. The creator's focus on themes and concepts like time, duration, urban and rural, continuity, position of the artist, seeing-looking, being-becoming, death-being born.
- ART 130** (3+0+0) 3 Credits / 5 ECTS
Introduction to Film Analysis
(Film Analizine Giriş)
 This course aims to provide students with a theoretical and historical understanding of the development of cinema. The course covers major breakthroughs in cinema, as well as different topic, such as style and meaning, elements of film narrative, and techniques of film production. The main genres and some key auteurs will be discussed as well as the rise of the studio system, media technology and the role of the cinema audience.
- ART 140** (3+0+0) 3 Credits / 5 ECTS
Music History
(Müzik Tarihi)
 A global history of music starting from early ages to modern times. Prominent examples of different musical styles.
- BIO 101** (3+0+0) 3 Credits / 5 ECTS
Life Sciences
(Yaşam Bilimleri)
 Hierarchical order in life, cellular basis of living things, DNA-heritable information, interactions of organisms, diversity and evolution, physiology of organisms, digestive system, circulatory system, immune system, respiratory system, endocrine system, nervous system, reproductive system and human development.
- BIO 110** (3+0+0) 3 Credits / 5 ECTS
Introduction to Modern Biology
(Modern Biyolojiye Giriş)
 Molecules of life, organization of the cell, chromosomes and cell division, genetics, molecular genetics, recombinant DNA technology, genetic diseases, evolution, animal development, biotechnology.

- COM 250** (3+0+0) 3 Credits / 5 ECTS
Effective Communication Techniques
 (Etkin İletişim Teknikleri)
 Guidance for CV writing and effective interview techniques. Effective communication. Examination of the characteristics of a presentation. Focusing on various stages of preparing a presentation; emphasizing the introduction and the conclusion. Message, content, voice style and body language. Videotaping student progress. (This course is partly in Turkish, partly in English.)
- ENG 101** (2+2+0) 3 Credits / 5 ECTS
English for Academic Purposes
 (Akademik İngilizce Becerileri)
 Academic reading and writing skills; critical reading and note-taking within the framework of a thematic and integrated skills approach; writing essays with different methods of organization, giving academic presentations as an outcome of listening and reading activities; emphasis on citation and documentation techniques.
- ENG 102** (2+2+0) 3 Credits / 5 ECTS
Expository Writing
 (Akademik Yazım)
 Writing a term paper by following a process approach; doing library and internet research, formulating a thesis and researching supporting ideas; one-on-one tutorials with instructors for feedback during the stages; oral presentation with the aim of defending written work; emphasis on the importance of avoiding plagiarism.
- ENG 111** (2+2+0) 3 Credits / 5 ECTS
Advanced English for Academic Purposes
 (İleri Akademik İngilizce Becerileri)
 Analysis of authentic reading pieces such as short stories, magazines, newspapers, and academic articles; organizing paragraphs, essays or reflection papers; developing higher order critical thinking skills through transferring knowledge; solving problems, making inferences; comparing and contrasting definition, descriptive and narrative paragraphs.
- ENG 204** (3+0+0) 3 Credits / 5 ECTS
Professional Communication in English
 (Profesyonel İletişim Becerileri)
 Introduction and development of professional skills in English; presenting information and opinions using different means of communication in a business context, appropriate language structures and proper vocabulary for effective communication, a focus on persuasion and problem solving skills; integration of the four language skills based on a functional approach.
- ENG 300** (2+2+0) 3 Credits / 5 ECTS
Academic English with Short Stories
 (Kısa Hikâyelerde Akademik İngilizce)
 Short Stories. Language skills. Rhetoric. Figurative language. Literary language. Cultural awareness. Critical thinking. Creativity. Characterization. Opening. Plot. Closing. Twists.

Pre-requisites: ENG 101 and ENG 102

ENG 301 (2+2+0) 3 Credits / 5 ECTS

Great Books & Great Ideas
(Büyük Kitaplar ve Büyük Fikirler)

Analyzing influential ideas in the history of civilizations, reading important books, studying advanced English, using complex linguistic structures, acquiring sophisticated vocabulary, intellectual growth, analytical thinking.

Pre-requisites: ENG 101 and ENG 102

ENG 310 (2+2+0) 3 Credits / 4 ECTS

Academic English with Integrated Writing
(Akademik İngilizce ile Bütünleşik Yazım)

Academic English. Mastering writing skills. Responding to academic texts. Integrated Writing. Multiple skills. Writing integrated compositions.

Pre-requisites: ENG 101 and ENG 102

ENG 320 (2+2+0) 3 Credits / 4 ECTS

Academic English with Poetry
(Şiirle Akademik İngilizce)

Poetry. Poem. Figurative language. Literary language. Rhetorics. Metaphor. Poetic license. Form. Rhyme. Line. Verse. Meter. Stanza. Simile. Line break. Image.

Pre-requisites: ENG 101 and ENG 102

GER 101 (3+0+0) 3 Credits / 5 ECTS

Elementary German I
(Temel Almanca I)

Introduction to German with emphasis on reading, writing and speaking, for students with no prior knowledge of German. Use of familiar everyday expressions and very basic phrases.

GER 102 (3+0+0) 3 Credits / 5 ECTS

Elementary German II
(Temel Almanca II)

Basic knowledge of German grammar and structure; further studies on reading, writing and speaking. Asking and answering simple questions, interacting with others in a simple way.

GER 103 (3+0+0) 3 Credits / 5 ECTS

Elementary German III
(Temel Almanca III)

Improving the German language level, defined in the Common European framework of Reference for Languages, from A1 to A2.

HIST 101 (2+0+0) 2 Credits / 2 ECTS

History of Turkish Republic I
(Türkiye Cumhuriyeti Tarihi I)

The characteristics of the Turkish Republic and Atatürk's reforms in their cultural, ideological and historical context. (This course is conducted in Turkish.)

- HIST 102** (2+0+0) 2 Credits / 2 ECTS
History of Turkish Republic II
(Türkiye Cumhuriyeti Tarihi II)
 Study of the intellectual foundations of Modern Turkey. Analysis of the main political, social, economic and cultural currents in the Republican era. Nation state and nationalism as a major force in Turkey. (This course is conducted in Turkish.)
- HIST 150** (2+0+0) 2 Credits / 2 ECTS
History of Turkish Republic for International Students I
(Yabancılar için Türkiye Cumhuriyeti Tarihi I)
 Historical, socio-political, economical and cultural modification in Ottoman modernization and westernization history. The characteristics of the Turkish Republic and Atatürk's reforms in their cultural, ideological and historical context. (This course is conducted in English.)
- HIST 160** (2+0+0) 2 Credits / 2 ECTS
History of Turkish Republic for International Students II
(Yabancılar için Türkiye Cumhuriyeti Tarihi II)
 Historical, socio-political, economical and cultural modification in Turkish Republican and modernization history. The characteristics of the Turkish Republic and Atatürk's reforms in their cultural, ideological and historical context from 1920s to the end of 1990s. (This course is conducted in English.)
- HUM 101** (3+0+0) 3 Credits / 5 ECTS
World History I
(Dünya Tarihi I)
 Historical evolution of humanity from the first civilizations up to the Renaissance period. Developing a particular consciousness about human history in terms of the development and transformation of civilizations, economic systems, technological inventions, cultural productions and political developments.
- HUM 102** (3+0+0) 3 Credits / 5 ECTS
World History II
(Dünya Tarihi II)
 Historical evolution of humanity from the Renaissance period up to the post-Cold War period. Developing a particular consciousness about human history in terms of the development of the nation state, economic systems, technologic inventions, cultural productions and political.
- ITA 101** (3+0+0) 3 Credits / 5 ECTS
Elementary Italian I
(Temel İtalyanca I)
 Introduction to Italian with emphasis on reading, writing and speaking, for students with no prior knowledge of Italian. Use of familiar everyday expressions and very basic phrases.

<p>ITA 102 Elementary Italian II (Temel İtalyanca II)</p> <p>Basic knowledge of Italian grammar and structure; further studies on reading, writing and speaking. Asking and answering simple questions, interacting with others in a simple way.</p> <p>Pre-requisite: ITA 101 or consent of instructor.</p>	<p>(3+0+0) 3 Credits / 5 ECTS</p>
<p>JAP 101 Elementary Japanese I (Temel Japonca I)</p> <p>Introduction to Japanese with emphasis on reading, writing and speaking, for students with no prior knowledge of Japanese. Use of familiar everyday expressions and very basic phrases.</p>	<p>(3+0+0) 3 Credits / 5 ECTS</p>
<p>JAP 102 Elementary Japanese II (Temel Japonca II)</p> <p>Basic knowledge of Japanese grammar and structure; further studies on reading, writing and speaking. Asking and answering simple questions, interacting with others in a simple way.</p> <p>Pre-requisites: JAP 101 or consent of instructor.</p>	<p>(3+0+0) 3 Credits / 5 ECTS</p>
<p>LIT 100 World Literature (Dünya Edebiyatı)</p> <p>Examining the life and works of significant representatives of world literature, literary movements, getting to know the well-known writers and their works and examination of literary texts that shaped the other cultures.</p>	<p>(3+0+0) 3 Credits / 5 ECTS</p>
<p>LIT 110 Introduction to Cultural Studies (Kültür Araştırmalarına Giriş)</p> <p>Introduction to essential theories, key terms and concepts of cultural studies, such as identity, hybridity, power, representation, gender and so forth. Analysis of various cultural products and representations from different perspectives.</p>	<p>(3+0+0) 3 Credits / 5 ECTS</p>
<p>LIT 202 Analyses of Visual Culture Texts (Görsel Kültür Metin Analizleri)</p> <p>Introduction to the terms image, text, metaphor, symbol, signifier, icon and the kitsch. A brief look at the place of the image in the history of human thought. Analysis of various examples from popular culture, photography and film, to everyday life and world literature.</p> <p>Pre-requisite: ENG 101 or ENG 102</p>	<p>(3+0+0) 3 Credits / 5 ECTS</p>

- LIT 210** (3+0+0) 3 Credits / 5 ECTS
Critical Thinking and Writing
(Eleştirel Düşünme ve Yazma)
 Critical thinking, critical reading, writing and development of discussion skills, benefit from critical thinking in decision making. By benefiting from literary works evaluating what they read, critically and the ability of writing their thoughts.
- PHIL 104** (3+0+0) 3 Credits / 5 ECTS
Philosophy and Ethics
(Felsefe ve Etik)
 Understanding the fundamental concepts, problems, and approaches of philosophy and prominent ethical systems; the place and importance of philosophy for everyday life; the difference between philosophy and other human endeavors such as literature, mythology, religion, and science; appreciation of the deep understanding philosophy provides for human beings; a brief history of philosophy.
- PHYS 104** (2+0+2) 3 Credits / 5 ECTS
Introduction to Natural Sciences
(Doğa Bilimlerine Giriş)
 The general principles of physics and chemistry. Measurement, motion, Newton's laws of motion, momentum, energy, work, power, heat, thermodynamics, waves, sound light, electricity, magnetism, and chemical principles. Understanding of the physical environment and be able to apply the scientific principles to observations experienced. Concepts of chemistry and physics will be reinforced by laboratory.
- PHYS 105** (3+0+2) 4 Credits / 6 ECTS
Physics I
(Fizik I)
 Vectors and coordinate systems; kinematics, dynamics, Newton's Laws of motion. Charge; electric field, Gauss' law; electric potential; capacitors; DC circuits. Temperature; Zeroth law of thermodynamics; Thermal expansion; Ideal gas law.
- PHYS 106** (3+0+2) 4 Credits / 6 ECTS
Physics II
(Fizik II)
 Work and energy; conservation of energy and momentum, collisions. Magnetic field; Ampere's law; Faraday's law; inductance. Heat; Internal Energy; Specific Heat; First and Second laws of thermodynamics; Entropy.
 Pre-requisite: PHYS 105
- PHYS 120** (2+0+2) 3 Credits / 5 ECTS
General Astronomy
(Genel Astronomi)
 Scales in the universe, history of astronomy, universal gravitation. Kepler's Laws, properties of light, tools of astronomy. Solar System, planets, moons, minor bodies of the solar system, The Sun, evolution of stars, the Milkyway, other galaxies, cosmology.

- RUS 101** (3+0+0) 3 Credits / 5 ECTS
Elementary Russian I
 (Temel Rusça I)
 Introduction to Russian with emphasis on reading, writing and speaking, for students with no prior knowledge of Russian. Use of familiar everyday expressions and very basic phrases.
- RUS 102** (3+0+0) 3 Credits / 5 ECTS
Elementary Russian II
 (Temel Rusça II)
 Basic knowledge of Russian grammar and structure; further studies on reading, writing and speaking. Asking and answering simple questions, interacting with others in a simple way.
 Pre-requisite: RUS 101 or consent of instructor.
- SPA 101**
Elementary Spanish I
 (Temel İspanyolca I)
 Introduction to Spanish with emphasis on reading, writing and speaking, for students with no prior knowledge of Spanish. Use of familiar everyday expressions and very basic phrases.
- SPA 102**
Elementary Spanish II
 (Temel İspanyolca II)
 Basic knowledge of Spanish grammar and structure; further studies on reading, writing and speaking. Asking and answering simple questions, interacting with others in a simple way.
 Pre-requisites: SPA 101 or consent of instructor.
- TEDU 400** (0+0+0) 0 Credit / 1 ECT
Student Development Seminar
 (Öğrenci Gelişimi Semineri)
 Supporting personal development. Development and/or enhancement of the knowledge, skills, and understanding to make informed academic, social, personal, career, and interpersonal decisions. Participation to seminars offered throughout the bachelor education. Expanding artistic and cultural repertoire and increasing interest towards them. (This course is graded as P/F.)
- TUR 101** (2+0+0) 2 Credits / 2 ECTS
Turkish I
 (Türkçe I)
 Explanation of communication; explanation of language and its relationship with thinking process, culture, society and literature; written and oral communication; illustration of main characteristics of the Turkish language, types of narration and its defects. (This course is conducted in Turkish.)

TUR 150**(3+0+0) 2 Credits / 2 ECTS****Turkish for Foreigners I
(Yabancılar için Türkçe I)**

Basic knowledge of grammar and vocabulary, familiarization with Turkish culture. Fundamental language skills (listening, reading, writing, spoken interaction and spoken production), communication in Turkish at a basic level in daily life.

Only for non-Turkish speaking students.

Pre-requisites: None

TUR 155**(3+0+0) 2 Credits / 2 ECTS****Intermediate Turkish for Foreigners
(Yabancılar için Orta Düzey Türkçe)**

Intermediate Turkish. It is aimed that the foreign students who speak Turkish at basic level to express themselves in more various contexts and text types, to realize the modality appearances and usage of Turkish.

Only for non-Turkish speaking students.

Pre-requisites: None

TUR 160**(3+0+0) 2 Credits / 2 ECTS****Turkish for Foreigners II
(Yabancılar için Türkçe II)**

Development of listening, reading, writing, spoken interaction, and spoken production skills, further improvement of knowledge of the grammar and vocabulary by in-class discussions.

Only for non-Turkish speaking students.

Pre-requisite: TUR 150 or equivalent proficiency.

TUR 165**(2+0+0) 2 Credits / 2 ECTS****Advanced Turkish for Foreigners
(Yabancılar için İleri Düzey Türkçe)**

Development of advanced listening, reading, speaking and writing skills in Turkish language level B2 to C1. Understanding the main ideas of complex texts on both concrete and abstract topics, including technical discussions in corresponding specialization. Oral and written communication in an effective, fluent, spontaneous, and organized manner, enabling interaction with native speakers on a wide range of subjects.

Only for non-Turkish speaking students.

Pre-requisites: None

Co-requisites: None

SECONDARY FIELDS



SECONDARY FIELDS

In line with the liberal education system of TED University, all undergraduate students are required to choose a secondary field next to their major within their credits to discover interdisciplinarity. Depending on the major students should take 4 or 5 courses from their secondary field program.

Departmental Secondary Fields

Secondary Fields offered by Faculty of Education

Learning Sciences

(Available for Students Except Faculty of Education)

	CODE	Course Title	CR	ECTS
1	EDU 101	Introduction to Education	3	6
2	EDU 102	Instructional Principles and Methods	3	6
3	ECE 203	Child Development and Learning	3	5
4	GPC 201	Life Span Development	3	5
5	GPC204	Psychology of Learning	3	6
6	GPC 206	Social Psychology	3	5
7	GPC 303	Measurement and Evaluation	3	5

English Education

(2017-2018 and Before Available for Students Except Faculty of Education)

	CODE	Course Title	CR	ECTS
1	EDU 101	Introduction to Education	3	6
2	EDU 102	Instructional Principles and Methods	3	6
3	ELE 205	Language Acquisition	3	5
4	ELE 302	Technology Enhanced Language Learning	3	5
5	ELE 307	Teaching English to Young Learners	3	5

English Language Teaching Secondary Field

(New Program)

	CODE	Course Title	CR	ECTS
1	ELEP 301	Teaching English to Young Learners 1	3	5
2	ELEP 303	Teaching English Language Skills 1	3	5
3	ELEP 302	Teaching Foreign Language to Young Learners 2	3	5
5	ELEP 304	Teaching English Language Skills 2	3	5
4	ELEP 401	Instructional Design in English Language Teaching	3	3
5	ELEP 403	Translation	3	3
6	ELEP 402	Testing in English Language Teaching (ELT)	3	4

Teaching English for Educators

(Available for Students Except Faculty of Education)

	CODE	Course Title	CR	ECTS
1	ELE 205	Language Acquisition	3	5
2	ELE 209	Approaches to ELT	3	5
3	ELE 210	ELT Methodology I	3	5
4	ELE 302	Technology Enhanced Language Learning	3	5
5	ELE 304	Assessment in ELT	3	6
6	ELE 401	Materials Adaptation & Development	3	6

Secondary Fields offered by Faculty of Economics and Administrative Sciences

Management

(available for students except Department of Business Administration)

Management secondary field program consists of 5 Courses.

- Students can choose 4/5 BA courses.*
 - * Students in Department of Industrial Engineering are not allowed to take BA202, BA 305, BA 472, BA 474, BA 476, BA 477, BA 478, and BA 479 as electives to fulfill their requirements.
- Students cannot take BA 300, BA 400, BA 401, BA 402, BA 410 courses for the secondary field.

Economics

(available for students except Department of Economics)

Economics secondary field program consists of 5 Courses.

- Students can choose 4/5 ECON courses.*
 - * Students can take only one of ECON 101 and ECON 110 courses as a part of the secondary field.
 - * If students have taken one of these courses as a must course, then they cannot take the other as a part of the secondary field.
- Students cannot take ECON 300, ECON 400, ECON 401, ECON 402 courses for the secondary field.

Political Science

(available for students except Department of Political Science and International Relations)

Political Science secondary field program consists of 5 Courses.

- PSIR 213 Political Concepts and Processes
- PSIR 214 Political Currents
- PSIR 373 Comparative Politics
- PSIR 351 History of Political Thought I
- PSIR 352 History of Political Thought II

International Relations

(available for students except Department of Political Science and International Relations)

International Relations secondary field program consists of 5 Courses.

- PSIR 291 Global Politics
- PSIR 292 International Relations Theory
- PSIR 367 Public International Law
- PSIR 422 Current Issues in World Politics
- PSIR 491 Foreign Policy Analysis

Secondary Fields offered by Faculty of Architecture

Architectural Culture

(available for students except Faculty of Architecture)

To complete the Secondary Field Program in Architectural Culture, students must take either 4 or 5 courses, according to the number specified by their department's curriculum. Two of these courses must be the compulsory courses below. The rest can be selected from the departmental elective courses offered by the Department of Architecture with an ARCH code, as long as the pre-requisites are met, if there is any.

Students should begin the program with the course ARCH 121. In special cases which necessitate otherwise, the approval of both the instructor of the course, which is intended to be taken prior to or together with ARCH 121, and of the student's advisor must be provided.

Compulsory Courses:

- ARCH 121 Introduction to Architecture (3+0+0) 3 Credits / 5 ECTS
- ARCH 221 History of Architecture I (3+0+0) 3 Credits / 5 ECTS

Suggested Program:

- Semester 5: ARCH 121
- Semester 6: ARCH Elective
- Semester 7: ARCH 221
- Semester 8: ARCH Elective + (ARCH Elective)

Secondary Fields offered by Faculty of Engineering

Industrial Engineering: Systems Modeling and Optimization

(available for students except Faculty of Engineering)

Pre-requisites:

- Knowledge of Linear Algebra (MATH 203 or MATH 202 or equivalent),
- Knowledge of Probability Theory (MATH 230 or MATH 233 or MATH 240, or equivalent)

Required Courses:

- IE 232 - Mathematical Modeling and Optimization (3+0+0) 3 Credits / 6 ECTS
- IE 331 - Mathematical Modeling and Optimization II (3+0+0) 3 3 Credits / 6 ECTS
- IE 332 - Mathematical Modeling and Optimization III (3+0+0) 3 3 Credits / 6 ECTS

Elective Courses:

- IE XXX - Two of any IE 3xx or IE 4xx courses courses

Civil Engineering Basics

(available for students except Faculty of Engineering)

Pre-requisition: PHYS 101 or PHYS 105

Suggested Courses: PHYS 102 or PHYS 106

Must Courses: CE 211 and CE 214

Elective Courses:

CODE	Course Title	Pre-requisites	ECTS
CE 221	Engineering Mechanics I	-	6
CE 311	Structural Analysis	CE 214 and MATH 210	6
CE 312	Fundamentals of Steel Design	CE 214	6
CE 314	Reinforced Concrete Fundamentals	CE 214	6
CE 341	Soil Mechanics	CE 214	6
CE 342	Foundation Engineering I	CE 341	6
CE 411	Reinforced Concrete Structures	CE 314	6
CE 412	Steel Structures	CE 312	6
CE 442	Foundation Engineering II	CE 342	6
CE 451	Construction Engineering and Management	Consent of the Department	6
CE 452	Practical Aspects of Construction Management	CE 451	6
CE 454	Contractual Aspects of Construction Works	-	6
CE 455	Sustainable Construction	-	5

Secondary Fields offered by Faculty of Arts and Sciences

General Psychology

The Department of Psychology offers a secondary field (SEC) in "General Psychology". General Psychology secondary field consists of five courses. Students must take PSY 104 as a compulsory course and two courses from each group, Group I & Group II. Courses offered under the title of Group II must be chosen depending on the advisor approval. The secondary field courses of General Psychology were presented below.

Courses:	Compulsory-Elective
PSY 104 Psychology	C
Group I	
PSY 217 Experimental Psychology	E
PSY 232 Social Psychology	E
PSY 221 Life-Span Development I	E
PSY 203 Research Methods I	E

Group II
TEDU students may take any PSY coded course from the eligible elective courses of the Psychology Department opened for that semester except for PSY 342, PSY 343, PSY 442, PSY 445, PSY 446 and PSY 447.

Sociology

Aim of the Secondary Field:

Sociology secondary field program is designed for students who aspire to acquire a general understanding of sociology as a discipline as well as its sub-areas. The aim of this secondary field is to enable students to learn both theoretical and methodological approaches in sociology, apply these approaches in sub-areas of sociology, and employ a sociological perspective on their own disciplines.

Requirements of the Secondary Field:

Students are required to take SOC 103 Introduction to Sociology as the prerequisite, 2 compulsory courses (listed below), and 2 or 3 other elective courses (from the list below).

- Prerequisite for application: SOC 103 Introduction to Sociology
- Total number of courses: 5 /6
 - Compulsory courses: 2
 - Elective courses: 2/3
- Total credits: 15/18

Course Code	Course Names	Credit	Pre-requisite	Status
SOC 201	Research Methods I	3		Compulsory
SOC 203	Sociological Theories I: Classics	3		Compulsory
SOC 210	Family Sociology	3		Elective
SOC 211	Sociology of Education	3		Elective
SOC 212	Religion and Society	3		Elective
SOC 213	Religion and Modernity	3		Elective
SOC 220	New Media and Communication Studies	3		Elective
SOC 221	Economics and Society	3		Elective
SOC 222	Migration in a Globalized World	3		Elective
SOC 223	New Social Movements	3		Elective
SOC 224	Social Anthropology	3		Elective
SOC 302	Development of Sociology in Turkey	3		Elective
SOC 303	Urban Sociology	3		Elective
SOC 304	Demography and Society	3		Elective

Non-Departmental Secondary Fields

Non-departmental secondary fields are available to all undergraduate students. Communication secondary field program is administrated by Faculty of Arts and Sciences. Applied Data Analytics, Global Citizenship and Law secondary fields are administrated by Faculty of Economics and Administrative Sciences.

Applied Data Analytics

Applied Data Analytics secondary field program consists of 4 or 5 Courses.

Compulsory Course:

- ADA 423 Statistical Inference Methods with Applications
- ADA 442 Statistical Learning

Core Elective Courses:

- ADA 402 Computational Statistics
- ADA 403 Exploratory Data Analysis
- ADA 407 Data Science for Social Scientists
- IE 332 Mathematical Modeling & Optimization III
- IE 435 Heuristic Search

Elective Courses List:

- BA 406 Market Data Analysis
- BA 407 Management Information Systems
- BA 463 Marketing Research
- CMPE 310 Rapid Application Development
- CMPE 442 Introduction to Machine Learning

- CMPE 467 Human Computer Interaction
- ECON 331 Econometrics I
- ECON 332 Econometrics II
- ECON 431 Applied Econometrics
- ECON 432 Time Series
- ECON 434 Panel Data Analysis
- IE 341 Simulation
- IE 441 Stochastic Processes
- IE 444 Forecasting Methods
- IE 451 Decision and Risk Analysis
- IE 454 Multi-Objective Decision Analysis

Communication and Critical Media Studies

Compulsory Course: COM 450 Introduction to Media Studies

Elective Courses List:

- COM 330 Introduction to Public Relations
- COM 340 Media Ethics
- COM 350 Media Literacy
- COM 360 Alternative Media
- COM 370 Cinema Studies and Film Analysis
- COM 380 New Media
- COM 455 Turkish Media and Representation
- COM 390 Film Design: Meaning Formation Through Film Practices

Global Citizenship

Global Citizenship secondary field program consists of 4 or 5 Courses.

- CIT 221 Global Environmental Issues
- CIT 226 Cross National Perspectives On Women's Movement
- CIT 301 Civic Involvement
- CIT 302 Understanding Social Innovation: Concept, Context and Practice
- CIT 310 Introduction to Philosophy of Science
- CIT 320 Diaries and Letters of Great Authors
- CIT 323 Media and International Politics
- CIT 324 Gender and Media
- CIT 330 Sociology of the City
- CIT 340 The Concept and Practice of Corporate Responsibility
- CIT 350 Social Environmental Ethics
- CIT 362 Introduction to Sustainable Development
- CIT 364 Sustainable Development Goals
- CIT 370 Global Concerns: Inequalities and Discrimination
- CIT 371 Turkey's EU Process: Identity vs. Access

- CIT 372 European Union (EU) and Social Policy
- CIT 425 Politics of Energy
- CIT 430 Citizenship Theories
- CIT 480 Photography on Urban Space
- CIT 381 History of Ottoman Diplomacy
- CIT 492 Gender and the City
- PSIR 294 International Organizations
- PSIR 377 Social and Political Movements
- PSIR 392 Peace Studies and Conflict Resolution
- PSIR 429 Human Rights and World Politics
- SOC 213 Religion and Modernity

Law

Law secondary field program consists of 4 or 5 Courses.

Compulsory Course:

- PSIR 263 Fundamental Principles of Law

Elective Courses List:

- BA 302 Business Law
- CIT 340 The Concept and Practice of Corporate Responsibility
- LAW 352 Law of Contracts
- LAW 361 Consumer Protection Law
- LAW 451 Labor Law
- LAW 452 Main Concepts of Tax Law
- LAW 461 Law of the European Union
- PSIR 266 Turkish Constitutional Law
- PSIR 367 Public International Law
- PSIR 429 Human Rights and World Politics

Course Descriptions of Non-Departmental Secondary Fields

Applied Data Analytics Secondary Field

ADA 423 (3+0+0) 3 TEDU Credits, 5 ECTS Credits

Statistical Inference Methods with Applications

Data structures, loops and conditionals, data wrangling, grouping and summarizing, transforming data, data visualization, exploratory data analytics, statistical inference, hypothesis testing, analysis of variance, introduction to statistical modelling, linear and logistic regression as statistical models.

Pre-requisite: MATH 232 or MATH 233 or MATH 240

ADA 442 (3+0+0) 3 TEDU Credits, 5 ECTS Credits

Statistical Learning

Statistical Learning, Linear Methods and Regularization, Classification, Resampling Methods, Non-linear Methods, Tree- based Models, Applications using R.

ADA 402 (3+0+0) 3 TEDU Credits, 5 ECTS Credits

Computational Statistics

Generating Random Variables. Monte Carlo (MC) Method for Statistical Inference. Data Partitioning. Resampling. Bootstrapping. Numerical Methods.

ADA 403 (3+0+0) 3 TEDU Credits, 5 ECTS Credits

Exploratory Data Analysis

Types of Data. Graphical and Tabular Representation of Data. Exploratory Data Analyses for Large and High-Dimensional Data. Analysis of Categorical Data. Handling Missing Data. Applications in R.

ADA 407 (3+0+0) 3 TEDU Credits, 6 ECTS Credits

Exploratory Data Analysis

Introduction to data science. Causal inference. Programming with R, Stata, and/or Python. Rubin causal model. Various causal inference methods and techniques. Text analytics applications. Machine learning applications in social sciences. The use of big data in addressing social and economic problems.

Communication and Media Studies Secondary Field

COM 330 (3+0+0) 3 TEDU Credits, 5 ECTS Credits

Data Science for Social Scientists

This course provides students with a detailed introduction to public relations. COM 330 includes a historical origin of public relations and its distinctions from advertising. This course is a particular focus on the public relations theory, many roles of the public relations practitioner and the public relations agency.

- COM 340** (3+0+0) 3 TEDU Credits, 5 ECTS Credits
Media Ethics
 A discovery of moral decision making in the media. An examination of both classical and contemporary approaches to ethical decision making of media. Applying these approaches to media practices, a particular focus of the problematic ethical issues through a number of case studies and ethical approaches to media practices.
- COM 350** (3+0+0) 3 TEDU Credits, 5 ECTS Credits
Media Literacy
 Communication, mass media and media. Reading media through written, visual and electronic media; analysis of the media from a critical perspective. This course is conducted in Turkish.
- COM 360** (3+0+0) 3 TEDU Credits, 5 ECTS Credits
Alternative Media
 A particular focus on alternative media, which are somehow opposite to mainstream or dominant media in terms of their content, production or distribution, challenge the status quo and take the responsibility of becoming the voice of the other, the silenced and ignored. An analysis of the production of alternative media covering women, children, minorities, disabled people, elderly people, LGBT etc. without profit expectation. Discussing and criticizing mainstream media, its history, structure, role, content, development, opportunities and effects on society, the main features of this course is to focus on both alternative, citizen and radical media, the differences between them, their possibilities of affecting the society, the characteristics of peace journalism and its effects to society.
- COM 370** (3+0+0) 3 TEDU Credits, 5 ECTS Credits
Cinema Studies and Film Analysis
 A particular focus on examining and analyzing a series of films stretching across multiple genres, countries, and historical periods. Introducing students to the basic vocabulary of films (montage, cinematography, long take, etc.) and the analytical terms to examine a sequence of films, this course provides a wide array of world cinema.
- COM 380** (3+0+0) 3 TEDU Credits, 5 ECTS Credits
New Media
 An enriched perspective of New Media, different storytelling and Internet technologies, which have made information accessible from everywhere. A particular focus on the theories and applications of new media sphere, its cultural, political and social consequences.
- COM 390** (3+0+0) 3 TEDU Credits, 5 ECTS Credits
Film Design: Meaning Formation Through Film Practices
 Expression of ideas and emotions through the language of cinema. Meaning formation. The basic principles and expressive potentials of cinematography, editing and sound design. The manipulative power of film practices in meaning formation. Film design/ideation.

COM 450

(3+0+0) 3 TEDU Credits, 5 ECTS Credits

Introduction to Media Studies

Introduction to Media Studies is designed for students who are interested in doing critical research on media and its outlets. This course aims to explore theories and models of media. Introduction to Media Studies will enable students to analyze (hidden) media messages, helping them to think critically on their meanings and to develop awareness on their impacts regarding society, culture, diversity, etc.

COM 455

(3+0+0) 3 TEDU Credits, 5 ECTS Credits

Turkish Media and Representation

This course aims a critical analysis of representation in Turkish media. It has a particular focus on representing gender, ethnicity, minority, religion, class in 21st century Turkish media through series, news, literature, movies, social media.

Global Citizenship Secondary Field

CIT 221

(3+0+0) 3 TEDU Credits, 6 ECTS Credits

Global Environmental Issues

Global environmental issues and policies. Capitalist growth strategies and environmental problems. International conservation conventions and states' policies. Civil societal initiatives.

CIT 226

(3+0+0) 3 TEDU Credits, 6 ECTS Credits

Cross National Perspectives on Women's Movements

Evolution and current state of women's movements in different countries. Middle Eastern, North American, European, and Latin American cases.

CIT 301

(3+0+0) 3 TEDU Credits, 5 ECTS Credits

Civic Involvement

Basic principles of project cycle management. Active citizenship. Volunteerism. Participatory democracy. Citizen involvement. Civil society organisations. Non governmental, not for profit and intergovernmental actors. Social issues. Public jury and public presentation experience.

CIT 302

(3+0+0) 3 TEDU Credits, 5 ECTS Credits

Understanding Social Innovation

Social entrepreneurship. Social innovation. Public sector innovation. Urban social innovation. Digital social innovation. Open innovation. Maker and social maker movements. Network entrepreneurship. Impact networks. Social impact. Public debates and simulation exercises.

CIT 310

(3+0+0) 3 TEDU Credits, 5 ECTS Credits

Introduction to Philosophy of Science

Critical thinking. Scientific knowledge. Scientific method. Epistemology. Scepticism. Paradigm shift. Falsificationism. Deduction. Induction. Causal reductionism. Rules of inference.

- CIT 320** (3+0+0) 3 TEDU Credits, 5 ECTS Credits
Letters and Diaries of Great Minds
 Critical reading of non-fiction on real life experiences of great authors. Analysis of a variety of texts such as; letters, diaries, memoirs and travel writings that will improve academic literacy, and new ideas. Application of critical and evaluative skills through writing activities.
- CIT 323** (3+0+0) 3 TEDU Credits, 6 ECTS Credits
Media and International Politics
 The role of media in international relations. Theories of media. Media- power relationship. Media as a means of governments and media as a means to resist governments.
- CIT 324** (3+0+0) 3 TEDU Credits, 5 ECTS Credits
Gender and Media
 The interrelation between gender and global/local media. The intersection of "communication", "culture" and "identity". Media's role in representing and constructing gender roles. Critical approach to media from critical theory perspective. Alternative gender-equality- sensitive media practices.
- CIT 330** (3+0+0) 3 TEDU Credits, 5 ECTS Credits
Sociology of the City
 A set of core concepts and theories in the field of urban sociology. Urban social issues such as urbanization, place and identity, social inequality, globalization, community and neighborhood relations, urban culture, demography and metropolitan problems such as segregation, poverty and urban crime. The relation of social and the physical. Readings, discussions, case studies. Interdisciplinary and interactive learning. Research algorithm. Jury presentation.
- CIT 340** (3+0+0) 3 TEDU Credits, 5 ECTS Credits
The Concept and Practice of Corporate Responsibility
 The analysis of social, environmental and economic responsibilities of corporations. Sustainable development. The notion of corporate citizenship. The impact of globalization on business. The influence of cultural perceptions on corporate responsibility. Non-financial reporting.
- CIT 350** (3+0+0) 3 TEDU Credits, 5 ECTS Credits
Social Environmental Ethics
 Basic topics and questions in ethics and social environment. Social environmental sciences. Social environmental theories. Applied ethics. Contemporary discussions on biopolitics. Why do we need ethics? How can environmental ethics become a language between human and human, human and nature?
- CIT 362** (3+0+0) 3 TEDU Credits, 5 ECTS Credits
Introduction to Sustainable Development
 Anthropocene epoch. Tragedy of the commons and globalization. Three pillars of sustainability and Triple bottom line. Historical development of the concept of "sustainable development". From Millennium Development Goals to Rio+20. Sustainable Development Goals and targets. Corporate social responsibility.

CIT 364**(3+0+0) 3 TEDU Credits, 5 ECTS Credits****Sustainable Development Goals**

The concept of "sustainability". Global challenges and urgency of cooperation. UN 2030 Agenda for Sustainable Development. 17 Sustainable Development Goals (SDGs) with related targets. Interconnections among SDGs. Global efforts to achieve SDGs. Role of different actors on SDGs.

CIT 370**(3+0+0) 3 TEDU Credits, 5 ECTS Credits****Global Concerns: Inequalities and Discrimination**

The interconnectedness of the individual, state and international levels. Globalization and the globalization of inequalities. Discrimination and social divisions. Human security. Sociological and international perspectives to poverty, welfare, and development. Gender inequalities. Culture and diversity. Religion, ethnicity, migration and radicalism. Technology and the risk society. Technology and environment. Awareness on the global issues and problems. Sense of global citizenship. Creative problem solving thinking.

CIT 371**Turkey's EU Process: Identity vs. Access**

The question of culture, identity and national identity. European identity from pan- nationalism to post-nationalism. The concept of Europeanization. Comparison of Turkish identity and European identity. The concept of conditionality. Turkey-EU association relationship. Turkey's EU accession process. Future reflections on Turkey-EU Relations.

CIT 372**(3+0+0) 3 TEDU Credits, 5 ECTS Credits****European Union (EU) and Social Policy**

Social policy with concrete examples from projects implemented in the EU and Turkey. Social protection and inclusion, disadvantaged individuals and groups. Skills, qualifications, equal opportunities and access to the labour market. Decent work, social dialogue, poverty, gender equality. The European Union and its social policies. EU project cycle management and logical framework approach. EU funded projects.

CIT 381**History of Ottoman Diplomacy**

This is a comprehensive course on the Ottoman Diplomatic History with special emphasis on relations with Europe, from the early years of the expansion to the fall of the Empire. It is planned to cover: The Ottoman Empire and the Basics of the Imperial Administrative System; Introduction to Ottoman Diplomacy at the Classical Age; Premodern Ottoman Diplomacy; Beginning of Modernization; Reforms and the Ottoman Diplomacy; Establishment of the Foreign Ministry; The Eastern Question, Tanzimat Diplomacy; Foreign Policy of Abdülhamid II; The Union and Progress; Road to the Great War and the Fall of the Empire.

CIT 425**(3+0+0) 3 TEDU Credits, 6 ECTS Credits****Politics of Energy**

Economic and political dimensions of the global energy issue. World energy consumption. Geographic distribution and availability of energy sources. Energy producing and energy consuming states. Global energy policies. Renewable energy sources. Energy efficiency.

CIT 430 (3+0+0) 3 TEDU Credits, 5 ECTS Credits
Citizenship Theories
 Basic concepts on social structure, social institution, social change and social issue. Critical analysis of major texts in various genres for understanding the social issues on local/global scale and generating universal values such as: tolerance, respect and cooperation.

CIT 480 (3+0+0) 3 TEDU Credits, 5 ECTS Credits
Photography on Urban Space
 This course aims to address the encounter of a particular form of visual storytelling – documentary photography – with the understanding of space. Students will be introduced with photography as an apparatus to understand and tell the story of urban space. They will be asked to improve their observation skills, decide on the story they want to tell and find out the appropriate form of visual expression for their stories. The documentary photos will further be employed to organise an unorthodox exhibition, which will be utilised to make them familiar with the design thinking approach.

CIT 492 (3+0+0) 3 TEDU Credits, 5 ECTS Credits
Gender and the City
 Theoretical and empirical concepts on gender. Gendered norms and identities. Women and the city. Gendered routines of daily city life. Political ecology. Public, private, political, personal spheres. Urban public spaces. Right to the city. Urban mobility. History and the city. Masculinities, femininities and queer in the city. Imagination and gender. Utopias.

Law Secondary Field

LAW 352 (3+0+0) 3 TEDU Credits, 5 ECTS Credits
Law of Contracts
 Concept of obligation and types of obligations. Legal transaction and types. Contract and the general principles that govern the field of law of contracts. Contractual freedom and its limits; Formation of a contract. Form and freedom of form. Agency. Fulfillment of obligations resulting from contracts, Default of the debtor and creditor, Discharge of obligations, Penalty clause, Condition. Several liability.

LAW 361 (3+0+0) 3 TEDU Credits, 5 ECTS Credits
Consumer Protection Law
(Tüketicinin Korunması Hukuku)
 Concept of consumer and the movement of consumerism. Development of consumer protection. EU legislation on consumer protection. Consumer protection in Turkey. The Law On Consumer Protection. Consumer rights. Consumer transactions and consumer disputes. Defective goods and services. Protection of consumers in financial sector. Dispute resolution methods and application.

LAW 451 (3+0+0) 3 TEDU Credits, 5 ECTS Credits
Labour Law
 Historical background of labour law. Employment contract. Labour Code and the provisions of Code of Obligations regulating the employment contract. Parties and the relations between the employer and employee. Organization of work and working time; Termination of employment contract. Job security. Severance pay. Collective labour relations; Trade unions; Strike and lock-outs; Collective agreements and settlement of disputes. Social security This course is conducted in Turkish.

LAW 452**(3+0+0) 3 TEDU Credits, 5 ECTS Credits****Main Concepts of Tax Law**

Constitutional Principles regarding Taxation in Turkey; Canon of Certainty/Legality of Taxes (No Taxation Without Representation Principle); Canon of Equality/Ability to Pay Principle. The principle of fair and moderate distribution of tax burden in the society. General Concepts of Turkish Tax Law, Tax Object, Tax Payer & The Liability To Pay Tax, Taxable Event, Tax Base, Tax Rates and Tariffs, Tax Reliefs. Turkish Tax System: Taxes On Income: Personal Income Tax, Corporate Income Tax. Taxes on Wealth: Real Estate Tax, Inheritance and Gift Tax, Motor Vehicles Tax. Taxes on Expenditure: VAT Value Added Tax, Excise Tax, Stamp Duty and Charges. Taxation Procedure in Turkey. Tax Disputes and Their Solution in Turkey. This course is conducted in Turkish.

LAW 461**(3+0+0) 3 TEDU Credits, 6 ECTS Credits****Law of the European Union**

The European Union's (EU) law and legal order. Sources of community law: the treaties, derived law, international law. Relationship of Community Law to national law. Law making process in EU. The limits of EU law. EU citizenship. Social and economic regulations.

GRADUATE
SCHOOL



GRADUATE SCHOOL

Director's Statement

With the contribution of various academic departments under its five colleges/faculties, TED University offers eleven master's programs with thesis and/or non-thesis options as well as a doctoral program in clinical psychology. Having been designed in view of the contemporary needs in the focus of academic or professional life, all of these programs stand out as alternatives to be considered by college graduates aiming to improve their skills by gaining expertise in these areas.

We strongly recommend students in the final stages of their undergraduate education and those who gained experience in various capacities after receiving their bachelor's degree, to continue with their studies to enrich the broad knowledge gained in undergraduate education with a graduate degree that will allow them to specialize in an area or subject of their interest. Our graduate programs aim to train critical thinkers, individuals who are able to contribute to the domestic and international literature, who can follow local, national and global developments, and apply their knowledge and experience in different fields in their career. We believe that graduate degree holders will stand out as well-sought employees in the professional world and they will also continue their personal lives as individuals who are able to think in more original and creative ways.

We are in the belief that graduate education is not reserved to any age group or to people in any particular stage in life. As an extension of the strong roots of TED's past experience in education, we offer a multifaceted educational experience in our graduate programs much like in our undergraduate curricula. Our students' learning form their personal research or from each other's knowledge, findings and experiences, contributing to the literature by publishing their findings, working together with the faculty in ongoing projects are only a part of the opportunities offered by graduate studies at TEDU. If you hold a bachelor's degree or if you are in the last year of a bachelor's program, check out our graduate programs. We hope that you will find a suitable program to pursue your goals. In any case, we would like to let you know that we are in the process of designing new programs also.

You should refer to the web pages of the specific program you intend to apply. Graduate programs at TEDU require a tuition payment but scholarship opportunities are available for programs with thesis. You need a valid ALES (national graduate admission test) score to apply to a program with thesis. Depending on the intended program, international applicants may take either GRE or GMAT exam instead of ALES. Most of our programs are entirely in English. English language proficiency is assessed by the English Language School through the English Proficiency Exam (EPE) administered on specific dates or through other test scores with pre-approved equivalency. All candidates, other than those who have been continuing their education for the past three years in a country where English is spoken as the native language, are required to certify their English proficiency by valid exam scores.

Once again, check out our programs and do not hesitate to apply if you find one matching your interests. Feel free to contact us with any questions. We will be happy to help you in realizing your goals.

Prof. Mehmet Rüştü TANER, Director of the Graduate School

ARCHITECTURE AND URBAN STUDIES MASTER PROGRAM

(with thesis)

(Language of Instruction: English)

Graduate Curriculum

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
MAUS 501	Theory and Method in AUS Studies	3	0	0	3	7.5
MAUS 503	Architecture and Urban Studies Research Studio I	3	2	4	6	15
	Elective I	3	0	0	3	7.5
TOTAL		9	2	4	12	30

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
MAUS 502	Research Methods, Topics and Ethics in AUS	3	0	0	3	7.5
MAUS 504	Architecture and Urban Studies Research Studio II	3	2	4	6	15
	Elective II	3	0	0	3	7.5
TOTAL		9	2	4	12	30

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
MAUS 591	Pre-Thesis Seminar	0	0	0	0	15
	Elective III	3	0	0	3	7.5
	Elective IV	3	0	0	3	7.5
TOTAL		6	0	0	6	30

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
MAUS 592	Master's Thesis I	0	0	0	0	30
TOTAL		0	0	0	0	30

Totals expected for graduation		24	4	8	30	120
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Graduate Course Descriptions

MAUS 501 (3+0+0) 3 Credits / 7,5 ECTS

Theory and Method in Architecture and Urban Studies
(Mimarlık ve Şehir Çalışmaları Kuram ve Metodolojileri)

Critical theories pertaining to the field architecture and city studies elaborated; with focus on architecture, planning, product design, sociology and similar disciplines. Scientific methodological approaches, related with these theories, are discussed.

MAUS 502 (3+0+0) 3 Credits / 7,5 ECTS

Research Methods, Topics and Ethics in AUS
(Mimarlık ve Kent Çalışmaları Araştırma Yöntemleri, Konuları ve Etiği)

Major research topics in the field of Architecture and City Studies are raised and discussed, in an interactive milieu. Conceptual frameworks are constituted on these problems by critical readings.

MAUS 503 (3+0+6) 6 Credits / 15 ECTS
Architecture and Urban Studies Research Studio I
(Mimarlık ve Kent Çalışmaları Araştırma Stüdyosu I)
 In this studio course, problems are formulated in the field of Architecture and City Studies. Conceptual frameworks are constituted on these problems by critical readings. Interactive Dialogue and Innovative Approaches to problems are must.

MAUS 504 (3+0+6) 6 Credits / 15 ECTS
Architecture and Urban Studies Research Studio II
(Mimarlık ve Kent Çalışmaları Araştırma Stüdyosu II)
 In this studio course, problems are formulated in the field of Architecture and Urban Studies. Conceptual frameworks are constituted on these problems by critical readings. Interactive Dialogue and Innovative Approaches to problems are must.

MAUS 510 (3+0+0) 3 Credits / 7,5 ECTS
Essay Film as a Research Method
(Araştırma Yöntemi olarak Deneme Film)
 Introduction to essay film. An intellectual cinematoraphic genre that is established at the intersection of academic and artistic modes of expression. Development of academic and intellectual capacities of students through the elaboration of essay film(making) in a methodological approach. Watching essay films; reading essays on these films; making moderated discussions for learning and inventing research methods thorough essay films. Reading and wrting on a specific essay film to make a methodological elaboration.

MAUS 511 (3+0+0) 3 Credits / 7,5 ECTS
Photography on Urban Space
(Kentsel Mekanın Fotoğrafi)
 Photography as an apparatus to understand and tell the story of urban space. Students will improve their observation skills, decide on the story they want to tell and find out the appropriate form of visual expression for their stories. The documentary photos will further be employed to organise an exhibition, which will be utilised to make students familiar with the design thinking approach.

ARCH 531 (3+0+0) 3 Credits / 7,5 ECTS
Digital Culture and Architecture
(Dijital Kültür ve Mimarlık)
 Definition and evolution of digital culture, understanding the relation between digital technologies, theories and culture, introduction to the key concepts in digital design research and practice, mapping the developments in digital culture and their impacts on the theoretical discourse and design processes in architecture, modeling hybrid research frameworks.

ARCH 532 (3+0+0) 3 Credits / 7.5 ECTS
Mediascapes: Communication Models in Digital Design
(Mediascapes: Dijital Tasarımda İletişim Modelleri)
 Communication models in architecture. Theoretical and historical aspects of digital design. Rethinking architectural representation and communication models in relation to digital design theories and

practices. Different modes and techniques of communication in digital design. Transformation of vision, imaging and cognition.

ARCH 544 (3+0+0) 3 Credits / 7,5 ECTS

Parametric Design Thinking
(Parametrik Tasarım Düşüncesi)

An introduction to parametric design. Understanding computer-aided design's theoretical background through its applicable models. Gaining familiarity to concepts like algorithm, parameter, topology and form. Descriptive exploration of architectural examples through parametric design tools. Generating variations of architectural examples via innovative techniques.

ARCH 551 (3+0+0) 3 Credits / 7,5 ECTS

Fundamentals of Cultural Heritage Conservation
(Kültürel Mirası Korumanın Temelleri)

Introduction to the principles of conservation of cultural heritage. Examples of conservation implementations both national and international. Problems and developments in the field of conservation in the world and Turkey. The impact of political, social and economic inputs on cultural heritage conservation.

ARCH 571 (3+0+0) 3 Credits / 7,5 ECTS

Visual Culture
(Görsel Kültür)

A critical survey on the development of contemporary visual culture and its historical background. Analysis on the operations of certain concepts, approaches, practices and ideas constituting this culture and how they engage with social, cultural and political issues.

ARCH 584 (3+0+0) 3 Credits / 7,5 ECTS

Architecture of Urban Form Through History
(Tarih Boyunca Kentsel Biçimin Mimarisi)

Key elements of urban form and related historical building typologies. Topics on urban elements -such as streets, city squares, gardens and fortifications- through history of architecture. Continuity and change in urban form.

MAUS 591 (0-0-0) 0 Credit / 15 ECTS

Pre-Thesis Seminar
(Tez Öncesi Semineri)

Determination of a subject for thesis study, with relevant literature survey, intent of research and corresponding methodological approach. The seminar format course finalize with a panel jury.

MAUS 592 (0-0-0) 0 Credit / 30 ECTS

Master's Thesis I
(Yüksek Lisans Tezi)

MS Thesis Defense, where the applicant candidate will be asked to prepare and present a final thesis-format study, to be defended in front of a five-membered jury, organized as a public open event.

APPLIED DATA SCIENCE MASTER PROGRAM(with and without thesis)
(Language of Instruction: English)

with thesis

First Year**Semester 1**

Code	Course Title	C	P	L	Cr	ECTS
IE 547	Modelling and Analysis of Uncertainty	3	0	0	3	7.5
ADS 511	Statistical Inference Methods with Applications	3	0	0	3	7.5
ADS 531	Information Retrieval	3	0	0	3	7.5
	Elective	3	0	0	3	7.5
TOTAL		12	0	0	12	30

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
ADS 542	Statistical Learning	3	0	0	3	7.5
GSSE 599	Research Methods and Academic Publication Ethics	3	0	0	3	2.5
	Elective	3	0	0	3	7.5
	Elective	3	0	0	3	7.5
ADS 591	Pre-Thesis Seminar	0	0	0	0	5
TOTAL		9	0	0	9	30

Second Year**Semester 1**

Code	Course Title	C	P	L	Cr	ECTS
ADS 592	Master's Thesis I	0	0	0	0	30
TOTAL		0	0	0	0	30

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
ADS 593	Master's Thesis II	0	0	0	0	30
TOTAL		0	0	0	0	30

without thesis

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
IE 547	Modelling and Analysis of Uncertainty	3	0	0	3	7.5
ADS 511	Statistical Inference	3	0	0	3	7.5
ADS 531	Information Retrieval	3	0	0	3	7.5
ADS	Elective Courses	3	0	0	3	7.5
GSSE 599	Research Methods and Academic Publishing Ethics	1	4	0	0	5
TOTAL		13	0	0	12	35

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
ADS 542	Statistical Learning	3	0	0	3	7.5
ADS	Elective Courses	3	0	0	3	7.5
ADS	Elective Courses	3	0	0	3	7.5
ADS	Elective Courses	3	0	0	3	7.5
TOTAL		12	0	0	12	30

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
ADS 590	Graduation Project	0	0	0	0	15
ADS	Elective Courses	3	0	0	3	7.5
ADS	Elective Courses	3	0	0	3	7.5
TOTAL		6	0	0	6	30

Totals expected for graduation		31	0	0	30	95
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Graduate Course Descriptions

ADS 501 (3+0+0) 3 Credits / 7.5 ECTS

Probability Theory
(Olasılık Teorisi)

Determination of thesis subject, problem definition. Preparatory work for thesis such as literature review, data collection and method research. Presentation of thesis proposal as a seminar. Attending seminars organized as part of the program.

ADS 507 (3+0+0) 3 Credits / 7.5 ECTS

Data Science for Social Scientists
(Sosyal Bilimciler için Veri Bilimi)

Causal inference, Data visualisation, Applications of machine learning and big data in social sciences.

ADS 511 (3+0+0) 3 Credits / 7.5 ECTS

Statistical Inference Methods with Applications
(İstatistiksel Çıkarım Metotları)

Probability, Random Variables, Distributions, Likelihood estimation, Hypotheses testing, Estimators, Regression.

ADS 521 (3+0+0) 3 Credits / 7.5 ECTS

Numerical Methods
(Sayısal Yöntemler)

Mathematics of Model fitting, optimisation techniques, regression analysis, Statistical Learning.

ADS 522 (3+0+0) 3 Credits / 7.5 ECTS

Advanced Statistical Methods
(İleri İstatistiksel Metodlar)

Bayesian estimation methods, Monte Carlo Methods, Monte Carlo Markov Chain Models, Empirical Likelihood, Splines, Regression and Overfitting, Smoothing.

- ADS 523** (3+0+0) 3 Credits / 7.5 ECTS
Time Series
(Zaman Serileri)
 A variety of statistical models for time series. Main methods for analysing these models. Correlogram and a sample spectrum. Moving average (MA), Autoregressive (AR), ARMA and ARIMA models. Forecasts for a variety of linear methods and models.
- ADS 531** (3+0+0) 3 Credits / 7.5 ECTS
Information Retrieval
(Bilgi Erişimi)
 Basic information retrieval models; vocabulary, posting lists, inverted indexes; scoring; vector space model; probabilistic information retrieval; text and vector space classification; support vector machines (SVM) and machine learning; clustering; Web search.
- ADS 540** (3+0+0) 3 Credits / 7.5 ECTS
Multivariate Analysis with Applications
(Çok Değişkenli Analiz)
 Principal Component Analysis, Structural Equation Model, Factor Analysis, Cluster Analysis.
- ADS 542** (3+0+0) 3 Credits / 7.5 ECTS
Statistical Learning
(İstatistiksel Öğrenme)
 Statistical Learning, Linear Methods and Regularization, Classification, Resampling Methods, Non-linear Methods, Tree-based Models, SPM, Unsupervised Learning, Applications using R.
- ADS 545** (3+0+0) 3 Credits / 7.5 ECTS
Ordinary and Generalised Linear Regression Models
(Doğrusal ve Genelleştirilmiş Doğrusal Regresyon Modelleri)
 Linear and Generalised Linear Regression (Logit, Probit) Models, Binary Data, Survival Analysis.
- ADS 550** (3+0+0) 3 Credits / 7.5 ECTS
Stochastic Processes
(Stokastik Süreçler)
 Stochastic Analysis and Stochastic Calculus, Ito and Levy Processes, Black-Scholes Model.
- ADS 555** (3+0+0) 3 Credits / 7.5 ECTS
Multilevel and Longitudinal Data Analysis
(Çoklu Seviyeli ve Panel Veri Analizi)
 Multilevel Data Analysis, Longitudinal Data Analysis, Causal Inference, Analysis of Variance.
- ADS 590** (0+0+0) 3 Credits / 15 ECTS
Graduation Project
(Dönem Projesi)
 Completion of a research project on a Data Science subject. Oral presentation and written report.

ADS 591	(0+0+0) 0 Credits / 7.5 ECTS
Pre-Thesis Seminar (Teze Hazırlık Semineri)	
Determination of thesis subject, problem definition. Preparatory work for thesis such as literature review, data collection and method research. Presentation of thesis proposal as a seminar. Attending seminars organized as part of the program.	
ADS 592	(0+0+0) 0 Credits / 30 ECTS
Master's Thesis I (Yüksek Lisans Tezi I)	
First stage of the Master's Thesis performed under supervision of the academic staff.	
ADS 593	(0+0+0) 0 Credits / 30 ECTS
Master's Thesis II (Yüksek Lisans Tezi II)	
Second stage of the Master's thesis performed under supervision of the academic staff.	
ADS 600	(3+0+0) 3 Credits / 7.5 ECTS
Big Data Analytics (Büyük Veri Analitiği)	
Map-Reduce Methods, Parallel Computing.	
ADS 610	(3+0+0) 3 Credits / 7.5 ECTS
Data Mining and Data Retrieval (Veri Madenciliği)	
Accessing structured data in a database such as Mysql or raw data in various forms scattered around on the web.	

CIVIL ENGINEERING MASTER PROGRAM(with and without thesis)
(Language of Instruction: English)

with thesis

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
CE 503	Uncertainty and Decision Making in Civil Engineering	3	0	0	3	7.5
CE-ELECT.	Elective Courses	3	0	0	3	7.5
CE-ELECT.	Elective Courses	3	0	0	3	7.5
CE-ELECT.	Elective Courses	3	0	0	3	7.5
TOTAL		12	0	0	12	30

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
CE 571	Sustainable Construction	3	0	0	3	7.5
CE 594	Research Methods and Academic Publishing Ethics	3	0	0	3	7.5
CE 591	Pre-Thesis Seminar	0	0	0	0	2.5
CE ELECT.	Elective Courses	3	0	0	3	7.5
CE ELECT.	Elective Courses	3	0	0	3	7.5
TOTAL		12	0	0	12	32,5

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
CE 592	Master's Thesis I	0	0	0	0	30
TOTAL		0	0	0	0	30

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
CE 593	Master's Thesis II	0	0	0	0	30
TOTAL		0	0	0	0	30

Totals expected for graduation		28	8	1	32	125
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without thesis

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
CE 503	Uncertainty and Decision Making in Civil Engineering	3	0	0	3	7.5
CE ELECT.	Elective Courses	3	0	0	3	7.5
CE ELECT.	Elective Courses	3	0	0	3	7.5
CE ELECT.	Elective Courses	3	0	0	3	7.5
TOTAL		12	0	0	12	30

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
CE 571	Sustainable Construction	3	0	0	3	7.5
CE 594	Research Methods and Academic Publishing Ethics	3	0	0	3	7.5
CE ELECT.	Elective Courses	3	0	0	3	7.5
CE ELECT.	Elective Courses	3	0	0	3	7.5
TOTAL		12	0	0	12	30

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
CE 590	Graduation Project	0	0	0	0	15
CE ELECT.	Elective Courses	3	0	0	3	7.5
CE ELECT.	Elective Courses	3	0	0	3	7.5
TOTAL		0	0	0	0	30
Totals expected for graduation		30	0	0	30	90

Graduate Course Descriptions

CE 503

(3+0+0) 3 Credits / 7.5 ECTS

Uncertainty and Decision Making in Civil Engineering
(İnşaat Mühendisliğinde Belirsizlik ve Karar Verme)

Fundamentals of decision theory: Decision trees, value of information, utility theory. Uncertainty modeling: linear models, extreme value models, first and second-order approximations, random fields and processes, Monte Carlo simulation. Data analysis: Bayesian decision framework, analytical methods, approximate methods. Practical risk evaluation, formulation of risk-based design criteria, risk benefit trade-offs and optimal decisions.

CE 571

(3+0+0) 3 Credits / 7.5 ECTS

Sustainable Construction
(Sürdürülebilir İnşaat)

Introduction to sustainability in construction. Green buildings. Ecological design. Green building evaluation and certification systems. Design process of green buildings. Green construction operations. Green buildings economics. Case studies with recent technology.

CE 590

(0+0+0) 3 Credits / 15 ECTS

Graduation Project
(Bitirme Projesi)

Introduction to sustainability in construction. Green buildings. Ecological design. Green building evaluation and certification systems. Design process of green buildings. Green construction operations. Green buildings economics. Case studies with recent technology.

- CE 591** (0+0+0) 3 Credits / 2.5 ECTS
Pre-Thesis Seminar
(Teze Hazırlık Semineri)
 Introduction to sustainability in construction. Green buildings. Ecological design. Green building evaluation and certification systems. Design process of green buildings. Green construction operations. Green buildings economics. Case studies with recent technology.
- CE 592** (0+0+0) 3 Credits / 30 ECTS
Master's Thesis I
(Yüksek Lisans Tezi I)
 M.Sc. Thesis performed under supervision of an academic staff. This course must be taken in the semesters where the thesis work is in progress.
- CE 593** (0+0+0) 3 Credits / 30 ECTS
Master's Thesis II
(Yüksek Lisans Tezi II)
 M.Sc. Thesis performed under supervision of an academic staff. This course must be taken in the semesters where the thesis work is in progress.
- CE 594** (3+0+0) 3 Credits / 7.5 ECTS
Research Methods and Academic Publishing Ethics
(Araştırma Yöntemleri ve Akademik Yayın Etiği)
 Literature Survey; Establishing the Objective and Scope; Analytical and Experimental Approaches; Design and Evaluation of Questionnaires. Experiment Design. Quantitative and Qualitative Data Analyses; Presentation of Results; Methods of Academic Publication Ethics.
- CE 504** (3+0+0) 3 Credits / 7.5 ECTS
Computer Applications in Civil Engineering
(İnşaat Mühendisliğinde Bilgisayar Uygulamaları)
 Introduction to computer applications in civil engineering. Integration of analysis, design, optimization, data management, computer programming and problem-solving skills with computer tools and techniques.
- CE 505** (3+0+0) 3 Credits / 7.5 ECTS
Introduction to Finite Element Method
(Sonlu Eleman Yöntemine Giriş)
 Introduction to finite element method. 1D elements, basic elements. Theory and formulation of finite element method. Isoparametric elements. Coordinate transformation. Error estimation and convergence. Modelling considerations.
- CE 506** (3+0+0) 3 Credits / 7.5 ECTS
Instrumentation, Measurements and Predictions
(Enstrümantasyon, Ölçümler ve Tahminler)
 Purpose and utilization of instrumentation: design, determination of engineering properties during and after construction, foundation design, buildings, earth fills, retaining structures, open cuts, tunnels, dams, deep excavations, demolition and blasting, dynamic loads, slopes, groundwater and seeping

water, tectonic movements. Design and planning: soil layering and their properties, groundwater, nearby buildings, environmental impacts, determination of the requirements and measured parameter, selection of instruments, calibration and placement, critical zones, measurement frequency, collection and reduction of data, maintenance. Instruments: surface measurements, deformations and displacements, pressures and strains. Case studies.

CE 511 (3+0+0) 3 Credits / 7.5 ECTS

**Reinforced Concrete Structures
(Betonarme Yapılar)**

General RC Behavior: Material Behavior, Time Dependent Behavior of Concrete; Review on Flexural Behavior of RC Members; Bi-axial Bending; Moment-Curvature Relationship, Plastic Hinge, Redistribution; Behavior and Strength of Members under Combined Shear and Torsion; Floor Systems-Slabs; Footings; Strut-and-Tie Method; Serviceability and Detailing.

CE 513 (3+0+0) 3 Credits / 7.5 ECTS

**Advanced Structural Analysis
(İleri Yapısal Analiz)**

Matrix methods of structural analysis. Introduction to methods of nonlinear structural analyses.

CE 514 (3+0+0) 3 Credits / 7.5 ECTS

**Introduction to Earthquake Resistant Design
(Depreme Dayanıklı Yapı Tasarımına Giriş)**

Causes of earthquakes, characteristics of earthquake ground motions, earthquake magnitude and intensity measurements. Seismic response analysis of simple structures. Derivation of elastic response spectra and earthquake design spectra. Earthquake design criteria. Free and forced vibration analysis of frame structures. Modal spectral analysis and equivalent static lateral force method. Design codes, design applications.

CE 515 (3+0+0) 3 Credits / 7.5 ECTS

**Advanced Strength of Materials
(İleri Mukavemet)**

Fundamentals of stress, strain and deformation, linear elastic theory. Classical theory of torsion. Unsymmetrical bending and transverse shear, shear flow and shear center in thin-walled sections, shear deformation of beams, curved beams. Beams on elastic foundations. Introduction to plasticity theory and introduction to fracture mechanics.

CE 521 (3+0+0) 3 Credits / 7.5 ECTS

**Sustainability of Construction Materials
(Yapı Malzemelerinin Sürdürülebilirliği)**

The concept and principles of sustainability. Sustainable construction materials. Environmental impacts of construction materials. Techniques to reduce embedded energy consumption of construction materials. Durability of construction materials. Novel and upcoming construction materials.

- CE 531** (3+0+0) 3 Credits / 7.5 ECTS
Design of Hydraulic Structures
(Hidrolik Yapıların Tasarımı)
 Dam design concepts. Design of overflow and outlet structures. Design of dissipation structures. Design of bottom outlets, gate types. Design of intake structures. Hydraulic losses, vortex formation, control gates and valves, penstock.
- CE 532** (3+0+0) 3 Credits / 7.5 ECTS
Water Supply Engineering Design
(Su Mühendisliğinde Tasarım)
 Pump, valves, friction loss formulae. Water transmission by pipelines. Hydraulics and operation of pumped discharge lines and gravity pipelines. Design of pipelines. Hydraulics, operation and design of water distribution systems. Municipal water requirements, extension of population. Hardy-Cross method. Newton-Raphson method.
- CE 533** (3+0+0) 3 Credits / 7.5 ECTS
Open Channel Hydraulics
(Açık Kanal Hidroliği)
 Review of fundamentals of fluid mechanics and application to flow in open channels. Uniform flow. Flow resistance. General equation of gradually varied flows (GVF). Analysis and computation of non-uniform flow in open channel systems. Flow transitions.
- CE 534** (3+0+0) 3 Credits / 7.5 ECTS
Coastal Engineering
(Kıyı Mühendisliği)
 Linear wave theory. Wave transformations (shoaling, refraction, breaking, diffraction, reflection). Wind-generated waves and their prediction. Wave climate. Design of rubble mound and vertical wall breakwaters.
- CE 535** (3+0+0) 3 Credits / 7.5 ECTS
Statistical Applications in Hydrology and Coastal Engineering
(Hidroloji ve Kıyı Mühendisliğinde İstatistiksel Uygulamalar)
 Definitions. Frequency distribution and estimation of parameters. Probability distribution functions. Flood frequency analysis. Correlation and regression analysis. Applications to hydrology. Statistical properties and spectra of sea waves. Statistical theory of irregular waves. Application to coastal engineering.
- CE 536** (3+0+0) 3 Credits / 7.5 ECTS
Integrated Coastal Zone Management
(Bütünleşik Kıyı Alanları Yönetimi)
 Definition of coastal zone. Physical and ecological properties of coastal Zone. Coastal landforms. Coastal processes. The Global Ocean and the climate system; Coastal structures. Pressures on the coast; Coastal pollution. Sea Level Rise. Integrated Coastal Zone Management (ICZM). ICZM Practice in Turkey.

- CE 537** (3+0+0) 3 Credits / 7.5 ECTS
Sustainable Sediment Management in Water Resources Engineering
(Su Kaynakları Mühendisliğinde Sürdürülebilir Sediment Yönetimi)
 Soil erosion and control. Sediment yield rate in catchments. Measurement of sediment load in streams. Sustainable sediment management in reservoir sedimentation. Local scour and control around hydraulic structures.
- CE 538** (3+0+0) 3 Credits / 7.5 ECTS
Sediment Transport
(Sediment Taşınımı)
 Properties of sediment. Initiation of motion. Bedload transport. Suspended sediment transport. Total load transport. Bed forms.
- CE 539** (3+0+0) 3 Credits / 7.5 ECTS
Coastal Hydraulics
(Kıyı Hidroliği)
 Introduction to Non-Linear wave theories. Stokes Theory. Solitary Theory. Cnoidal Theory. Stream Function Theory. Progressive waves. Boussinesq Model. KdV Model. Harbor resonance.
- CE 541** (3+0+0) 3 Credits / 7.5 ECTS
Geotechnical Engineering for Sustainable Infrastructure
(Sürdürülebilir Altyapı için Geoteknik Mühendisliği)
 Energy consumption in geotechnical projects, natural and man-made material use, impact on ecology and natural resources: economic, social, and environmental criteria. Reduction of energy consumption: increasing energy efficiency, renewable and alternative energy for site investigation and design. Material use in design, production, construction, and maintenance (life cycle) phases: reuse, recycle, resource use, generated waste. Reduction of pollution: site, water, noise pollution, mitigation of pollutants, resilience. Waste management: reduction of generated waste, recycle. Sustainability assessment framework: single and multi-criteria. Systems engineering approach applied to cases.
- CE 542** (3+0+0) 3 Credits / 7.5 ECTS
Geotechnical Engineering Applications Benefitting Society
(Topluma Yararlı Geoteknik Mühendisliği Uygulamaları)
 Service-learning sustainable projects benefiting the society: determining the problems and the needs of people/communities and working towards finding solutions. Reconciling economic, environmental, and practical concerns with resources: determining soil parameters, retaining structures, shallow and deep foundations, slope stability, soil improvement. Repair and maintenance suggestions and training.
- CE 543** (3+0+0) 3 Credits / 7.5 ECTS
Geoenvironmental Engineering
(Geoteknik Çevre Mühendisliği)
 Waste and contaminants: types, generation, properties, collection, regulations. Sustainable waste management: environmental, social and economic considerations, alternative solutions. Waste and contaminant disposal: legal and regulatory framework, site identification and preparation, base

and liner systems, geotechnical parameters. Clay behavior and improvement: types, effect and conductivity of fluids/contaminants. Compacted clay barriers: compaction, design, site applications. Geosynthetic materials: types, functions, applications, properties and parameters for geotechnical design, methods of analysis. Practical applications.

CE 544

(3+0+0) 3 Credits / 7.5 ECTS

**Geotechnical Earthquake Engineering
(Geoteknik Deprem Mühendisliği)**

Propagation of mechanical waves in soils. Dynamic soil properties. Undrained and drained stress-strain behavior and strength properties of soils under earthquake loading. Ground response analysis: one-dimensional equivalent linear and non-linear methods, soil amplification. Liquefaction and its effects: shallow and deep foundations. Microzonation. Seismic slope stability. Dynamic soil-structure interaction: slopes, foundations, and bearing structures. Worked cases.

CE 545

(3+0+0) 3 Credits / 7.5 ECTS

**Soil Improvement and Sustainability: Conventional and Innovative Applications
(Zemin İyileştirme ve Sürdürülebilirlik: Konvansiyonel ve Yenilikçi Uygulamalar)**

Densification. Consolidation. Load reduction. Reinforcement. Chemical treatment. Thermal stabilization. Biotechnical stabilization. Unconventional methods.

CE 551

(3+0+0) 3 Credits / 7.5 ECTS

**Building Information Modeling
(Yapı Bilgi Modellemesi)**

Creation, management, and application of building information models. Process and tools available for creating 2D and 3D computer representations of building components and geometries. Organizing and operating on models to produce architectural views and construction documents, renderings and animations, and interface with analysis tools.

CE 552

(3+0+0) 3 Credits / 7.5 ECTS

**Practical Aspects of Construction Management
(Yapım Yönetiminin Uygulamaya Dönük Yönleri)**

Introduction to management, general description of construction industry, contract systems, types of construction contracts. Review of typical organizational structures for construction companies and projects. Work scheduling by network time analysis, resource analysis and leveling. Main tasks to start up construction projects. Project records, documentation. Communication basics and communication in construction sites. Monitoring and control systems. Procedures and formalities for project completion.

CE 553

(3+0+0) 3 Credits / 7.5 ECTS

**International Civil Engineering Contracts
(Uluslararası İnşaat Mühendisliği Sözleşmeleri)**

Contracts in International Civil Engineering Practice. Assessment of Legal, Commercial and Technical Aspects. Interference and Impact Analyses of Various Contract Types. Fundamentals of Dispute Resolution Methods.

- CE 554** (3+0+0) 3 Credits / 7.5 ECTS
Contractual Aspects of Construction Works
(İnşaat İşlerinin Sözleşmeye Dayalı Yön)
 General information about construction industry. Code of Obligations. Documents in a contract file, types of contracts and contractorship licenses. Public Procurement Law 2886: Tendering process for construction works, control regulations, general and technical specifications of public construction works. Documents kept at site. Progress payments by unit price and percentage methods. Settlement of disputes. Time value analysis of money: comparison of alternatives, replacement and benefit/cost analysis.
- CE 555** (3+0+0) 3 Credits / 7.5 ECTS
Construction Site Management
(Şantiye Yönetimi)
 Notice to proceed. Construction site team building. Setting up construction site. Site facilities and organization chart. On-site construction management. Subcontractor and procurement management. Progress payments and bonds. Time and cost management. Project closure.
- CE 556** (3+0+0) 3 Credits / 7.5 ECTS
Construction Process and Document Management
(İnşaat Projelerinde Süreç ve Doküman Yönetimi)
 Introduction to process management. Process improvement techniques. Document management. Total quality management. Lean construction examples. Performance management and assessment in process improvement. Enterprise resource planning.
- CE 557** (3+0+0) 3 Credits / 7.5 ECTS
Contract and Claim Management
(Sözleşme ve Talep Yönetimi)
 Fundamental principles of contract law. Construction administration. Contract types. Public tender contracts. FIDIC contracts. Time extension and change orders. Delay analysis. Principles of claims. Examples and case studies.
- CE 558** (3+0+0) 3 Credits / 7.5 ECTS
International Arbitration
(Uluslararası Tahkim)
 Fundamental principles of International Arbitration. Turkish International Arbitration Law. Domestic Arbitration.
- CE 572** (3+0+0) 3 Credits / 7.5 ECTS
Natural Hazards: Risks, Impacts, and Resilience
(Doğal Afetler: Riskler, Etkiler ve Dirençlilik)
 Natural hazards and their impacts: critical infrastructure, buildings, transportation systems, service infrastructure (pipelines, power grids, water systems). Landslides. Mudslides. Floods. Seepage from dams. Earthquakes. Subsidence. Determination of hazard risk and measures for mitigation: early warning systems. Decision making mechanisms. Case studies.

CE 573**(3+0+0) 3 Credits / 7.5 ECTS****Renewable Energy Projects
(Yenilenebilir Enerji Projeleri)**

The importance of renewable energy in energy market and Turkey's renewable energy potential. Renewable energy resources. Basic design principles, structure types, construction techniques and applications of renewable energy projects, environmental impacts of the renewable energy systems, the role of renewables for sustainability. Conditions of renewable energy market in Turkey and worldwide. Government agencies, laws and permissions related with renewable energy in Turkey. Case study of a real renewable energy project invested in Turkey.

CE 574**(3+0+0) 3 Credits / 7.5 ECTS****Design for Environment
(Çevre için Tasarım)**

Methods and concepts concerning the design of engineered systems and processes and assessment of their effects on the global environment, minimization of residues, materials selection and packaging, designing products for recycling, disassembly, and disposal. Decision making in new product development and creating environmental objectives. Incorporating design for environment into the design process. Use of product design matrices, environmental effect analysis, life cycle thinking, and other design for environment tools.

CE 575**(3+0+0) 3 Credits / 7.5 ECTS****Life Cycle Assessment
(Yaşam Döngüsü Değerlendirmesi)**

Approaches and methods for life cycle assessment for products and processes using the ISO 14040 family of standards. Case studies for products, processes, and infrastructure/building systems. Application of life cycle assessment to a product or system. Engineering decision-making using analysis results.

CE 576**(3+0+0) 3 Credits / 7.5 ECTS****Impact of Climate Change on Civil Engineering Design
(İklim Değişikliğinin İnşaat Mühendisliği Tasarımına Etkileri)**

Climate change science. Forecasting models. Mitigation and adaptation to impacts. Regional climate impacts in Turkey including impacts on cities. Resilience of urban infrastructure and networks.

CE 577**(3+0+0) 3 Credits / 7.5 ECTS****Entrepreneurship in Civil Engineering
(İnşaat Mühendisliğinde Girişimcilik)**

Project-based course. Entrepreneurial businesses related to civil engineering. Identifying challenges and opportunities in practice. Developing business plans. Identifying funding sources. Pitch presentations to industry experts. Application for funding.

CE 581**(3+0+0) 3 Credits / 7.5 ECTS****Structural Dynamics
(Yapı Dinamiği)**

Introduction to structural dynamic systems. Linear SDOF and MDOF discrete systems. Undamped and

damped systems. Free and forced vibration. Dynamic response to periodic and arbitrary excitations. Numerical evaluation of dynamic response. Response spectrum and modal analysis.

CE 582 (3+0+0) 3 Credits / 7.5 ECTS

**Earthquake Engineering
(Deprem Mühendisliği)**

Hazard and risk concept. Elastic and inelastic oscillator (sdof) response under seismic excitation. Seismic analysis procedures for building systems. Seismic design provisions. Basics of nonlinear static analysis. Introduction to approximate methods in displacement-based performance evaluation.

CE 583 (3+0+0) 3 Credits / 7.5 ECTS

**Engineering Seismology
(Mühendislik Sismolojisi)**

Hazard, risk, and global tectonics-earthquakes and faults. Generation of seismic waves and earthquake source parameters. Fourier transformation. Basics of seismometers. Strong ground-motion parameters. Ground-motion data processing. Ground-motion prediction equations. Point-source stochastic simulations.

CE 584 (3+0+0) 3 Credits / 7.5 ECTS

**Seismic Hazard Assessment
(Sismik Tehlike Analizi)**

Basic probability concepts, and epistemic and aleatory uncertainties. Seismicity and earthquake recurrence models. Ground motion prediction equations. Deterministic seismic hazard analysis. Probabilistic seismic hazard analysis. Methods of selection, scaling and spectral matching of ground motion recordings.

CE 585 (3+0+0) 3 Credits / 7.5 ECTS

**Structural Reliability
(Yapısal Güvenilirlik)**

Procedures for evaluating the safety of structural components and systems. First-and second-order estimates of failure probabilities of engineered systems. Sensitivity of failure probabilities to assumed parameter values. Measures of the relative importance of random variables. Reliability of systems with multiple failure modes. Reliability updating. Simulation methods and variance reduction techniques.

CE 589 (3+0+0) 3 Credits / 7.5 ECTS

**Design of Coastal Structures
(Kıyı Yapıları Tasarımı)**

Wave climate. Harbour structures. Wave forces on harbor structures. Design of concrete block quaywalls. Sheet pile walls and piled quay walls.

CE 589 (3+0+0) 3 Credits / 7.5 ECTS

**Special Topics in Civil Engineering
(İnşaat Mühendisliğinde Özel Konular)**

Special topics and research related to Civil Engineering chosen by the faculty member and may be taken by students as part of their studies approved by advisor. Course content may vary. Additional requirements (pre-requisites or co-requisites) may need to be satisfied depending on topic.

DEVELOPMENTAL FOCUSED CLINICAL CHILD AND ADOLESCENT PSYCHOLOGY MASTER PROGRAM

(with thesis)

(Language of Instruction: English)

Clinical Child and Adolescent Psychology is a subfield of clinical psychology and a specialty in professional psychology that develops and applies scientific knowledge to the assessment, prevention and treatment of mental health problems in children and adolescents within their social context. The specialty in Clinical Child and Adolescent Psychology focuses on the understanding of the basic psychological needs of infants, toddlers, children and adolescents; influence of the family and other social and historical contexts on the psychosocial adjustment, cognitive development, behavioral adaptation and health status; and delivery of psychological services to children and adolescents.

Along with the increased awareness regarding the long-term adverse effects of child mental health problems for individuals, families and societies; training of professionals specialized in this field became an issue of significant importance.

Being the first of its kind in Turkey, TEDU's "Developmental Focused Clinical Child and Adolescent Psychology MSc Program (DF-CCAP)" aims to train highly-qualified professionals to work in academic or applied settings related the field of clinical child and adolescent psychology. The program adopts a multidisciplinary framework bringing together clinical, developmental and family psychology. Being basically grounded on the discipline of clinical psychology, the program provides our students specific and extensive knowledge and skills related to child and adolescent mental health. Its "developmental focus" enriches the program by incorporating scientific knowledge, methodology and perspectives from developmental science. And the family psychology component complements it by presenting the context in which childhood mental health and disorders can be understood, and prevention, intervention and treatment efforts are realized.

The program is developed:

- On the basis of **Scientist-Practitioner Model (Boulder Model)** which is a training model for graduate programs that aspires to train students not only as "scientists" producing knowledge, but also as "practitioners" who are able to transfer this scientific knowledge into their applied practice. The curriculum based on this model covers theoretical and practical courses supervision and internships; as well as courses on scientific methodology and research.
- In accordance with the requirements of **EuroPsy Specialist Certificate in Psychology**. EuroPsy is a European standard of education and professional training in psychology set by the European Federation of Psychologists' (EFPA) to demonstrate the achievement of a basic level of competence and expertise in practice of psychotherapy.
- As being compatible with the **TEDU Quality Assurance System**, which provides the students with the opportunity **deepen their knowledge and skills in specific areas** by taking elective courses. The students in MSc Program can either follow one of two tracks presented below or combine courses from both of them in terms of their professional and academic goals.

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
PSY 501	Advanced Research Methods and Statistics	2	2	0	3	7
PSY 521	Advanced Developmental Psychology	3	0	0	3	6
PSY 541	Developmental Psychopathology	3	0	0	3	6
DEVCLIN-1	Family Track Elective Courses	3	0	0	3	6
DEVCLIN-2	Developmental Psychology Track Elective	3	0	0	3	6
Semester Credits		14	2	0	15	31

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
PSY 540	Clinical Interviewing	2	2	0	3	7
PSY 542	Clinical Assessment of Children and Adolescents	2	2	0	3	7
PSY 548	Child and Adolescent Psychotherapy	3	0	0	3	6
PSY 560	Clinical and Research Ethics	1	0	1	1	3
DEVCLIN-1	Family Track Elective Courses	3	0	0	3	6
PSY 591	Pre-Thesis Seminar	0	0	0	0	3
Semester Credits		11	4	1	13	32

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
PSY 543	Clinical Supervision I	1	2	0	2	4
PSY 545	Supervised Clinical Practicum /Internship	0	0	0	0	12
PSY 592	Master's Thesis I	0	0	0	0	15
Semester Credits		1	2	0	2	31

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
DEVCLIN-3	4. Semester Elective Course	2	0	0	2	4
PSY 546	Supervised Clinical Practicum /Internship	0	0	0	0	12
PSY 593	Master's Thesis II	0	0	0	0	15
Semester Credits		2	0	0	2	31

Totals expected for graduation		28	8	1	32	125
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Graduate Course Descriptions

PSY 501

(2+2+0) 3 Credits / 7 ECTS

Advanced Research Methods and Statistics
(İleri Düzey Araştırma Yöntemleri ve İstatistik)

In-depth understanding of advance regression methods. Simple linear regression, multiple linear regression, interactions, categorical and continuous variables and related topics. Setting up and running the analysis in SPSS; interpreting the results; drawing implications for the research problem.

- PSY 504** (1+2+0) 2 Credits / 4 ECTS
Research Colloquium
(Araştırma Uygulaması)
 Work closely with faculty members to generate ideas, create research proposals, conduct research, prepare a professional research paper, and present their findings.
- PSY 521** (3+0+0) 3 Credits / 6 ECTS
Advanced Developmental Psychology
(İleri Gelişim Psikolojisi)
 Origin, continuity, and the nature of developmental change of the human behavior across the life span. Current research trends and debates within the field of developmental science.
- PSY 522** (3+0+0) 3 Credits / 6 ECTS
Advanced Cognitive Development
(İleri Bilişsel Gelişim)
 Cognitive development together with discussions of constructivist, sociocultural, evolutionary, and biological theories. Perception and memory in infancy and childhood.
- PSY 524** (3+0+0) 3 Credits / 6 ECTS
Development, Family, and Culture
(Gelişim, Aile ve Kültür)
 Cross cultural investigation of development; cross-cultural and cultural findings, methodological problems, social change and acculturation.
- PSY 525** (3+0+0) 3 Credits / 6 ECTS
Developmental Research: New Methods and Designs
(Gelişim Araştırmaları: Yeni Yöntemler ve Desenler)
 Research methods in developmental science, investigation of longitudinal and contextual methods, developmental and individual differences, variability versus stability and other issues in human developmental research. Research ethics.
- PSY 526** (3+0+0) 3 Credits / 6 ECTS
Parenting & Parent-Child Relations
(Ana babalık ve Anababa-Çocuk İlişkileri)
 Transition to parenthood, parent-child relations and theory and research in the area of parenting in the context of life span.
- PSY 540** (2+2+0) 3 Credits / 7 ECTS
Clinical Interviewing
(Klinik Görüşme)
 Developing theoretical knowledge and skills on clinical interviewing. Ethics of psychotherapy practice, therapist-client relationship, structure of clinical interview, clinical formulation, developing treatment plan, clinical report writing.

- PSY 541** (3+0+0) 3 Credits / 6 ECTS
Developmental Psychopathology
 (Gelişimsel Psikopatoloji)
 Understanding psychological problems in the context of human development. Developmental origins and developmental consequences of social, emotional, and behavioral disturbances in childhood and adolescence. Examination of the characteristics, course, and etiology of childhood disorders with an emphasis on early development, including social, cognitive, biological, and psychological influences.
- PSY 542** (2+2+0) 3 Credits / 7 ECTS
Clinical Assessment of Children and Adolescents
 (Çocuk ve Ergenlerin Klinik Değerlendirme)
 Tracking of the development of a child and identifying deviations from normal development and early identification of children at risk on the basis of cognitive, emotional and social assessment. Application, scoring, assessment, interpretation and reporting of particular assessment tools developed for children and adolescents.
- PSY 543** (1+2+0) 2 Credits / 4 ECTS
Clinical Supervision I
 (Klinik Süpervizyon I)
 Presentation of the cases followed by the supervisees to the supervisor. Discussion of the issues related to the clinical practice, such as case formulation/management, therapy plan and strategies, therapeutic relationship with the child, adolescent and family, consultation and ethical considerations, under the guidance of a supervisor.
- PSY 544** (1+2+0) 2 Credits / 4 ECTS
Clinical Supervision II
 (Klinik Süpervizyon II)
 Presentation of the cases followed by the supervisees to the supervisor. Discussion of the issues related to the clinical practice, such as case formulation/management, therapy plan and strategies, therapeutic relationship with the child, adolescent and family, consultation and ethical considerations, under the guidance of a supervisor. Continuation of Clinical Supervision I.
- PSY 545** (0+0+0) 0 Credit / 12 ECTS
Supervised Clinical Practicum / Internship I
 (Süpervizyonlu Klinik Uygulama / Staj I)
 Supervised clinical practice (internship) with children, adolescents and families in a clinical setting.
- PSY 546** (0+0+0) 0 Credit / 12 ECTS
Supervised Clinical Practicum / Internship II
 (Süpervizyonlu Klinik Uygulama / Staj II)
 Supervised clinical practice (internship) with children, adolescents and families in a clinical setting. Continuation of Supervised Clinical Practicum I.

PSY 547**(2+2+0) 3 Credits / 6 ECTS****Play Therapy
(Oyun Terapisi)**

Importance and function of play in the psychosocial development of children and adolescents.; use of play for assessment and intervention purposes, elements of play therapy, play therapy approaches and techniques, application of play therapy for various psychological problems, supervised play sessions.

PSY 548**(3+0+0) 3 Credits / 6 ECTS****Child and Adolescent Psychotherapy
(Çocuk ve Ergen Psikoterapisi)**

Theoretical frameworks for psychotherapy approaches and clinical skills of observation, assessment, diagnosis, and treatment planning of children and adolescents. Evidence-based interventions utilized for children and adolescents with specific and commonly encountered developmental, social, and behavioral issues. Ethical issues within the framework of child and adolescent psychotherapy. Case examples.

PSY 549**(3+0+0) 3 Credits / 6 ECTS****Family, Crises, and Trauma
(Aile, Krizler ve Travma)**

Definition of crises and trauma, crises and traumatic incidents families may encounter through the stages of life cycle, responses of families in face of psychological trauma and crisis, loss and bereavement, crises and trauma intervention.

PSY 550**(3+0+0) 3 Credits / 6 ECTS****Family Systems: A Developmental Perspective
(Gelişimsel Bakışaçısıyla Aile Sistemleri)**

Family as the primary social context which influences the individual. Systems Approach, Family Systems Theory and Development Theory. Introduction to systemic perspective. Patterns, processes and dynamics in each of the stages of the family life-cycle.

PSY 551**(3+0+0) 3 Credits / 6 ECTS****Application of Learning Theories to Clinical Practice with Children and Families
(Öğrenme Kuramlarının Çocuk ve Ailelerle Klinik Çalışmalara Uygulanması)**

Contemporary behavioral models explaining normal development and deviations from normal development in infancy, childhood, and adolescence; application of learning theories to the common mental health conditions of childhood and to the clinical practice with children, adolescents and their families; contributions of learning theory to child case management; foundations of behavioral therapy.

- PSY 552** (2+2+0) 3 Credits / 6 ECTS
Family Therapy
(Aile Terapisi)
 Overview of the systems perspective and family systems; historical roots of family therapy; main schools of family therapy; methods and principles in family therapy practice; family therapy in the 21st century; contemporary approaches and practices in family therapy.
- PSY 554** (2+2+0) 3 Credits / 6 ECTS
Case Formulation in Child, Adolescent and Family Therapy
(Çocuk, Ergen ve Aile Terapisinde Vaka Formülasyonu)
 Clinical formulation in child, adolescent and family therapy via case examples. Forming hypothesis. Developing treatment plan based on case formulation.
- PSY 556** (2+2+0) 3 Credits / 6 ECTS
Adolescence and Psychopathology
(Ergenlik Dönemi ve Psikopatolojileri)
 Examination of mental health problems in adolescence through case examples and experiential learning. Fundamental characteristics of adolescence. Attachment in adolescence. Identity in adolescence. Trauma and adolescence. Common psychopathologies of adolescence.
- PSY 560** (1+0+1) 1 Credit / 3 ECTS
Clinical and Research Ethics
(Klinik ve Araştırma Etiği)
 Ethical principles and guidelines for clinical psychologists; standards of clinical practice, laws and regulations, research ethics, dealing with ethical dilemmas, ethical case discussions.
- PSY 591** (0+0+0) 0 Credit / 3 ECTS
Pre-Thesis Seminar
(Teze Hazırlık Semineri)
 Determination of thesis subject, problem and research question definition. Preparatory work for thesis such as literature review, hypothesis generation and methodology research. Presentation of thesis proposal as a seminar. Attending seminars organized as part of the program.
- PSY 592** (0+0+0) 0 Credit / 15 ECTS
Master's Thesis I
(Yüksek Lisans Tezi I)
 Conducting an independent, supervised research in the field of clinical child and adolescent psychology to be written in Master's Thesis format.
- PSY 593** (0+0+0) 0 Credit / 15 ECTS
Master's Thesis II
(Yüksek Lisans Tezi II)
 Completion and successful defense of the supervised, written thesis to demonstrate mastery of theory, methodology, data analysis and argumentation.

ECONOMICS AND FINANCE MASTER PROGRAM(with and without thesis)
(Language of Instruction: English)

with thesis

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
ECON 511	Microeconomics	3	0	0	3	7.5
ECON 531	Econometri	3	0	0	3	7.5
EF 589	Research Methods and Ethics	3	0	0	3	5
	Elective Course from the Pool	3	0	0	3	7.5
	Elective Course from the Pool	3	0	0	3	7.5
TOTAL		15	0	0	15	35

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
EF 591	Seminar	0	0	0	0	2.5
BA 504	Financial Management	3	0	0	3	7.5
	Elective Course from the Pool	3	0	0	3	7.5
	Elective Course from the Pool	3	0	0	3	7.5
TOTAL		9	0	0	9	25

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
EF 592	Master Thesis I	0	0	0	0	30
TOTAL		0	0	0	0	30

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
EF 593	Master Thesis II	0	0	0	0	30
TOTAL		0	0	0	0	30

without thesis

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
EF 589	Research Methods and Ethics	3	0	0	3	5
ECON 511	Microeconomics	3	0	0	3	7.5
ECON 531	Econometrics	3	0	0	3	7.5
	Elective Course from the Pool	3	0	0	3	7.5
	Elective Course from the Pool	3	0	0	3	7.5
TOTAL		15	0	0	15	35

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
BA 504	Financial Management	3	0	0	3	7.5
	Elective Course from the Pool	3	0	0	3	7.5
	Elective Course from the Pool	3	0	0	3	7.5
	Elective Course from the Pool	3	0	0	3	7.5
TOTAL		12	0	0	12	30

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
EF 590	Graduation Seminar	0	0	0	0	17.5
	Elective Course from the Pool	3	0	0	3	7.5
TOTAL		3	0	0	3	25

C: Class Lecture, P: Practice, L: Laboratory, Cr: Credits, ECTS: ECTS Credits

Graduate Course Descriptions

EF 589 (3+0+0) 3 Credits / 7,5 ECTS

Research Methods and Ethics
(Araştırma Yöntemleri ve Etik)

Qualitative and quantitative methods in economics and finance. Defining research questions, formulating hypotheses and categorizing variables. Data collection, sampling, analysis and interpretation. Ethical considerations in research. Oral and written communication and dissemination of research findings.

BA 583 (3+0+0) 3 Credits / 7,5 ECTS

Energy and Electricity Markets
(Enerji ve Elektrik Piyasası)

Energy infrastructure. Physical networks of electrical energy. Business of electrical energy. Financial and regulatory aspects of energy market. Energy pricing. Renewable energy vs carbon based energy.

ECON 545 (3+0+0) 3 Credits / 7,5 ECTS

The Political Economy of Globalization

Challenges of international integration in historical perspective. Bretton Woods and its demise. Financial globalization and its challenges. Trade, multinational corporations and global value chains. Globalization, inequality and employment. Dilemmas for developing countries. Challenges of global governance. Globalization and populism.

EF 590 (0+0+0) 0 Credits / 15 ECTS

Graduation Seminar
(Bitirme Projesi)

Development of a research project about Economics and Finance. In accordance with the project principles, integrating theoretical knowledge with application.

Pre-requisite: EF 589

EF 591 (0+0+0) 0 Credit / 7,5 ECTS

Seminar
(Seminer)

Determination of thesis subject, problem definition. Preparatory work for thesis such as literature review, data collection and method research. Presentation of thesis proposal at a seminar. Attending seminars organized as part of the program.

Pre-requisite: EF 590

EF 592**(0+0+0) 0 Credit / 30 ECTS****Master Thesis I
(Yüksek Lisans Tezi I)**

M.Sc.Thesis performed under the academic supervision. This course must be taken during semesters where the thesis work is done. The thesis must be presented along with a submitted written draft.

Pre-requisite: EF 591

EF 593**(0+0+0) 0 Credit / 30 ECTS****Master Thesis II
(Yüksek Lisans Tezi II)**

M.Sc.Thesis performed under the academic supervision. This course must be taken during semesters where the thesis work is done. The thesis must be defended in written and spoken form in front of a jury.

Pre-requisite: EF 592

ENGINEERING MANAGEMENT MASTER PROGRAM(with and without thesis)
(Language of Instruction: English)

without thesis

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
BA 503	Financial and Managerial Accounting	3	0	0	3	7.5
IE 537	Mathematical Programming for Engineering Management	3	0	0	3	7.5
IE 547	Modelling and Analysis of Uncertainty	3	0	0	3	7.5
EM_DEPT.	Elective course from the Pool	3	0	0	3	7.5
TOTAL		12	0	0	12	30

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
BA 504	Financial Management	3	0	0	3	7.5
EM_DEPT.	Elective Course from the Pool	3	0	0	3	7.5
EM_DEPT.	Elective Course from the Pool	3	0	0	3	7.5
EM_DEPT.	Elective Course from the Pool	3	0	0	3	7.5
TOTAL		12	0	0	12	30

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
EM_DEPT.	Elective Course from the Pool	3	0	0	3	7.5
EM_DEPT.	Elective Course from the Pool	3	0	0	3	7.5
EM 590	Graduation Project	0	0	0	0	12.5
GSSE 599	Research Methods and Academic Publication Ethics	1	0	0	1	2.5
TOTAL		6	0	0	6	30

with thesis

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
BA 503	Financial and Managerial Accounting	3	0	0	3	7.5
IE 537	Mathematical Programming for Engineering Management	3	0	0	3	7.5
IE 547	Modelling and Analysis of Uncertainty	3	0	0	3	7.5
EM_DEPT.	Elective Course from the Pool	3	0	0	3	7.5
TOTAL		12	0	0	12	30

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
BA 504	Financial Management	3	0	0	3	7.5
EM_DEPT.	Elective Course from the Pool	3	0	0	3	7.5
EM_DEPT.	Elective Course from the Pool	3	0	0	3	7.5
EM 591	Pre-Thesis Seminar	0	0	0	0	5.0
GSSE 599	Research Methods and Academic Publication Ethics	1	0	0	1	2.5
TOTAL		10	0	0	10	30

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
EM 592	Master Thesis I	0	0	0	0	30
TOTAL		0	0	0	0	30

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
EM 593	Master Thesis II	0	0	0	0	30
TOTAL		0	0	0	0	30

Graduate Course Descriptions

EM 590 (0+0+0) 0 Credit / 12.5 ECTS

Graduation Project
(Bitirme Projesi)

Development of a research project about Engineering Management. In accordance with the project principles, integrating theoretical knowledge with application.

EM 591 (0+0+0) 0 Credit / 5 ECTS

Pre-Thesis Seminar
(Teze Hazırlık Semineri)

Determination of thesis subject, problem definition. Preparatory work for thesis such as literature review, data collection and method reserach. Presentation of thesis proposal as a seminar. Attending seminars organized as part of the program.

EM 592 (0+0+0) 0 Credit / 30 ECTS

Master Thesis I
(Yüksek Lisans Tezi I)

First stage of the M.Sc. thesis performed under supervision of the academic staff.

Pre-requisite: EM 591

EM 593 (0+0+0) 0 Credit / 30 ECTS

Master Thesis II
(Yüksek Lisans Tezi II)

Second stage of the M.Sc. thesis performed under supervision of the academic staff.

ENGLISH LANGUAGE EDUCATION MASTER PROGRAM(with and without thesis)
(Language of Instruction: English)

with thesis

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
ELEP 501	English Language Teaching Methodology	3	0	0	3	7.5
ELEP 502	Second Language Acquisition	3	0	0	3	7.5
ELEP	Elective Courses	3	0	0	3	7.5
ELEP	Elective Courses	3	0	0	3	7.5
TOTAL		13	0	0	13	32.5

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
ELEP 503	Research Methods in Education and Academic Publication Ethics	3	0	0	3	7.5
ELEP	Elective Courses	3	0	0	3	7.5
ELEP	Elective Courses	3	0	0	3	7.5
ELEP 591	Graduate Seminar	0	0	0	0	7.5
TOTAL		9	0	0	9	30

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
ELEP 592	Master's Thesis I	0	0	0	0	30
TOTAL		0	0	0	0	30

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
ELEP 593	Master's Thesis II	0	0	0	0	30
TOTAL		0	0	0	0	30

Totals expected for graduation		21	0	0	21	120
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without thesis

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
ELEP 501	English Language Teaching Methodology	3	0	0	3	7.5
ELEP 502	Second Language Acquisition	3	0	0	3	7.5
ELEP	Elective Courses	3	0	0	3	7.5
ELEP	Elective Courses	3	0	0	3	7.5
TOTAL		12	0	0	12	30

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
ELEP 503	Research Methods in Education and Academic Publication Ethics	3	0	0	3	7.5
ELEP	Elective Courses	3	0	0	3	7.5
ELEP	Elective Courses	3	0	0	3	7.5
ELEP 504	Testing and Evaluation in English Language Teaching	0	0	0	0	7.5
TOTAL		9	0	0	9	30

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
ELEP 590	Graduation Project	0	0	0	0	15
ELEP	Elective Courses	3	0	0	3	7.5
ELEP	Elective Courses	3	0	0	3	7.5
TOTAL		0	0	0	0	30
Totals expected for graduation		30	0	0	30	90

Graduate Course Descriptions

ELEP 501

(3+0+0) 3 Credits / 7.5 ECTS

English Language Teaching Methodology
(İngilizce Öğretim Yöntemleri)

Examining language awareness through detailed analysis of different phases and techniques of teaching listening, speaking, writing and reading; designing individual and / or small-scale group activities according to the different proficiency levels and lesson planning principles and techniques; developing activities for groups of learners of different ages and language proficiency.

ELEP 502

(3+0+0) 3 Credits / 7.5 ECTS

Second Language Acquisition
(İkinci Dil Edinimi)

Comprehending behavioral, cognitive, developmental, social, cognitive, constructivist and socio-cultural theories and perspectives related to second language acquisition; critically examining second language acquisition theories; discussing the contribution of learning theories to the student motivation, self-regulation and classroom management; creating an effective classroom design based on second language acquisition practices.

ELEP 503

(3+0+0) 3 Credits / 7.5 ECTS

Research Methods in Education and Academic Publication Ethics
(Eğitimde Araştırma Teknikleri ve Bilimsel Yayın Etiği)

Comprehending the theoretical and practical aspects of qualitative and quantitative research methods in second language teaching; examining different research types such as experimental, quasi-experimental, classroom observation and research, case study, ethnographic research, conversation analysis; being informed about research processes such as problem determination, data collection, data analysis and interpretation of results; implementing the related literature review, data collection, data evaluation and report writing techniques to conduct research on a particular subject.

- ELEP 504** (3+0+0) 3 Credits / 7.5 ECTS
Testing and Evaluation in English Language Teaching
(İngilizce Öğretiminde Ölçme ve Değerlendirme)
 Emphasizing the importance of measurement, evaluation and assessment; recognizing the properties of measuring tools; obtaining technical information about measurement tools used in education; being informed about the principles and methods related to the test development process; gaining experience with the test development process; measurement of higher-order thinking skills and learning about alternative assessment methods.
- ELEP 551** (3+0+0) 3 Credits / 7.5 ECTS
Educational Psychology in Foreign Language Teaching
(Yabancı Dil Öğretiminde Eğitim Psikolojisi)
 Examining the effects of different factors considering the psychological dimension of foreign language education, motivation of foreign language learning, anxiety, autonomy in learning, risk taking; the role of the teacher in supporting language teaching with reference to the relationship between affective factors and success; discussing ways of preventing negative factors; examining the steps of individual research; discussing how teachers can carry out self-study for their professional development.
- ELEP 552** (3+0+0) 3 Credits / 7.5 ECTS
Using Technology in English Language Teaching
(İngilizce Öğretiminde Teknoloji Kullanım)
 Examining the different stages of innovations and research in the field of technology assisted language acquisition and teaching; examining the connections between research and innovations and different language theories; experiencing the appropriate and effective evaluation, selection, adaptation, use and development of various software and web based resources required for language acquisition, distance and blended learning in the classroom.
- ELEP 553** (3+0+0) 3 Credits / 7.5 ECTS
Reflective Practices in English Language
(İngilizce Öğretiminde Yansıtımlı Uygulamalar)
 The importance of reflection in foreign language education and features of reflective practices and how they can be applied; contribution of reflection to the professional development and teaching of teachers; reflective application models, student diaries, observation notes, teaching portfolios, video enriched observations and how to use case studies as reflection tools in English language teaching; self- reflection, peer reflection; systematic reflection; examining examples of data-based reflection applications: communicative reflection, animated associations; situation-based reflective practices in English teaching; reflection practices on micro teaching experiences; promoting reflective thinking through action research.
- ELEP 554** (3+0+0) 3 Credits / ECTS
Pronunciation Teaching and Research in Second Language
(İkinci Dilde Telaffuz Öğretimi ve Araştırması)
 Learning theoretical and practical issues related to teaching pronunciation in the second language; examining the relationship of pronunciation especially with listening and speaking skills; examining

the approaches and methods to be used in teaching pronunciation to young and adult students; evaluation and measurement of pronunciation; the use of technology in pronunciation teaching, intelligibility, individual differences in pronunciation learning process and the study of research topics in pronunciation; examining the sounds and supersonic elements in English.

ELEP 555

(3+0+0) 3 Credits / 7.5 ECTS

**Curriculum Development in Foreign Language Education
(Yabancı Dil Öğretiminde Program Geliştirme)**

The philosophical, psychological and social foundations of curriculum development; different program design models; program types used in English language teaching; comparative analysis of English teaching programs used in primary and secondary education; learning the program evaluation methods and approaches.

ELEP 556

(3+0+0) 3 Credits / 7.5 ECTS

**Materials Development in English Language Teaching
(İngilizce Öğretiminde Materyal Geliştirme)**

Material adaptation for different levels and age groups in English teaching; material development and material evaluation processes; development of materials for different skills and incorporation of integrated all four skill-based materials with technology; evaluation and analysis of currently used materials.

ELEP 557

(3+0+0) 3 Credits / 7.5 ECTS

**Drama in English Language Teaching
(İngilizce Öğretiminde Drama)**

The use of creative drama in foreign language teaching; drama activities suitable for different age groups; drama activities that can be used in speaking, reading, writing, listening and vocabulary teaching; applications used in drama education in the world; examining the different creative education approaches with the use of drama in teaching different cultures.

ELEP 558

(3+0+0) 3 Credits / 7.5 ECTS

**Teaching Foreign Languages to Young Learners
(Çocuklara Yabancı Dil Öğretimi)**

Theoretical and practical approaches of teaching foreign languages to young learners; psychological, social, cognitive development features of children; classroom management; teaching foreign language skills to young learners; developing appropriate lesson plan, activities and materials, and evaluation in a foreign language to young learners.

ELEP 559

(3+0+0) 3 Credits / 7.5 ECTS

**Professional Development of Language
(Yabancı Dil Öğretmeninin Mesleki Gelişimi)**

Developmental processes of foreign language teachers in their professional life; different stages of teacher education; teachers' cognitive development and beliefs on language teaching; different reflective teaching methods; observation of teaching and feedback process; self-study method as a development process.

- ELEP 560** (3+0+0) 3 Credits / 7.5 ECTS
Basic Statistics
(Temel İstatistik)
 Basic statistical concepts; grouping data; measures of central tendency, measures of variation and controlling the normality of distributions; correlation, regression, independent samples T test, paired samples T test, Mann Whitney U test, Wilcoxon Signed-Ranks test, one way Analysis of Variance (ANOVA), Repeated Measures ANOVA and Chi-squared test.
- ELEP 561** (3+0+0) 3 Credits / 7.5 ECTS
Educational Linguistics
(Eğitimsel Dilbilim)
 Examining the use of theoretical linguistics knowledge and skills in the education and training environment of the trainer; ensuring the integration of phonetics, phonology, morphology, syntax, and semantics and pragmatics in linguistics with education.
- ELEP 562** (3+0+0) 3 Credits / 7.5 ECTS
Bilingualism and Second Language Acquisition
(ÇiftDillilik ve İkinci Dil Edinimi)
 The study of bilingualism which embraces language acquisition and bilingual literacy development from linguistic, cognitive, and social perspectives; an extensive examination of bilingualism through the psycholinguistic principles of bilingualism, language and identity, language planning stages along with language preservation and language loss.
- ELEP 563** (0+0+0) 3 Credits / ECTS
Language Education Policy
(Dil Eğitimi Politikaları)
 Examining language education policy designs and practices in the national and international arena; examining legal, social and political choices in language education policies; studying concepts, theories and methods in the field of language planning and policies; official language decisions of theoretical information, language choices in education and training, literacy initiatives, the effect of language reforms that trigger gender discrimination; foreign/cultural heritage/second language pedagogy and policy; examining local language revitalization efforts and decisions and policies related to other languages at international, national and local levels.
- ELEP 591** (0+1+0) 0 Credit / 30 ECTS
Graduate Seminar
(Lisansüstü Semineri)
 Research processes including problem determination, data collection, data analysis and interpretation of results; reviewing major scientific research methods such as experimental method, screening method, correlational research method; finding literature on a specific subject, collecting data, evaluating data and implementing report writing techniques; writing an applied thesis supervised by an advisor.

ELEP 592**(0+0+0) 0 Credit / 30 ECTS****Master's Thesis I****(Yüksek Lisans Tezi I)**

Investigating a subject related to foreign language education in detail in accordance with scientific research processes under the supervision of the advisor; reporting and presenting the obtained results.

ELEP 593**(0+0+0) 0 Credit / 30 ECTS****Master's Thesis II****(Yüksek Lisans Tezi II)**

Applying the second stage for the completion of the thesis work carried out under the supervision of the advisor.

INTERACTIVE COMPUTING AND INFORMATION SYSTEMS MASTER PROGRAM

(with and without thesis)
(Language of Instruction: English)

without thesis

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
CMPE 567	Human-Computer Interaction	3	0	0	3	7.5
PSY 512	Research Methods	2	2	0	3	7.5
ICT_DEPT.	Elective Course from the Pool	3	0	0	3	7.5
ICT_DEPT.	Elective Course from the Pool	3	0	0	3	7.5
TOTAL		11	2	0	12	30

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
ICT_DEPT.	Elective Course from the Pool	3	0	0	3	7.5
ICT_DEPT.	Elective Course from the Pool	3	0	0	3	7.5
ICT_DEPT.	Elective Course from the Pool	3	0	0	3	7.5
ICT_DEPT.	Elective Course from the Pool	3	0	0	3	7.5
TOTAL		12	0	0	12	30

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
ICT_DEPT.	Elective Course from the Pool	3	0	0	3	7.5
ICT_DEPT.	Elective Course from the Pool	3	0	0	3	7.5
ICT 590	Graduation Project	0	0	0	0	15
TOTAL		6	0	0	6	30

with thesis

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
CMPE 567	Human-Computer Interaction	3	0	0	3	7.5
PSY 512	Research Methods	2	2	0	3	7.5
ICT_DEPT.	Elective Course from the Pool	3	0	0	3	7.5
ICT_DEPT.	Elective Course from the Pool	3	0	0	3	7.5
TOTAL		11	2	0	12	30

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
ICT_DEPT.	Elective Course from the Pool	3	0	0	3	7.5
ICT_DEPT.	Elective Course from the Pool	3	0	0	3	7.5
ICT_DEPT.	Elective Course from the Pool	3	0	0	3	7.5
ICT 591	Pre-Thesis Seminar	0	0	0	0	7.5
TOTAL		10	4	0	12	30

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
ICT 592	Master Thesis I	0	0	0	0	30
TOTAL		0	0	0	0	30

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
ICT 593	Master Thesis II	0	0	0	0	30
TOTAL		0	0	0	0	30

Graduate Course Descriptions

CMPE 523 (3+0+0) 3 Credits / 7.5 ECTS

Artificial Intelligence

Intelligent agents. Problem solving with computers. Uninformed and informed search. Game playing. Knowledge representation and reasoning. Propositional & first-order logic. Uncertain knowledge. Learning from observations.

ICT 590 (0+0+0) 0 Credit / 15 ECTS

**Graduation Project
(Bitirme Projesi)**

Development of a research project about interactive computing and information systems. In accordance with the project principles, integrating theoretical knowledge with application.

ICT 591 (0+0+0) 0 Credit / 7.5 ECTS

**Pre-Thesis Seminar
(Teze Hazırlık Semineri)**

Determination of thesis subject, problem definition. Preparatory work for thesis such as literature review, data collection and method research. Presentation of thesis proposal as a seminar. Attending seminars organized as part of the program.

ICT 592 (0+0+0) 0 Credit / 30 ECTS

**Master Thesis I
(Yüksek Lisans Tezi I)**

First stage of the M.Sc. thesis performed under supervision of the academic staff.

ICT 593 (0+0+0) 0 Credit / 30 ECTS

**Master Thesis II
(Yüksek Lisans Tezi II)**

Second stage of the M.Sc. thesis performed under supervision of the academic staff.

MANAGEMENT IN EDUCATIONAL INSTITUTIONS MASTER PROGRAM

(without thesis)

(Language of Instruction: Turkish)

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
EDU 581	Research Methods in Education and Academic Publication Ethics	3	0	0	3	7.5
EKI-DEPT.	Departmental Elective Courses	3	0	0	3	7.5
EKI-DEPT.	Departmental Elective Courses	3	0	0	3	7.5
EKI-DEPT.	Departmental Elective Courses	3	0	0	3	7.5
TOTAL		12	0	0	12	30

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
EKI-DEPT.	Departmental Elective Courses	3	0	0	3	7.5
EKI-DEPT.	Departmental Elective Courses	3	0	0	3	7.5
EKI-DEPT.	Departmental Elective Courses	3	0	0	3	7.5
EKI-DEPT.	Departmental Elective Courses	3	0	0	3	7.5
TOTAL		12	0	0	12	30

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
EKI-DEPT.	Departmental Elective Courses	3	0	0	3	7.5
EKI-DEPT.	Departmental Elective Courses	3	0	0	3	7.5
MEI 590	Graduation Project	1	4	0	3	15
TOTAL		7	4	0	9	30

Examples from Graduate Course Descriptions

MEI 590

(1+4+0) 3 Credits / 15 ECTS

Graduation Project
(Dönem Projesi)

Developing a proposal or project in the field of administration of educational institution. Preparing oral and written presentation.

MEI 502

(3+0+0) 3 Credits / 7.5 ECTS

School Management Practices
(Okul Yönetimi Uygulamaları)

Practices related to education-instruction and student services. Business Administration. GPC Services carried out in schools. School Personnel Affairs. School Development Studies. Current Issues.

MEI 514**(3+0+0) 3 Credits / 7.5 ECTS****Accounting and Budget Management in Education
(Eğitim Kurumlarında Muhasebe Uygulamaları ve Bütçe Yönetimi)**

Introduction to accounting. The basic principles of accounting and recording transactions. Financial tables. Accounting applications in educational institutions and special accounts. Fundamental principles in school budget preparation. Preparation and reporting of school budgets. Implementation and management of school budgets. Case studies.

MEI 512**(3+0+0) 3 Credits / 7.5 ECTS****Strategic Management
(Stratejik Yönetim)**

Basic strategic management concepts and processes in educational institutions. Examination of governance systems. External and internal analysis. Preparation of SWOT (Strengths, weaknesses, opportunities, threats) table. Determining strategies. Evaluation of competition and cooperation options.

MEI 510**(3+0+0) 3 Credits / 7.5 ECTS****Human Resources Management
(İnsan Kaynakları Yönetimi)**

Strategic Human Resources Management. Role of Human Resources in educational institutions. Recruitment and placement processes in Human Resources Management. Training. Employee motivation and performance system creation. Career development. Needs for sustainable Human Resources.

MEI 508**(3+0+0) 3 Credits / 7.5 ECTS****Guidance Services in Schools
(Okullarda Rehberlik Hizmetleri)**

Meaning and scope of Guidance and psychological counseling. Place and function of the counseling in the school. Organization of the GPC Services. Principles, problems, application fields and methods of GPC. Attitude towards GPC services. Guidance practices that affect school climate positively. Individual, social and cultural diversity in schools.

MEI 506**(3+0+0) 3 Credits / 7.5 ECTS****Development and Learning
(Gelişim ve Öğrenme)**

Development, theories and concepts. Prenatal development. Development during infancy. Development in toddlerhood. Development in early childhood. Development in school period. Adolescence development. Learning Styles. Classical learning theories. Behaviorist learning theories. Cognitive learning theories. Cognitive-social approach.

MEI 504**(3+0+0) 3 Credits / 7.5 ECTS****Curriculum Development in Education
(Eğitimde Program Geliştirme)**

Basic concepts related to program development. Program development in the world and Turkey. Theoretical foundations of program development. Approaches to program design. Program development models in education. Program improvement planning. Preparing program design. Testing of programs. Evaluation of the program. Program sustainability. New directions to program improvement.

MEI 503**(3+0+0) 3 Credits / 7.5 ECTS****Management of Distance Education
(Uzaktan Eğitimin Yönetimi)**

A Systems View and Model of Distance Education; Distance Education Technologies and Media in Digital Age; Globalization and Commercialization of Distance Education; Distance Education Marketing; Teaching and Learning in Distance Education; Organizational Structure of Distance Education; Supply Model of Distance Education Organization; Demand Driven Model of Distance Education; Management of Staff in Distance Education; Training and Orientation of Staff in Distance Education; Staff Monitoring and Assessment in Distance Education; Management of Distance Education in Turbulent Periods.

MEI 505**(3+0+0) 3 Credits / 7.5 ECTS****Digital Marketing
(Dijital Pazarlama)**

Digital environment. Online and offline marketing concepts. Digital tools, platforms and channels. Digital marketing campaigns planning. Omni-channel marketing. Online metrics. Educational institution applications.

MECHANICAL ENGINEERING MASTER PROGRAM(with and without thesis)
(Language of Instruction: English)

with thesis

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
MATH 501	Advanced Engineering Mathematics	3	0	0	3	7.5
GSSE 599	Research Methods and Academic Publication Ethics	1	0	0	1	2.5
ME-ELECT.	Elective Courses	3	0	0	3	5
ME-ELECT.	Elective Courses	3	0	0	3	5
ME-ELECT.	Elective Courses	3	0	0	3	5
TOTAL		13	0	0	13	25

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
MATH 502	Numerical Optimization	3	0	0	3	7.5
ME-ELECT.	Elective Courses	3	0	0	3	5
ME-ELECT.	Elective Courses	3	0	0	3	5
ME 591	Pre-Thesis Seminar	0	0	0	0	5
TOTAL		9	0	0	9	22,5

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
ME 592	Master's Thesis I	0	0	0	0	40
TOTAL		0	0	0	0	40

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
ME 593	Master's Thesis II	0	0	0	0	40
TOTAL		0	0	0	0	40

Totals expected for graduation		22	0	0	22	127,5
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without thesis

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
MATH 501	Advanced Engineering Mathematics	3	0	0	3	7.5
GSSE 599	Research Methods and Academic Publication Ethics	1	0	0	1	2.5
ME-ELECT.	Elective Courses	3	0	0	3	5
ME-ELECT.	Elective Courses	3	0	0	3	5
ME-ELECT.	Elective Courses	3	0	0	3	5
ME-ELECT.	Elective Courses	3	0	0	3	5
TOTAL		16	0	0	16	30

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
Math 502	Numerical Optimization	3	0	0	3	7.5
ME-ELECT.	Elective Courses	3	0	0	3	5
ME-ELECT.	Elective Courses	3	0	0	3	5
ME-ELECT.	Elective Courses	0	0	0	0	5
ME-ELECT.	Elective Courses	0	0	0	0	5
TOTAL		15	0	0	15	27,5

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
ME 590	Graduation Project	0	0	0	0	40
TOTAL		0	0	0	0	40
Totals expected for graduation		31	0	0	31	97,5

Graduate Course Descriptions

GSSE 599

(1+0+0) 1 Credit / 2.5 ECTS

Research Methods and Academic Publication Ethics

(Araştırma Yöntemleri ve Akademik Yayın Etiği)

Literature Survey; Establishing the Objective and Scope; Analytical and Experimental Approaches; Design and Evaluation of Questionnaires. Experiment Design. Quantitative and Qualitative Data Analyses; Presentation of Results; Methods of Academic Publication Ethics.

MATH 501

(3+0+0) 3 Credits / 7.5 ECTS

Advanced Engineering Mathematics

(İleri Mühendislik Matematiği)

First order ordinary differential equations. Initial value problems. Existence and uniqueness of solutions. Separable, linear, homogeneous, and exact differential equations. Bernoulli and Riccati differential equations. Higher order ordinary differential equations. Reduction of order. Method of undetermined coefficients. Variation of parameters. Series solutions. The Laplace transform. Systems of linear differential equations. Introduction to partial differential equations. Separation of variables.

MATH 502

(3+0+0) 3 Credits / 7.5 ECTS

Numerical Optimization

(Sayısal Optimizasyon)

Fundamentals of unconstrained optimization: line search methods, steepest descent, Newton & quasi-Newton methods, conjugate gradient methods; Linear programming : the simplex method, the interior point method; Constrained optimization : quadratic optimization and active set methods, penalty and barrier methods, Lagrange multiplier method; Sequential quadratic programming; Derivative free optimization : derivative free methods (Powell's and Hooke-Jeeves methods).

- ME 433** (3+0+0) 3 Credits / 5 ECTS
Theory of Machines
(Makine Teorisi)
 Introduction to mechanisms. Kinematic analysis of mechanisms. Simple and planetary gear trains. Static and dynamic force analysis of mechanisms. Fundamentals of vibrations. Modeling of vibrating systems. Free and forced vibrations of single degree-of-freedom systems.
- ME 441** (2+2+0) 3 Credits / 5 ECTS
Applied Finite Element Analysis
(Uygulamalı Sonlu Elemanlar Analizi)
 Introduction to Finite Element Method (FEM). Commercial software packages. Linear FEM applications: linear elasticity, beam bending, stress concentration. Non-linear FEM applications: plasticity, contact analysis, Hertzian contact stresses, friction.
- ME 453** (3+0+0) 3 Credits / 5 ECTS
Introduction to Aeronautics
(Havacılığa Giriş)
 Basic Aerodynamics. Equations of motion. Aircraft performance. Static / dynamic stability and control principles.
- ME 501** (0+0+0) 3 Credits / 7.5 ECTS
Advanced Engineering Mathematics
(Mekatronik Sistemler)
 First order ordinary differential equations. Initial value problems. Existence and uniqueness of solutions. Separable, linear, homogeneous, and exact differential equations. Bernoulli and Riccati differential equations. Higher order ordinary differential equations. Reduction of order. Method of undetermined coefficients. Variation of parameters. Series solutions. The Laplace transform. Systems of linear differential equations. Introduction to partial differential equations. Separation of variables.
- ME 503** (3+0+0) 3 Credits / 7.5 ECTS
Modern Control Engineering
(Modern Kontrol Mühendisliği)
 Modelling dynamical systems in state-space, analysis of structural characteristics, controllability, observability, stabilizability, detectability, finding eigenvalues and eigenvectors, design by pole placement using state feedback, observer based state feedback, design of servo systems.
- ME 504** (0+0+0) 3 Credits / 7.5 ECTS
Control of Mechatronic Systems
(Mekatronik Sistemlerin Denetimi)
 Control hardware and software in mechatronic systems, control of MIMO systems, design of adaptive controllers, design of robust controllers, nonlinear control systems, case studies.
- ME 505** (0+0+0) 3 Credits / 7.5 ECTS
Control of Robot Manipulators
(Robot Manipülörlerin Denetimi)
 Kinematics, rigid body dynamics, dynamical analysis of system of rigid bodies, dynamics of serial manipulators, control of manipulators.

- ME 506** (0+0+0) 3 Credits / 7.5 ECTS
Flying Robotics
 Multicopters, novel systems, sensor systems and the need for estimation, actuator dynamics, 1, 2, and 3 dof models, attitude control, attitude and altitude control, trajectory planning and control, swarm of flying robots, flying manipulators.
- ME 509** (0+0+0) 3 Credits / 7.5 ECTS
Bioinspired Legged Robotics
(Biyoesinlenmiş Bacaklı Robotik Sistemler)
 Biological motor control, bioinspired central pattern generators, bipedal walking, kinematics and dynamics, bioinspired posture control, stability by ZMP technique, quadrupedal walking, mechanism synthesis.
- ME 510** (0+0+0) 3 Credits / 7.5 ECTS
Rehabilitation Robotics
(Rehabilitasyon Robotiği)
 Motor control and learning theories, motor re-learning based rehabilitation, computational rehabilitation, mirror neuron system and mirror therapy, robotic rehabilitation systems, exoskeletons and control, robotic mirror therapy system for hand rehabilitation.
- ME 511** (3+0+0) 3 Credits / 7.5 ECTS
CAD/CAM for Engineers
(Mühendisler İçin Bilgisayar Destekli Tasarım ve Üretim)
 CAD / CAM hardware and software, basics and theories of 2-D and 3-D computer graphics, basics of database, numerical analyses in CAD, introduction to optimization theory and applications to nonlinear engineering problems with constraints of multidimensional optimization algorithms, discussion on the application of CAD in engineering problems.
- ME 512** (3+0+0) 3 Credits / 7.5 ECTS
Nontraditional Manufacturing Processes
(Alışılmamış Üretim Yöntemleri)
 Metal removal methods, Metal cutting theories and parameters, unconventional mechanical methods and theories, Nontraditional chemical methods and theories, electrochemical methods and theories, Electro- thermal methods and theories.
- ME 515** (3+0+0) 3 Credits / 7.5 ECTS
Flexible forming processes
(Esnek Şekillendirme Yöntemleri)
 Fundamental of theory of plasticity and metal forming. Fundamental concepts in materials science. Material characterisation. Analytical methods. Conventional spinning, shear spinning, tube spinning and incremental sheet forming. Close-loop control of metal forming processes. Forming machines.

- ME 516** (3+0+0) 3 Credits / 7.5 ECTS
Precision Machine Design
(Hassas Makine Tasarımı)
Introduction to precision machine design. Accuracy, repeatability and resolution concepts. Sensors. System design. Geometric and thermal errors in mechanical systems. Contact and contactless bearings. Power generation and transmission.
- ME 518** (3+0+0) 3 Credits / 7.5 ECTS
Fundamentals of Metal Forming
(Metal Şekillendirmenin Esaslar)
Materials in forming. Theory of plasticity. Materials characterization. Analysis methods. Bulk metal forming processes. Sheet metal forming processes. Forming and measuring equipment. Energy and resource efficient forming.
- ME 521** (3+0+0) 3 Credits / 7.5 ECTS
Open Source Tools for Robotics
(Robotik için Açık Kaynak Araçları)
Python, SciCos, OpenCV, Tesseract, Octave. (By using these tools, image processing and speech recognition examples will be focused.) development and modeling of multi-body dynamics (Newton, Euler, and Lagrange). At the end of lecture, students are expected to have programming experience with open source physics solvers (ODE, Bullet, Simbody, DART, Siconos, etc.).
- ME 522** (0+0+0) 3 Credits / 7.5 ECTS
Applied Mechanics
(Uygulamalı Mekanik)
Solving advanced dynamics problems using open source tools. Real life problems will be focused especially on modelling and simulation of systems from defence industry.
- ME 525** (3+0+0) 3 Credits / 7.5 ECTS
Aerodynamics and Flight Mechanics
(Aerodinamik ve Uçuş Mekaniği)
Fundamentals of aerodynamics, equations of motion, aircraft performance, principles of static/dynamic stability and control.
- ME 526** (3+0+0) 3 Credits / 7.5 ECTS
Transducer Materials and Technology
(Transdüser Malzemeler ve Teknolojisi)
Introduction to transducer materials and technology. Classification of transducer materials and their applications. Correlation of material properties with transducer applications. Properties of nano-scaled transducer materials in comparison with their micro- and macro-scaled counterparts.
- ME 533** (3+0+0) 3 Credits / 5 ECTS
Advanced Mechanical Measurements
(İleri Mekanik Ölçümler)
Basic concepts of measurement methods. Static and dynamic characteristics of signals. Behaviour of measurement systems. Probability and statistics. Uncertainty analysis. Analog devices and measurements. Digital devices, sampling, and data acquisition.

- ME 535** (3+0+0) 3 Credits / 7.5 ECTS
Mechatronic Systems
(Mekatronik Sistemler)
 Definition of mechatronics. Sensors, actuators, and interfacing. Control systems: algorithms, hardware, and software. Mechatronic design. Machine learning for mechatronic systems.
- ME 551** (3+0+0) 3 Credits / 5 ECTS
Computational Fluid Dynamics
(Hesaplmalı Akışkanlar Dinamiği)
 Solution of partial differential equations by discrete methods. Euler / Navier Stokes equations in differential and integral forms. Spatial and temporal discretization. Finite difference and finite volume methods. Error, accuracy, stability and convergence. Turbulence models.
- ME 553** (3+0+0) 3 Credits / 5 ECTS
Advanced Fluid Mechanics
(İleri Akışkanlar Mekaniği)
 Fluid Mechanics and continuum hypothesis, tensors, fluid kinematics, mass and momentum conservation equations, energy conservation, analytical solutions of NS equations, boundary layer theory and equations, laminar boundary layer equations, Blasius solution, Falkner- Skan similarity solutions, turbulence, turbulent equations, compressible flows, shocks.
- ME 556** (3+0+0) 3 Credits / 5 ECTS
Advanced Thermal System Design
(İleri Isıl Sistem Tasarımı)
 Engineering design and thermal systems; pipeline systems, flow in pipes; pipe networks; pumps, pump systems and power, mathematical modeling, analysis and simulation of thermal systems; optimization of thermal systems; heat exchangers.
- ME 591** (0+0+0) 0 Credit / 5 ECTS
Pre-Thesis Seminar
Teze Hazırlık Semineri
 Determination of thesis subject, problem and research question definition. Preparatory work for thesis such as literature review, hypothesis generation and research on Methodology. Presentation of thesis proposal as a seminar. Attending seminars organized as part of the program.
- ME 592** (0+0+0) 0 Credit / 40 ECTS
Master's Thesis I
(Yüksek Lisans Tezi I)
 The first step of master's thesis performed under the supervision of academic staff.
- ME 593** (0+0+0) 0 Credit / 40 ECTS
Master's Thesis II
(Yüksek Lisans Tezi II)
 Master's thesis performed under the supervision of academic staff. This course must be taken in the semesters where the thesis work is in progress.

MECHATRONICS ENGINEERING MASTER PROGRAM(with and without thesis)
(Language of Instruction: English)

without thesis

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
MATH 501	Advanced Engineering Mathematics	3	0	0	3	7.5
GSSE 599	Research Methods and Ethics	1	0	0	1	2.5
MECE-T-ELEC	MECE Elective Courses I	3	0	0	3	7.5
MECE-T-ELEC	MECE Elective Courses II	3	0	0	3	7.5
MECE-T-ELEC	MECE Elective Courses III	3	0	0	3	7.5
TOTAL		13	0	0	13	32.5

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
MECE-T-ELEC	MECE Elective Courses IV	3	0	0	3	7.5
MECE-T-ELEC	MECE Elective Courses V	3	0	0	3	7.5
MECE-T-ELEC	MECE Elective Courses VI	3	0	0	3	7.5
MECE-T-ELEC	MECE Elective Courses VII	3	0	0	3	7.5
TOTAL		12	0	0	12	30

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
MECE-T-ELEC	MECE Elective Courses VIII	3	0	0	3	7.5
MECE-T-ELEC	MECE Elective Courses IX	3	0	0	3	7.5
MECE 590	Graduation Project	0	0	0	0	15
TOTAL		6	0	0	6	30

with thesis

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
MATH 501	Advanced Engineering Mathematics	3	0	0	3	7.5
GSSE 599	Research Methods and Ethics	1	0	0	1	2.5
MECE-T-ELEC	MECE Elective Courses I	3	0	0	3	7.5
MECE-T-ELEC	MECE Elective Courses II	3	0	0	3	7.5
MECE-T-ELEC	MECE Elective Courses III	3	0	0	3	7.5
TOTAL		13	0	0	13	32.5

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
MATH 502	Numerical Optimization	3	0	0	3	7.5
MECE-T-ELEC	MECE Elective Courses IV	3	0	0	3	7.5
MECE-T-ELEC	MECE Elective Courses V	3	0	0	3	7.5
MECE 591	Pre-Thesis Seminar	0	0	0	0	5
TOTAL		9	0	0	9	27.5

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
MECE 592	Master's Thesis I	0	0	0	0	30
TOTAL		0	0	0	6	30

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
MECE 593	Master's Thesis II	0	0	0	0	30
TOTAL		0	0	0	6	30

Graduate Course Descriptions

MATH 501

(3+0+0) 3 Credits / 7.5 ECTS

Advanced Engineering Mathematics (İleri Mühendislik Matematiği)

First order ordinary differential equations. Initial value problems. Existence and uniqueness of solutions. Separable, linear, homogeneous, and exact differential equations. Bernoulli and Riccati differential equations. Higher order ordinary differential equations. Reduction of order. Method of undetermined coefficients. Variation of parameters. Series solutions. The Laplace transform. Systems of linear differential equations. Introduction to partial differential equations. Separation of variables.

MATH 502

(3+0+0) 3 Credits / 7.5 ECTS

Numerical Optimization (Sayısal optimizasyon)

Fundamentals of unconstrained optimization: line search methods, steepest descent, Newton & quasi-Newton methods, conjugate gradient methods; Linear programming : the simplex method, the interior point method; Constrained optimization : quadratic optimization and active set methods, penalty and barrier methods, Lagrange multiplier method; Sequential quadratic programming; Derivative free optimization: derivative free methods (Powell's and Hooke-Jeeves methods).

GSSE 599

(1+0+0) 1 Credit / 2.5 ECTS

Research Methods and Ethics (Araştırma Yöntemleri ve Akademik Yayın Etiği)

Literature survey; Analytical and experimental techniques; Design and evaluation of the questionnaire; Design of experiments; Qualitative and quantitative analysis of the data; Presentation of the results; Ethical issues about the academic publications.

MECE 590

(0+0+0) 0 Credit / 15 ECTS

Graduation Project (Bitirme Projesi)

Development of a research project about mechatronic systems. In accordance with the project principles, it is aimed to integrate the theoretical knowledge with application.

MECE 591 (0+0+0) 0 Credit / 5 ECTS
Pre-Thesis Seminar
(Teze Hazırlık Semineri)
Determination of thesis subject, problem and research question definition. Preparatory work for thesis such as literature review, hypothesis generation and methodology research. Presentation of thesis proposal as a seminar. Attending seminars organized as part of the program.

MECE 592 (0+0+0) 0 Credit / 30 ECTS
Master's Thesis I
(Yüksek Lisans Tezi I)

First stage of the Master's thesis performed under supervision of the academic staff.

MECE 593 (0+0+0) 0 Credit / 30 ECTS
Master's Thesis II
(Yüksek Lisans Tezi II)

Second stage of the Master's Thesis performed under supervision of the academic staff.

MIGRATION STUDIES MASTER PROGRAM

(with and without thesis)
(Language of Instruction: English)

						with thesis	
Semester 1							
Code	Course Title	C	P	L	Cr	ECTS	
MIGS 501	Theories of Migration	3	0	0	3	7.5	
MIGS 503	Scientific Research Methods and Ethics	3	0	0	3	7.5	
MIGS xxx	MIGS Elective Courses	3	0	0	3	7.5	
MIGS xxx	MIGS Elective Courses	3	0	0	3	7.5	
TOTAL		12	0	0	12	30	
Semester 2							
Code	Course Title	C	P	L	Cr	ECTS	
MIGS 502	International Politics of Migration	3	0	0	3	7.5	
MIGS xxx	MIGS Elective Courses	3	0	0	3	7.5	
MIGS xxx	MIGS Elective Courses	3	0	0	3	7.5	
MIGS 591	Pre-Thesis Seminar	0	0	0	0	7.5	
TOTAL		9	0	0	9	30	
Semester 3							
Code	Course Title	C	P	L	Cr	ECTS	
MIGS 592	Master's Thesis I	0	0	0	0	30	
TOTAL		0	0	0	0	30	
Semester 4							
Code	Course Title	C	P	L	Cr	ECTS	
MIGS 593	Master's Thesis II	0	0	0	0	30	
TOTAL		0	0	0	0	30	
Totals expected for graduation		21	0	0	21	120	

						without thesis	
Semester 1							
Code	Course Title	C	P	L	Cr	ECTS	
MIGS 501	Theories of Migration	3	0	0	3	7.5	
MIGS 503	Scientific Research Methods and Ethics	3	0	0	3	7.5	
MIGS xxx	MIGS Elective Courses	3	0	0	3	7.5	
MIGS xxx	MIGS Elective Courses	3	0	0	3	7.5	
TOTAL		12	0	0	12	30	
Semester 2							
Code	Course Title	C	P	L	Cr	ECTS	
MIGS 502	International Politics of Migration	3	0	0	3	7.5	
MIGS xxx	MIGS Elective Courses	3	0	0	3	7.5	
MIGS xxx	MIGS Elective Courses	3	0	0	3	7.5	
MIGS xxx	MIGS Elective Courses	3	0	0	3	7.5	
TOTAL		12	0	0	12	30	

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
MIGS xxx	MIGS Elective Courses	3	0	0	3	7.5
MIGS xxx	MIGS Elective Courses	3	0	0	3	7.5
MIGS 590	Graduation Project	0	0	0	0	15
TOTAL		6	0	0	6	30
Totals expected for graduation		30	0	0	30	90

Graduate Course Descriptions

MIGS 501 (3+0+0) 3 Credits / 7,5 ECTS

Theories of Migration

Introduction of the main theoretical perspectives on migration. A brief historical outline beginning with mass migration flows in the latter part of the 19th century leading up to the end of the 20th century. Examination of recent theorizing of transnationalism, forced migration and refugee issues.

MIGS 502 (3+0+0) 3 Credits / 7,5 ECTS

International Politics of Migration

An exploration of the issue of migration with a view to international politics. Delivery of substantive conceptual and historical information on politics of migration. The effects of contemporary (international) political processes and institutions on migration. An account of problems and prospects regarding migration.

MIGS 503 (3+0+0) 3 Credits / 7,5 ECTS

Scientific Research Methods and Ethics

The tools of conducting scientific research and writing in migration studies. Development of the theoretical and practical skills to plan, conduct and analyze a scientific study. Development of ethics insight for scientific research and writing.

MIGS 511 (3+0+0) 3 Credits / 7,5 ECTS

Globalization, Multiculturalism and Migration

An examination of in light of the contemporary debates and discussions around globalization and multiculturalism. The multiculturalist response to migration in various contexts and its criticisms. Citizenship and migration.

MIGS 512 (3+0+0) 3 Credits / 7,5 ECTS

Religion and Migration

An examination of the social and political issues that arise at the intersection of religious identity and migration. The formation of religious identity, religious conflict, and the effects of these processes on migration. Examination of the tension and solidarity amongst different religious groups, and how these affect migration practices.

MIGS 513 (3+0+0) 3 Credits / 7,5 ECTS

Social Change

An examination of the content and context of major theories of social change and development. Evaluation of the relevance of these theories to historical experience in different world regions.

- MIGS 514** (3+0+0) 3 Credits / 7,5 ECTS
International Migration in the Contemporary World
 Contemporary international migration patterns and trends. Global and local interdisciplinary approaches to migration. Development of academic and practical knowledge base and analytical skills about international migration.
- MIGS 521** (3+0+0) 3 Credits / 7,5 ECTS
Intergroup Relations
 A general overview to the extant literature on intergroup relations. Major theoretical debates and empirical developments in the area of intergroup relations. The influence of group memberships on cognition, emotion, attitudes, and behavior.
- MIGS 522** (3+0+0) 3 Credits / 7,5 ECTS
Collective Emotions
 An examination of the role of emotional processes (e.g., intergroup emotions, emotion regulation, emotional preferences) in intergroup relations, intergroup conflict, and social justice. Introduction of discrete emotions and different emotional processes, their comparisons. Application of the knowledge of emotional processes to intergroup conflict, such as migration.
- MIGS 523** (3+0+0) 3 Credits / 7,5 ECTS
Immigration and Memory
 Examination of how personal events during immigration are remembered, how remembering those experiences affects the way a person perceives his/her life story. The cognitive factors underlying why events during immigration are usually remembered better.
- MIGS 524** (3+0+0) 3 Credits / 7,5 ECTS
Collective Memory
 An examination of the phenomena of people remembering/forgetting as part of a group - one's country, one's state, one's university, one's family. Collective memories and identity. Knowledge of one's self and interpretation of the world. The reasons as to why we remember or are unable to remember certain collective events more than others. Examination of how and under what circumstances collective memories are transmitted through next generation from a cognitive psychology perspective.
- MIGS 531** (3+0+0) 3 Credits / 7,5 ECTS
Racism, Xenophobia and Migration
 Nation, race and ethnicity. An examination of prejudice, discrimination, institutional discrimination, racism, "othering", the new "cultural racism", xenophobia and the rise of the radical right. An examination of the challenges towards democracy with the rise of "illiberal democracy". Discussion of new alternatives to overcome these predicaments.
- MIGS 532** (3+0+0) 3 Credits / 7,5 ECTS
Gender and Migration
 An examination of the gender-blindness of mainstream migration studies. Evaluation of the current trends in migration. Examination of brain drain, care drain, and care chains. Analysis of gender and migration at the personal, domestic, international and global levels with its social, political and economic aspects.

- MIGS 541** (3+0+0) 3 Credits / 7,5 ECTS
Economics of Migration
 The economic, social, cultural and political contexts of migration. Investigation of the drivers and impact of migration from an economic perspective. Policy recommendations at both national and international level. Examination of the gains from migration and its redistributive welfare effects.
- MIGS 551** (3+0+0) 3 Credits / 7,5 ECTS
Migration Law
 An analysis of migration from a legal aspect. Migration within the context of human rights, law of persons, family law, law of foreigners. Migration law within the context of national and international law. An evaluation of The Foreigners and International Protection Law in light of the Turkish Constitution, European Convention of Human Rights and Civil Code. Discussion of the legal situation of migrants in Turkey.
- MIGS 561** (3+0+0) 3 Credits / 7,5 ECTS
Migration and Space
 Introduction to Geography of Migration. Space as the Contextual Determinant of Migration. The urban and the country of the migration space; the transitional and the stationary; the temporary and the permanent spaces, the transitional and the final destinations. The social background of migration with its scope, delimitations, impacts, and factors delineating formation of social identities. Memory and remembrances of the evacuated, deserted, left behind spaces; the memory of place; space in collective memory.
- MIGS 590** (0+0+0) 3 Credits / 15 ECTS
Graduation Project
 Development of a research project about migration studies regarding the academic writing and ethical princip.
- MIGS 591** (0+0+0) 0 Credit / 7,5 ECTS
Thesis Preparation Seminar
 Determination of thesis subject, problem and research question definition. Preparatory work for thesis such as literature review, hypothesis generation and methodology research. Presentation of thesis proposal as a seminar. Attending seminars organized as part of the program.
- MIGS 592** (0+0+0) 0 Credit / 30 ECTS
Master's Thesis I
 Master's Thesis performed under supervision of an academic staff. This course must be taken in the semester, in which the thesis work commences.
- MIGS 593** (0+0+0) 0 Credit / 30 ECTS
Master's Thesis II
 M.Sc. Thesis performed under supervision of an academic staff. This course must be taken in the semesters where the thesis work is done. The thesis must be defended in the written and oral form to a jury.

CLINICAL PSYCHOLOGY PH.D. PROGRAM

(Language of Instruction: English)

Semester 1

Code	Course Title	C	P	L	Cr	ECTS
PSY 601	Research Methods in Clinical Psychology	2	2	0	3	10
PSY 643	Ethical Issues in Clinical Psychology	3	0	0	3	6
PSY 641	Biopsychosocial Models in Psychopatholog	3	0	0	3	8
PSY 645	Advanced Clinical Supervision I	1	4	0	3	8
TOTAL		9	6	0	12	32

Semester 2

Code	Course Title	C	P	L	Cr	ECTS
PSY 602	Multivariate statistics in clinical psychology	2	2	0	3	10
PSY 642	Biopsychosocial Models in Psychopathology II	3	0	0	3	8
PSY 644	Advanced Clinical Supervision II	1	4	0	3	8
PSY 646	Advanced Clinical Assessment	2	2	0	3	8
PSY	Elective Courses	3	0	0	3	6
PSY 690	Ph.D. Thesis Topic	0	0	0	0	1
TOTAL		11	8	0	15	41

Semester 3

Code	Course Title	C	P	L	Cr	ECTS
PSY 647	Relational Approaches in Psychotherapy	3	0	0	3	8
PSY 649	Community Clinical Psychology	3	0	0	3	8
PSY 645	Advanced Clinical Supervision III	1	4	0	3	8
PSY ELECT.	Elective Courses	3	0	0	3	6
TOTAL		10	4	0	12	30

Semester 4

Code	Course Title	C	P	L	Cr	ECTS
PSY 650	Community Mental Health Project	1	4	0	3	8
PSY 646	Clinical Supervision IV	1	0	4	3	8
PSY ELECT.	Elective Courses	3	0	3	0	6
PSY 800	Preparation for PhD Qualifying Exam	0	0	0	0	15
TOTAL		5	4	7	6	37

Semester 5

Code	Course Title	C	P	L	Cr	ECTS
PSY 691	Seminar and Thesis Proposal	0	0	0	0	40
TOTAL		0	0	0	0	40

Semester 6

Code	Course Title	C	P	L	Cr	ECTS
PSY 692	Ph.D. Thesis I	0	0	0	0	20
TOTAL		0	0	0	0	20

Semester 7

Code	Course Title	C	P	L	Cr	ECTS
PSY 693	Ph.D. Thesis II	0	0	0	0	20
PSY 660	Supervised Clinical Internship I	0	0	0	0	15
TOTAL		0	0	0	0	35

Semester 8

Code	Course Title	C	P	L	Cr	ECTS
PSY 694	Ph.D. Thesis III	0	0	0	0	20
PSY 661	Supervised Clinical Internship II	0	0	0	0	15
TOTAL		0	0	0	0	35

PSY 601

(2+2+0) 3 Credits / 10 ECTS

Research Methods in Clinical Psychology**(Klinik Psikolojide Araştırma Yöntemleri)**

Covering the correlational, observational, quasi-experimental, and experimental research methods used in the field of clinical psychology. Providing the methodological background of outcome and process studies in psychotherapy researches. Teaching the research methods that are specific to clinical psychology and how to design /conduct a research project. Presenting the methodological problems, new approaches, and future directions related to clinical psychology.

PSY 602

(2+2+0) 3 Credits / 10 ECTS

Multivariate Statistics in Clinical Psychology**(Klinik Psikolojide Çok Değişkenli İstatistik)**

Presenting the theoretical and applied multivariate statistics knowledge, which is widely used in the psychology field. Performing the multivariate statistics applications by using programs such as SPSS, Hayes PROCESS macro, AMOS, and Lizrel. Conducting explanatory and confirmatory factor analyses. Performing group comparison analyses such as ANOVA, ANCOVA, and MANOVA. Conducting mediator and moderator analyses. Testing theoretical models by using Structured Equation Modelling.

PSY 640

(3+0+0) 3 Credits / 6 ECTS

Ethical Issues in Clinical Psychology**(Klinik Psikolojide Etik Meseleler)**

Conceptualization of ethical problems arising during therapeutic applications and developing necessary skills to overcome such obstacles. Examination of ethical decision making processes in psychotherapy. Gaining insight regarding professional and personal characteristics that might lead to ethical problems during psychotherapy process. Developing awareness with regard to culturally sensitive psychotherapy applications.

PSY 641

(3+0+0) 3 Credits / 8 ECTS

Biopsychosocial models in Psychopathology I**(Psikopatolojide Biyopsikososyal Modeller I)**

Examination of the risk factors and etiology of adult psychopathologies in line with neurodevelopmental theories. Discussion of the current empirical evidence related to neurodevelopmental approaches in an integrative approach in the light of recent research.

- PSY 642** (3+0+0) 3 Credits / 8 ECTS
Biopsychosocial Models in Psychopathology II
(Psikopatolojide Biyopsikososyal Modeller II)
 Investigation of the risk factors and etiology of adult psychopathologies in line with biopsychosocial theoretical frameworks. Discussion of these factors in an integrative approach in the light of positive psychology research.
- PSY 646** (2+2+0) 3 Credits / 8 ECTS
Advanced Clinical Assessment
(İleri Düzey Klinik Değerlendirme)
 The teaching of current projective (e.g., TAT, Rorschach) and objective (e.g., MMPI) psychological test protocols that widely used in clinical assessment.
- PSY 643** (1+4+0) 3 Credits / 6 ECTS
Advanced Clinical Supervision I
(İleri Klinik Süpervizyon I)
 Presentation of the cases followed by the supervisees to the supervisor. Discussion of the issues related to the clinical practice, such as case formulation/management, therapy plan and strategies, therapeutic relationship, consultation and ethical considerations, under the guidance of a supervisor.
- PSY 644** (1+4+0) 3 Credits / 8 ECTS
Advanced Clinical Supervision II
(İleri Klinik Süpervizyon II)
 Presentation of the cases followed by the supervisees to the supervisor. Discussion of the issues related to the clinical practice, such as case formulation/management, therapy plan and strategies, therapeutic relationship, consultation and ethical considerations, under the guidance of a supervisor. Continuation of Clinical Supervision II.
- PSY 645** (1+4+0) 3 Credits / 8 ECTS
Advanced Clinical Supervision III
(İleri Klinik Süpervizyon III)
 Presentation of the cases followed by the supervisees to the supervisor. Discussion of the issues related to the clinical practice, such as case formulation/management, therapy plan and strategies, therapeutic relationship, consultation and ethical considerations, under the guidance of a supervisor. Continuation of Clinical Supervision II.
- PSY 646** (1+4+0) 3 Credits / 8 ECTS
Clinical Supervision IV
(Klinik Süpervizyon IV)
 Presentation of the cases followed by the supervisees to the supervisor. Discussion of the issues related to the clinical practice, such as case formulation/management, therapy plan and strategies, therapeutic relationship, consultation and ethical considerations, under the guidance of a supervisor. Continuation of Clinical Supervision III.

PSY 647**(3+0+0) 3 Credits / 8 ECTS****Relational Approaches in Psychotherapy
(Psikoterapide İlişkisel Yaklaşımlar)**

To review the effectiveness, efficacy, outcome, and process researches conducted in the field of psychotherapy research in the last 30 years. the Examination of the therapeutic relationship, which is a common factor in different psychotherapies, from neuropsychological and psychodynamic perspectives.

PSY 649**(3+0+0) 3 Credits / 8 ECTS****Community Clinical Psychology
(Toplum Temelli Klinik Psikoloji)**

Ecological Model and a critical examination of the broader social context within which psychological problems are embedded; basic premises and theories of community psychology; the impact of stress and social support on people, the importance and value of human diversity; prevention of psychological problems, empowerment of individuals, groups and communities; consultation and community change; psychosocial intervention; the roles of clinical psychologists involved in community work.

PSY 648**(2+1+0) 3 Credits / 6 ECTS****Community Mental Health Project
(Klinik Psikoloji Semineri)**

Presenting the theoretical background and current literature related to the specific Ph.D. thesis topic. Discussion of this knowledge and topic from the clinical psychology perspective.

PSY 650**(1+4+0) 3 Credits / 8 ECTS****Community Mental Health Project
(Toplum Ruh Sağlığı Projesi)**

Transferring the theoretical knowledge learned in the Community Clinical Psychology course into practice; identifying a problem affecting community mental health; developing a psychosocial intervention or community mental health project to address the problem, project implementation under supervision; conducting an effectiveness study and project report.

PSY 690**(0+0+0) 0 Credit / 1 ECTS****Ph.D. Thesis Topic****(Doktora Tez Konusu Belirleme)**

Making necessary reading, discussion, and planning for determining the subject for the doctoral thesis.

PSY 800**(0+0+0) 0 Credit / 15 ECTS****Preparation for PhD Qualifying Exam
(Yeterlik Sınavına Hazırlık)**

Preparing for the written and oral exams in the scope of the Ph.D. Qualifying Exam. Preparing for the exam by updating their knowledge of methods, psychopathology, and psychotherapy under the supervision of the academic advisors.

PSY 691	(0+0+0) 0 Credit / 40 ECTS
Seminar and Thesis Proposal (Seminer ve Tez Önerisi)	
Finding a specific topic that can bring innovation or fill a gap in the literature for their thesis. To review the literature related to the topic. Creating the research questions and hypotheses. Determining the measurement tools, sample, and procedure of the Ph.D. thesis.	
PSY 692	(0+0+0) 0 Credit / 20 ECTS
Ph.D. Thesis I (Doktora Tezi I)	
Ph.D. Thesis performed under supervision of the academic staff. This course must be taken during semesters where the thesis work is done.	
PSY 693	(0+0+0) 0 Credit / 20 ECTS
Ph.D. Thesis II (Doktora Tezi II)	
Ph.D. Thesis performed under supervision of the academic staff. This course must be taken during semesters where the thesis work is done.	
PSY 694	(0+0+0) 0 Credit / 20 ECTS
Ph.D. Thesis III (Doktora Tezi III)	
Ph.D. Thesis performed under supervision of the academic staff. This course must be taken during semesters where the thesis work is done. The thesis must be defended in written and spoken form in front of a jury.	
PSY 660	(0+0+0) 0 Credit / 15 ECTS
Supervised Clinical Internship I (Süpervizyonlu Klinik Staj I)	
Supervised clinical practice (internship) in a clinical setting.	
PSY 661	(0+0+0) 0 Credit / 15 ECTS
Supervised Clinical Internship II (Süpervizyonlu Klinik Staj II)	
Supervised clinical practice (internship) in a clinical setting.	
PSY 648	(2+1+0) 3 Credits / 6 ECTS
Psychotraumatology (Psikotravmatoloji)	
In-depth examination of concepts and research findings about traumatic experiences from a psychosocial perspective. Understanding individual, familial and societal impacts of crises and traumas. Gaining knowledge and skills with regard to evidence-based psychosocial and therapeutic interventions. Integrating societal and cultural issues while performing clinical evaluations for traumatic events.	

PSY 651**(2+1+0) 3 Credits / 6 ECTS****Culturally Sensitive Psychotherapy Applications
(Kültüre Duyarlı Psikoterapi Uygulamaları)**

Understanding and application of major principles of culturally sensitive psychotherapies. Gaining knowledge and skills in psychotherapy applications conducted with cultural groups having unique psychosocial needs (LGBT+, disabled, cultural minority groups etc). Gaining insight regarding cultural identity and prejudices as a therapist and researcher.

PSY 652**(2+1+0) 3 Credits / 6 ECTS****Marital and Family Therapies
(Evlilik ve Aile Terapileri)**

Examination of foundational concepts and principles of couple and family therapy from different theoretical perspectives. Differentiating concepts and techniques belonging to distinct family therapy schools. In-depth understanding of the impacts of family process and structure on stress and psychological symptoms. Learning main assessment and intervention principles of major family theory approaches (e.g. System Theory, Structural Family Therapy etc.). Conceptualization of the impacts of changing social, cultural and political dynamics on family structure and therapy.

PSY 653**(2+1+0) 3 Credits / 6 ECTS****Principles of Group Therapy
(Grup Terapisinin İlkeleri)**

In-depth examination of theoretical premises and application of Group Therapy. Evaluation of group processes and group dynamics from different theoretical perspectives. Gaining ability to decide suitability of group therapy for different psychosocial problems. Experiencing group therapy both as a leader and an experiential participant.

PSY 654**(2+1+0) 3 Credits / 6 ECTS****Group Therapy Practice and Supervision
(Grup Terapisi Uygulama ve Süpervizyonu)**

Developing skills regarding timing, management and structuring of group sessions in conjunction with skills necessary to manage interpersonal factors. Learning therapeutic methods to monitor and facilitate group relations. Integrating theoretical knowledge with group therapy skills. Developing skills necessary to manage interpersonal and ethical problems in group therapy settings.

PSY 655**(2+1+0) 3 Credits / 6 ECTS****Introduction to Psychodynamic Psychotherapies
(Psikodinamik Terapilere Giriş)**

Understanding of theoretical premises and application principles of psychoanalytic school of thought from a historical perspective. In depth-examination of Freudian psychoanalysis, Object Relations Theory, Ego Psychology, Self-Psychology and Lacanian perspective in conjunction with the analysis of clinical case examples.

- PSY 656** (2+1+0) 3 Credits / 6 ECTS
Play Therapy
(Oyun Terapisi)
Understanding theoretical premises and application of Play Therapy. Use of play as a therapeutic technique in child psychotherapy practices. Comprehensive conceptualization of the interactive relations among therapist, parents and the child during play therapy.
- PSY 657** (2+1+0) 3 Credits / 6 ECTS
Positive Psychology
(Pozitif Psikoloji)
Examination of the dynamic relation between positive affect and cognitive processes by means of self-compassion, hope, optimism, mindfulness, creativity, altruism and forgiveness. Understanding of main theoretical concepts of positive psychology including subjective well-being and happiness, dispositional optimism and positive interpersonal relationships. Learning fundamental components of therapeutic applications employing self-compassion and mindfulness.
- PSY 658** (2+1+0) 3 Credits / 6 ECTS
Psychopharmacology
(Psikofarmakoloji)
Assessment and identification of psychopathological problems for which psychiatric referral is necessary. In-depth understanding of effectiveness mechanisms and side effects of psychoactive medication use. Conceptualization of impacts of psychoactive medication use on therapeutic process. Examination of the relationship between drug categories and specific mental problems.

ENGLISH
LANGUAGE
SCHOOL



ENGLISH LANGUAGE SCHOOL (ELS)

Director

Suzan KOTAN

Instructors

Abdullah Furkan Palabıyık	Fulya İöz Narlı	Nancy Cherilus
Ahmet Tařkın Tař	Funda Kelahmetođlu	Nazila Aliyeva
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Atiye Burcu Yeřilyurt	Gizem Altın	Nazlı Elif Yalın
Aylin Selin Dewan	Hajar G. Khiabani	Nezih Nal
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Ayřeđül etin	Halenur Penekliođlu	Renan Güney
Cansu akmak Özgürel	Hamide Nur Ünal	Seda Aydan
Cennet Alaam	İclal Partlak	Selda Deliktaş
Ceren Yađmur Öztürk	İrem Yılmaz	Senar Emre
Deniz Bacaksız	John Michael Flynn	Serap Güçlüer Dindar
Elif Davutođlu Akbulut	Joseph Blake Lewis	Sercan elik
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Emre Demirel	Kerem Seluk	Sezin Topu
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Ersel Akgül	Meri Bulca	Tony Duane Sturtevant
Esmâ Ceren Ocak	Mert Deniz	Wendy Laura Phillips
Esra Erzen	Metin Halis Kaya	Zachary Charles Craig Beihler
Esra Ordu	Murat İnci	Zahide Hande Alhas
Esra Sansu	Mustafa Eray Eren	
Fatih Ekinci	Naile Bulu	

The Mission of English Language School

The aims of ELS program are as follows:

- To provide high quality language education
- To equip our students with English language skills necessary for undergraduate studies at TEDU and future professional lives
- To help students develop critical, reflective and creative thinking skills
- To help students become independent individuals

Our Philosophy of Education

The educational principles of TEDU English Language School are:

- To make learning meaningful
- To ensure active participation of students
- To be guiding and facilitating trainers
- To apply different learning styles
- To emphasize independent learning
- To mentor learners
- To provide students with continuous feedback

STRUCTURE OF THE PROGRAM

1. ELS LANGUAGE PROGRAM

The Program at the English Language School runs on a semester-based system which encourages student motivation and enables students to fully acquire the necessary skills. Our program comprises of 4 levels that are D, C, B and A.

- At the end of the program, students are required to have 60 out of 100. If they are successful, they go on to the higher level.
- Students placed in D, C or B level will be placed in a higher level in the next semester on condition that they collect 60 out of 100 at the end of the semester. For these students to be able to move on to their departmental studies at the end of spring semester, 30% of the score that they have collected during the semester and 70% of their EPE scores must sum up to 65 or higher. For students placed in the A level at the beginning of the fall semester to be able to move on to their departmental studies at the end of the fall semester, 30% of the score that they have collected during the semester and 70% of their EPE scores must sum up to 65 or higher.

- Each student will be provided the opportunity to start his/her undergraduate studies within a year. Students who are not able to pass on to their undergraduate studies the first year, may attend our school for another semester or year depending on their level.

2. LEVEL DESCRIPTIONS

The number of sessions for each level is the same;

- D Level: 20 hours per week
- C Level: 20 hours per week
- B Level: 20 hours per week
- A Level: 20 hours per week

Students who are able to successfully complete their education at ELS with a high level of English are eligible to;

- Understand and take notes by differentiating the main idea and details of academic sessions, texts and speeches while listening.
- Summarize academic sessions, texts and speeches by using the notes they have taken.
- Ask and answer questions considering the academic sessions, texts and speeches they listen.
- Read texts and summarize the important ideas.
- Use critical thinking skills to synthesize and summarize reading and listening texts.
- Synthesize reading and listening texts in their own words.
- Express themselves in written and spoken forms by using wide range of vocabulary and grammar points.
- Make speeches concerning academic content and communicative purposes.

VII. ACADEMIC RULES AND REGULATIONS



ACADEMIC RULES AND REGULATIONS FOR UNDERGRADUATE STUDY

(Turkish version is the legally binding document)

PART ONE

Aim, Scope, Basis and Definitions

Aim

ARTICLE 1 - (1) The aim of the rules and regulations herein are to regulate the procedures and principles with regard to registration, education, examination and graduation of the students attending undergraduate programs at the faculties of TED University.

Scope

ARTICLE 2 - (1) The rules and regulations herein cover the principles of admission and registration, examination, assessment of achievement, provision of diplomas and other related procedures pertaining to undergraduate study at the faculties of TED University.

Basis

ARTICLE 3 - (1) The rules and regulations herein have been based on Articles 14, 43 and 44 of the Higher Education Law No. 2547 dated 4/11/1981.

Definitions

ARTICLE 4 - (1) These terms shall have the following meanings heretofore;

- | | |
|---------------------------------|-------------------------------------------|
| a) Relevant board : | TED University Faculty board(s) |
| b) Relevant executive board : | TED University Faculty Executive Board(s) |
| c) Board of Trustees : | TED University Board of Trustees |
| d) Rector : | TED University Rector |
| e) Senate : | TED University Senate |
| d) University Executive Board : | TED University Executive Board |
| f) University : | TED University |

PART TWO

Academic Calendar, Education Programs, Duration of Education and Tuition Fees

Semester System and Academic Calendar

ARTICLE 5 - (1) Undergraduate study is arranged on the basis of semesters.

(2) The academic year consists of 14 weeks for both fall and spring semesters, excluding the final examination period.

(3) In addition to fall and spring semesters, a seven-week summer session is organized upon the decision of the Senate and the approval of the Board of Trustees. The principles and procedures applicable to the summer session are determined by the Senate.

(4) The dates and duration pertaining to all educational activities are included in the academic calendar prepared by the Senate.

Quotas and Education Programs

ARTICLE 6 - (1) The number of students with or without scholarship to be admitted to faculty degree programs in the subsequent academic year is determined by the Board of Trustees upon the proposal of the university Executive Board and is finalized with the approval of the Higher Education Council.

(2) The competencies expected from a student who graduates from a diploma program and the educational programs composed of courses, laboratory work, internship and similar activities are prepared by the respective administrative boards and approved by the Senate.

(3) All changes in curricula for the subsequent academic year are determined, finalized and announced by the end of June every year in accordance with the same procedures and principles.

Medium of Instruction

ARTICLE 7 - (1) The medium of instruction in TED University undergraduate programs is English. However, as required by Higher Education Law No. 2547, mandatory courses to be given in Turkish, as well as other courses determined by the Senate, are taught in Turkish and are specified as such in the University Catalog.

Duration of Study

ARTICLE 8 - (1) The regular teaching period at the English Language School preparatory program is two semesters. For elementary level students, the period includes a pursuant summer session, in addition to the two semesters. Students whose level of English is deemed insufficient at the end of this period are entitled to study English one more year.

(2) The undergraduate study is normally eight semesters at the faculties of the University.

Student Advisors

ARTICLE 9 - (1) For each student enrolled at TED University, a faculty member is appointed as an advisor by the relevant department chair. The duty of the student advisor is to follow up on the academic performance, to assist in the scheduling of the student's education program, and to guide the student within the framework of regulations and directives.

Tuition Fees

ARTICLE 10 - (1) Undergraduate study at TED University is subject to tuition fees. The fees are determined annually by the Board of Trustees.

(2) Students who fail to pay the annual tuition fee by the announced due dates are not registered, their registration is not renewed and leave of absence requests are not granted. These individuals are not able to benefit from the rights of students.

Scholarships

ARTICLE 11 - (1) Except for students who are placed with scholarships in various programs of the university by the Student Selection and Placement Center (SSPC), the principles on distribution of the additional scholarships and financial assistance provided to the students from various sources are determined by the Senate.

PART THREE

Principles of Admission and Registration

Admission of New Students

ARTICLE 12 - (1) The admission of students to the first year of undergraduate programs is done in accordance with the results of the annual examination carried out by the Student Selection and Placement Center.

(2) Admission of international students is done with the decision of the relevant executive board within the framework of the regulations and decisions of the Higher Education Council, within the provisions of higher education law and in accordance with the conditions outlined by the Senate.

(3) Transfer students placed at other universities by SSPC can be exempted from the courses they have successfully completed in these universities with the decision of the relevant executive board, provided that they submit an application in the first week of the academic year. In case of approval of course exemption, the student's grade for the relevant course is indicated as "T".

Admissions via Horizontal or Vertical Transfer

ARTICLE 13 - (1) Admission to TED University undergraduate programs is open to students from other national and international higher education institutions via horizontal or vertical transfers.

(2) The quotas of such transfers are determined with the approval of the Board of Trustees upon the proposal of the university Executive Board. It is also determined within the provisions of the Rules and Regulations No: 27561 on the "The Regulation for Student Transfer Between Associate Degree and Bachelor's Degree Programs, Double Major and Minor Programs and Course Credit Transfers Between Institutions of Higher Education Institutions", published in the Official Gazette on 24/4/2010.

(3) Candidates applying for horizontal or vertical transfer are required to fulfil the English proficiency requirements set for candidates starting undergraduate programs of the university.

Horizontal Transfers within the University

ARTICLE 14 - (1) In horizontal transfers within the university, students are required to have completed the first two semesters satisfactorily (excluding the language preparatory program), not have been dismissed from the university for any reason, and to fulfil the requirements of The Regulation for Student Transfer Between Associate Degree and Bachelor's Degree Programs, Double Major and Minor Programs and Course Credit Transfers Between Institutions of Higher Education Institutions, in addition to the conditions determined by the Senate if applicable.

Special Students

ARTICLE 15 - (1) Students or graduates of other higher education institutions can be accepted as special students in undergraduate courses in order to develop their knowledge and skills on a specific subject.

(2) Candidates applying to take courses with special student status are required to fulfil the requirements set for English proficiency necessary for study at the undergraduate programs of the university.

(3) The application, courses and total course hours of special students are decided on by the relevant executive board, taking the opinion of the relevant department's chair into account.

(4) Neither diplomas nor credits are awarded to special students. A document indicating the courses taken and their grades is given upon their request.

(5) Special students pay a tuition fee on the basis of the courses they attend in accordance with the principles determined by the Board of Trustees.

Exchange Programs

ARTICLE 16 - (1) TED University can arrange student exchange programs with national and international universities, can send students to other higher education institutions for a maximum of two semesters within the scope of these programs and can receive students from other higher education institutions.

(2) Student exchange is possible within the framework of the basics set forth in the Regulation for Student Transfer Between Associate Degree and Bachelor's Degree Programs, Double Major and Minor Programs and Course Credit Transfers Between Institutions of Higher Education Institutions, in addition to the conditions determined by the Senate with the decision of the Executive Board of the relevant faculty or higher school.

(3) The students sent to other higher education institutions within the scope of exchange agreements continue to be enrolled at TED University during the period they spend in the exchange program.

(4) Students are not eligible for exchange programs in the final semester of their senior year.

(5) Credit and grade matching of the courses the students have taken in other higher education institutions with their advisor's approval, within the scope of exchange agreements, is done with the decision of the relevant executive board.

(6) All exchange students pay the tuition fee required by the higher education institutions that they are registered in.

English Proficiency Examination

ARTICLE 17 - (1) The students who complete their registration take the English Placement Examination given by the English Language School.

(2) The students who score higher than the predetermined level in that examination enter the English Proficiency Test.

(3) The students who score lower than the predetermined level attend the level determined in accordance with their performance, and the weekly course hours and rules of changing levels are determined by the English Language School.

(4) The students who fail the English Proficiency Examination continue in the English Preparatory Class for one year. The principles of -teaching at the English Preparatory Class is determined by the Senate.

(5) National and international tests equivalent to the English Proficiency Examination can exempt students from enrolling in the university preparatory program and the minimum scores necessary for exemption are determined by the Senate.

(6) Students who provide documentation of the required level of success determined by the Senate directly start the undergraduate programs.

(7) Undergraduate students with gaps in their education of two consecutive years or four semesters due to reasons such as leave of absence, failure to renew registration, etc., are required to prove their competency through the English Proficiency Examination or through an equivalent test approved by the Senate. However, for those who spent the relevant time in national or international English medium higher education institutions, such a condition is not be applicable.

Initial Registration

ARTICLE 18 - (1) The students admitted at the University are required to obtain the necessary documents announced for registration and to register personally at the University within the time period indicated in the academic calendar.

(2) Candidates who cannot register individually due to valid reasons might have their initial registration processed through a legal representative.

(3) Candidates who fail to complete registration in the required time lose their registration rights.

(4) Registration of candidates with missing or damaged documents or candidates expelled from any higher education institution as a penalty is annulled.

(5) At registration, originals or copies approved by the university are accepted. For military status and judicial records, the declaration of the candidate is valid.

Renewal

ARTICLE 19 - (1) At the beginning of each semester, the students of the university are required to renew their registration within the time period indicated in the academic calendar prepared by the Senate and announced by the Rector's Office. This process involves selecting courses under the guidance of their advisors, paying the relevant tuition fees and completing other liabilities to the university.

PART FOUR

Undergraduate Programs

Curricula and Course Loads

ARTICLE 20 - (1) The courses to be taken by the students in each semester consist of required and elective courses, laboratory, practice, project, thesis and similar studies.

(2) Required courses are the courses that the student is obliged to take, whereas the electives are the courses that the student selects from among various groups of courses.

(3) The courses in the curriculum are taken in accordance with the course hours, credits and prerequisites, if any, within the framework of the below mentioned conditions:

a) Students taking courses for the first time or repeating courses from previous semesters are required to first register for these courses. If these courses to be repeated or to be taken for the first time are in the same semester, students need to take the ones from the earliest semester.

b) "F" and "FX" grades show that the student has failed that course. The students with these grades are required to repeat the course upon the first availability of the mentioned course, if it is a program requirement.

c) Students who do not fulfil the prerequisites of a course are not registered for the course.

ç) In case of multiplicity or conflict of the courses a student should take or repeat it is possible not to take some or all of the courses in the curriculum of that semester.

d) The students are able to add or drop courses within the period indicated on the academic calendar. Add/drop is subject to the conditions applicable for regular registration such as prerequisite courses, maximum course load, minimum required course load and conflicting courses. The add/drop period shall not exceed two weeks following the start of the semester. Students are not able to drop the courses they are repeating from the semester of their earliest "F" or "FX" grade(s).

e) Prior to the deadline of the withdrawal period indicated on the academic calendar, students are able to withdraw from a maximum of two courses in a given semester and a maximum of six courses throughout their education. These students receive a "W" for these courses. The approval of the student's advisor is required for withdrawal. No refund is given for fees related to "W" courses. Students are not able to withdraw from the required courses being repeated from the earliest semester and from courses with the grade of "F" or "FX". The mark of "W" does not hinder graduation. Students are not able to withdraw from courses in the last four weeks of the semester.

Course and Credit Loads

ARTICLE 21 - (1) The number of examinations, practical assignments and other assignments that are the students' responsibilities for each course, the contribution of these to the final grades and the requirements of the final exam are determined by the instructor and disclosed to the students at the onset of the semester.

(2) Depending on the characteristics of a course, a final exam may be excluded, upon the approval from the relevant Executive Board.

(3) The regular course load advised to students is equal to the average number of credits per semester in a given program, plus or minus two credits. The average number of credits per semester is calculated by dividing the total number of credits in the curriculum by 8.

(4) The course load of a student can be increased or decreased with the approval of the student's advisor. However, students registered for the first time in the first semester of a diploma program are not able to exceed the regular course load of that semester. Exceeding the regular course load (i.e. overloading) by 8 credits is not allowed. The minimum course load is 9 credits per semester, which can be reduced to 6 credits with the decision of the relevant Executive Board. The students who are expected to graduate in a maximum of two semesters are not subject to that condition.

Late Registration and Unregistered Student Status

ARTICLE 22 - (1) Students who fail to register by the designated registration dates may also register late during the add/drop period stated in the academic calendar. Students who also fail to register before the end of the add/drop period are not registered unless they can show valid acceptable reasons for the delay, to be approved by the relevant executive board within two weeks of the end of the add/drop period. Moreover, students registering late are obliged to fulfil the additional requirements determined by the Senate.

(2) Students who do not renew their registration become unregistered students. Unregistered students cannot enjoy the rights to which registered students are entitled to. The period spent while a student is unregistered is included in the term of study. Unregistered students may reactivate their registrations in the following registration period. Students wishing to reactivate their registrations will have to pay the tuition fee for the year and are not able to benefit from any TEDU scholarships they were previously awarded.

Attendance

ARTICLE 23 - (1) Students must attend the theoretical and practical class hours, examinations and other academic studies as required by the instructors.

(2) The attendance requirements will be announced by the instructor at the beginning of the semester.

Summer Internship

ARTICLE 24 - (1) For programs that require summer internship, the rules of conduct of the summer practicum are determined and declared by the Senate.

Double Major and Minor Programs

ARTICLE 25 - (1) The Senate might open double major and minor programs. The regulations governing these programs are determined by the Senate.

PART FIVE

Assessment

Examinations

ARTICLE 26 - (1) Each semester ends with an examination period known as the final examination period. Final examination periods are announced in the academic calendar.

(2) The final exam dates are announced at least four weeks before the final examination period of fall and spring semesters and two weeks before the final exam period of summer session.

(3) At least one midterm exam and one final exam are given for each course.

(4) The instructor may assess the assignments, laboratory practices and similar activities as midterm or final exam.

(5) The courses for which no midterm or final exam will be given are decided on by the relevant faculty boards.

(6) The excuse of a student, who could not attend the final exam due an illness or other hardship, will be investigated by the University Plea Committee. If the committee accepts the student's excuse, the student will be entitled to a make-up exam. The excuse of a student failing to attend a midterm examination will be directly evaluated by the instructor of the course. If the instructor accepts the excuse, the student will be entitled to make up for the unattended midterm. These students may be entitled to make-up exams, or weight adjustments of the final exam, or assignment of an additional project/essay or similar procedure.

(7) Instructors are expected to submit letter grades to the Rector's Office and Registrar's Office information system within one week of the course final exam date.

(8) Once recorded by the Registrar's Office, letter grades may only be altered if a written explanation, together with supporting documentation, is submitted by the course instructor to the dean's office of the relevant department. This application is evaluated by the executive board of the relevant faculty. Upon approval, the registrar will make the necessary correction to the student's academic record, provided the procedure is completed before the end of the next registration period.

(9) Exam papers and student answers will be kept on file by the university for at least two years following the term in which the course is offered.

Grade Appeals

ARTICLE 27 - (1) Students may request their instructor to review a grade for any exam in a course within one week after the grade announcements. If the appeal is rejected, students may submit a written appeal to the dean's office of the department by which the course is offered. The relevant board may, in turn, designate a review committee consisting of three members to make the final decision. If the decision is in favor of changing the result of the exam and if this requires a change in the final semester course grade of the student, the final grade is changed. For courses not offered by the faculties, the Rector's Office and the university Executive Board bear the responsibility of the review process explained above.

Letter Grades and Marks

ARTICLE 28 - (1) For each course taken by the student, as a result of the required exams or similar evaluations, one of the following grades is given by the course instructor:

Grades	Status	Grade Point Value
AA	Excellent	4.00
BA	Good-excellent	3.50
BB	Good	3.00
CB	Satisfactory-good	2.50
CC	Satisfactory	2.00
DC	Weak-satisfactory	1.50
DD	Weak	1.00
F	Failing	0.00
FX	Failing	0.00
P	Passing	-

- a) Letter grades "AA" and "BA" indicate that the course was completed with "outstanding achievement"
- b) Letter grade "CC" indicates that the course was completed with "satisfactory achievement"
- c) Letter grades "DC" and "DD" indicate that the course was completed "conditionally"
- ç) Letter grade "F" is a failing grade and assigned to students who could not reach the level of "DD" or "P."
- d) Letter grade "FX" is assigned to students who have failed to attend classes or failed to participate in the midterm exam, final exam, term project or in similar major course assessment activities
- e) Students who receive grades "F" and "FX" for a required course are required to repeat the course upon its first availability in a regular term. The summer session is not a regular term in this context.

Other Grade Symbols Used

ARTICLE 29 - (1) Other than the letter grades mentioned in Article 28, the following grades can be used under certain circumstances explained below.

T	The letter "T" (Transfer) is assigned for those courses taken at another university by students transferring to TEDU or by TEDU exchange students who studied abroad. Such courses taken at another university are transferred as credit only, not for a grade, and must be approved by the relevant faculty board as equivalent in content to a course in the pertinent academic curriculum of TED University.
NC	The letter "NC" (Non-Credit) is given for completed courses not included in the calculation of grade point average
NP	The letter "NP" (Not Present) is given to students who did not take the final exam. In cases when this letter is given, the course instructor is expected to convert it to a letter grade before the deadline for make-up grade entries. In case of failure to convert it to a letter grade within the required period, the letter "NP" will automatically turn into a letter grade "F".

I	The letter "I" (Incomplete) is given to students who cannot complete the course requirements, like projects or term papers, by the end of the semester or the summer session for a reason accepted by the course instructor. The letter "I" must be converted to a letter grade within two weeks of the deadline for grade submission to the registrar. In case of failure to convert the letter "I" to a letter grade within the required period, it will automatically turn into a letter grade "F"
R	The letter "R" (Repeat) indicates a repeated course
W	The letter "W" (Withdrawal) is given to students who withdraw from a course within the withdrawal period mentioned in the academic calendar.
L	The letter "L" (Leave) is given to students on leave.

Grade Point Averages and Academic Standings

ARTICLE 30 - (1) Academic standings of the students are determined by calculating their grade point averages at the end of each semester.

(2) The total credit points obtained from a course are calculated by multiplying the course's number of credit hours and the grade point value of the final letter grade received. (See chart in Article 28.)

(3) Semester Grade Point Average (SPA) is calculated by dividing the total credit points obtained from all the courses a student has taken in the pertinent semester by the total number of credit hours received in those courses.

(4) Cumulative Grade Point Average (GPA) is calculated by taking into consideration all the courses a student has taken since the beginning of the program. If there are repeated courses, the last grade obtained from the course, replaces the previous grade and is included in the grade point average calculation.

(5) Calculated semester and cumulative grade point averages are rounded to two decimal places.

(6) Students may repeat courses for which they have received a letter grade "DD" and/or "DC" in order to raise their grade point averages. Courses with letter grades "CC" and above cannot be repeated.

(7) Students with cumulative grade point averages of 2.00 and above are in good academic standing.

(8) Students with cumulative grade point averages less than 2.00 are placed on academic probation; probationary students are not entitled to course overload. These students must first repeat the courses from which they have received conditionally passing grades ("DD" or "DC") to raise their grade point averages.

(9) Course overloads of students in good academic standing and mandatory course repeats of students on probation are regulated on the basis of the principles determined by the Senate.

(10) Every semester, students with SPAs between 3.50 and above qualify as "High Honor" students. Those with SPAs between 3.00 and 3.49 qualify as "Honor" students, provided they have taken the regular course load and have a cumulative GPA of 2.00 or above.

PART SIX**Leave of Absence / Withdrawal from University****Leave of Absence**

ARTICLE 31 - (1) With the condition of provision of necessary documents, students may apply for leaves of absence due to health related matters, military service, education abroad or other academic, financial or familial obligations, as well as other extraordinary reasons accepted by the university Executive Board.

(2) The application for leave of absence must be submitted to the dean's office of the relevant faculty by a petition with supporting documents any time up to and including the last working day of the fourth week following the start of the classes. Applications after the end of this period are not processed. The request for leave of absence is granted upon the approval of the relevant faculty executive board.

(3) In the case of immediate sickness, a serious accident or other extraordinary circumstances occurring after the end of the application period for leave of absence, the status of the student is evaluated by the university Executive Board.

(4) Students are entitled to leave the university for a maximum of two consecutive semesters and four semesters in total during their term of the study. In obligatory situations upon the proposal of the relevant faculty executive board the term can be extended with the decision of the university Executive Board.

(5) Students requesting leave of absence from the university must pay half the tuition fee of the pertinent semester and clear all their debts to the university prior to the activation of the process. The tuition fees paid for the period of leave will not be deducted from the following semester's fees. Students considered on approved leave upon the decision of the University Executive Board after the indicated deadline, have to pay the tuition fee for the respective semester.

Withdrawal from University

ARTICLE 32 - (1) Students who wish to withdraw from the university must apply in writing to the relevant dean's office and follow the procedures required by the university. These students must fulfil their tuition fee and other financial obligations in order to receive their high-school diplomas and other related personal documents from the registrar's files. If requested, students can be given a document indicating their grades. The notarized copies of the high-school diploma and other documents required at the stage of registration will be kept on file in the Registrar's Office.

(2) If the student's withdrawal request is received prior to the start of courses, the student is not obliged to pay any tuition fee. Fifty percent of the tuition fee paid for the pertinent semester will be refunded to the student if the withdrawal request is filed any time up to and including the last working day of the fourth week following the start of the classes in a regular semester or the second week following the start of courses in the summer session. In all other cases, no refund will be made by the university.

PART SEVEN

Graduation

Special Requirements

ARTICLE 33 - (1) Apart from maintaining the required satisfactory grade point averages, students must spend their last semester, excluding the summer session in TEDU. At least half of the total credit points required by the curriculum must be obtained from courses completed at TEDU.

Diploma and Honors Documents

ARTICLE 34 - (1) Students who successfully complete all courses in the undergraduate program in which they are registered with a cumulative grade point average of at least 2.00 are eligible, with the condition of fulfilling the other graduation requirements, to receive the "Undergraduate Diploma of TED University" upon the decision of the relevant executive board.

(2) Students with a grade point average of at least 2.00 but failing to fulfil the graduation conditions due to "F" (not valid for FX) letter grades in a maximum of two courses, may be given the opportunity to take an exam or to undertake an equivalent academic project by the relevant executive board, upon the favorable opinion of the relevant instructor. With this exam or project, the student can compensate for the letter grade(s) of "F" without repeating the course(s).

(3) Students who complete their undergraduate education within 9 semesters or less with cumulative grade point averages between 3.00 and 3.49 graduate with "Honor," and the ones with cumulative grade point averages of 3.50 or above graduate with "High Honor." Students who receive disciplinary penalties during the course of their education in the university, however, are not entitled to such status. Students graduating with "Honors" and "High Honor" graduates are issued an honorary certificate indicating their status along with their diplomas.

(4) The requirements for diplomas and graduation of students earning double major or minor degrees are determined by the Senate.

(5) In the event that a diploma is lost, a new copy is issued only once, provided that the fee is paid and a lost notice is published in the national press. The new copy is printed with the phrase "second copy" on it.

ARTICLE 35 - (1) An "Associate Degree Diploma" is awarded to students who choose to leave the university or are expelled from the university without completing their degree program, but have completed all the courses of the first four semesters or at least half of the total credit of the programs that they are registered in with a grade point average of at least 2.00

Discipline

ARTICLE 36 - (1) The disciplinary proceedings of students are conducted in accordance with the "Rules and Regulations Governing the Disciplinary Procedures in Institutions of Higher Education" published in Official Gazette issue 18634, dated 13/1/1985.

PART EIGHT

Execution and Enforcement

Enforcement

ARTICLE 37 - (1) These regulations come into effect on the date of their issue.

Execution

ARTICLE 38 - (1) These regulations are executed by the Rector of TED University.

i. University Senate Decision 29.08.2012 – No.2012/5:

The minimum number of students for opening an elective course is 10. This number is 15 for the first year and second year service courses. This criteria is not valid for the establishment period (until the first graduates). For the summer school the designation of the tuition fee and the minimum number of students for opening a course is done according to the current budget limitations. These rules are defined and announced each year along with the summer school decisions.

ii. University Senate Decision 01.08.2013 – No. 2013/6:

The tuition fee payments done after the deadline announced in the Academic Calendar will be subject to a surcharge of 30TL per each business day (the respective payment continues until the end of add/drop period).

iii. University Senate Decision 29.08.2012 – No. 2012/5:

Compulsory course repetition for probation students: The new course registration of probation students are limited after the first two semesters in order to allow them to increase their grade point averages due to F, FX, DD and DC. The students who can not achieve the satisfactory status due to lack of credits, repeat the courses in which they have received F, FX, DD and DC letter grades. However if there are no courses they were graded with F, FX, DD, DC they can register to new courses if their course load allows.

The satisfactory status is defined as,

GNO=1.60 for students with 50 credits or less,

GNO=1.70 for students with 51-100 credits,

GNO=1.80 for students with 101 and more credits

Credit means "credits completed".

Excessive course load: The students receive a package program on their first semesters, there is no possibility for excessive course load. Probation students can not exceed the normal course load. 8 credits over the average course load is not allowed.

University Senate Decision 29.08.2012 – No. 2012/5 No (Correction of the error of fact):

The students whose general point average is between 3.00-3.49 are awarded as Honor, those who achieve a general point average of 3.50 and above are awarded as High Honor Students with the pre-condition of being registered to normal course load each semester.

i. The Senate decision dated 01.12.2016 and numbered 2016/14: "The request to extend the deadline to change the grading period for I-incomplete grades, for courses not changed into letter grades within 15 days, to the beginning of the following semester's registration period at the latest by a relevant board decision".

It was decided that the grading period for I-incomplete grades, for courses not changed into letter grades within 15 days, could be extended to the beginning of the following semester's registration period at the latest by a relevant board decision.

i. Senate Decision dated 01.06.2017 and numbered 2017/06: IP (In Progress) grade is given to students who are successfully continuing non-credit courses (except the Master's Thesis course).



TED UNIVERSITY