

ISTANBUL TECHNICAL UNIVERSITY

**Petrol ve Dogal Gaz Muhendisligi Bolumu
Maden Fakultesi
Maslak 34469
Istanbul, TURKEY**

**PHONE:90.212.285.6270
FAX:90.212.285.6263**

**DEPARTMENT E-MAIL: pdgmb@itu.edu.tr
UNIVERSITY: <http://www.itu.edu.tr/>
DEPARTMENT: <http://atlas.cc.itu.edu.tr/~pdgmb/>**

DEAN: Mahir Vardar, Faculty of Mines

CONTACT INFORMATION

Contact	Phone	E-mail
Secretary, Ebru Topkara	90.212.285.6275	topkara@itu.edu.tr
Department Head, Abdurrahman Satman	90.212.285.6268	mdsatman@itu.edu.tr
SPE Faculty Sponsor, Gursat Altun	90.212.285.6265	galtun@itu.edu.tr
Graduate Advisor, Mustafa Onur	90.212.285.6269	onur@itu.edu.tr
Assistant Head, H. Ozgur Yıldız	90.212.285.6312	hyildiz@itu.edu.tr
Assistant Head, Senol Yamanlar	90.212.285.6192	yamanlar@itu.edu.tr

DEGREE INFORMATION

DEGREES OFFERED IN PETROLEUM ENGINEERING

Degree	Required Petroleum Hours	Required Total Hours	Curriculum Description
Bachelor	45	151	http://atlas.cc.itu.edu.tr/~pdgmb/dept/classes.htm
Masters	12-24	30	http://atlas.cc.itu.edu.tr/~pdgmb/dept/graduate.htm
Doctorate	12-27	33	http://atlas.cc.itu.edu.tr/~pdgmb/dept/graduate.htm

ACCREDITATION

The four year basic level day program in Petroleum and Natural Gas Engineering is under accreditation evaluation by ABET.

CURRICULUM DESCRIPTION

The mission of the department is to provide undergraduate and graduate level engineers, conduct research and serve the entire sectors of petroleum and natural gas industry worldwide, and to contribute for the substantial development of the nation and for the commonality in the utilization of subsurface energy resources. The relevant subjects are well covered through sufficient and qualified number of faculty members.

Undergraduate

The program educates the student fully in the basic sciences of geology, physics, mathematics, and chemistry and all of the engineering sciences required in the discovery, drilling, production, reservoir evaluation, transportation, and marketing of petroleum, natural gas, and geothermal fluids. The undergraduate program requires a minimum of 151 course-credit hours. Individual course descriptions are listed on the department web server.

Graduate

Masters: The M.Sc. Degree program requires a minimum of 30 graduate credit hours beyond the baccalaureate degree, including 6 credit hours allowed for the thesis. An acceptable thesis is required for the M.Sc. degree. Individual course descriptions are listed on the web server of Institute of Science and Technology of Istanbul Technical University (<http://www.fbe.itu.edu.tr/>).

Doctorate: The Ph.D. degree program requires a minimum of 27 course-credit hours beyond the masters' degree. An acceptable dissertation is required for the Ph.D. degree. Individual course descriptions are listed on the web server of Institute of Science and Technology of Istanbul Technical University (<http://www.fbe.itu.edu.tr/>).

PROGRAM ADMISSION REQUIREMENTS

Undergraduate

The majority of the students (approximately 30 out of 40) are accepted via the interuniversity “Student Selection Examination”, which is executed by the Council of Higher Education-Turkey. In the computation of the effective scores of candidates, the high school achievement grades of the students are also taken into account in addition to the examination scores. In the last five years, the department accepts students from the top 1.5% of all the students who have taken the examination in Turkey. The number of students taking the student selection exam was over 1.5 million in 2002. The remaining nearly 10 students, who are also accepted via “Foreign Student Examination” also carried out by the Council of Higher Education”, are foreign students. Transfer students must have a minimum 2.00 cumulative GPA taken at a recognized university

Graduate

Masters: The master’s program requires 30 graduate credit hours above the baccalaureate degree, including 6 credit hours allowed for the thesis. At least 12 credit hours of department courses are required in addition to the thesis. Additional credit hours of other engineering, mathematics, or science will be allowed when approved by the candidate’s advisory committee and graduate advisor. The graduate program for each candidate is specifically tailored for that candidate’s educational background, industry experience, and individual interest. Qualified students with a B.Sc. degree in any field may enter the M.Sc. program in petroleum and natural gas engineering by completing without graduate credit leveling work as needed in basic science and engineering courses. The details of the leveling program will be worked out on an individual basis by the graduate advisor, and the length of the program is about 2 semesters. The admission requirements are described on the web server of Institute of Science and Technology of Istanbul Technical University (<http://www.fbe.itu.edu.tr/>).

Doctorate: For graduate admission in petroleum and natural gas engineering, an applicant must hold a M.Sc. degree from a university of recognized standing and must be able to demonstrate fundamental skills in petroleum, natural gas, and geothermal energy engineering. The Ph.D. program requires 27 course credit-hours excluding the dissertation study. The applicant must have a minimum 3.00 cumulative GPA on master’s program. The admission requirements are described on the web server of Institute of Science and Technology of Istanbul Technical University (<http://www.fbe.itu.edu.tr/>).

FACULTY INFORMATION

Name	Degree	Position	Major Field of Interest	E-mail	Phone
Altun, Gürsat	PhD., PE	Assistant Professor	Drilling/Well Completion /Formation Evaluation	galtun@itu.edu.tr	90.212.285.6265
Aydınoglu, Züleyha	PhD., PE	Assistant Professor	Fluid Properties/ Production/Geothermal	ugur@itu.edu.tr	90.212.285.6261
Cinar, Gultekin	M.S., PE	Part-Time Faculty	Natural Gas Engineering/Economics	gultekinc@stfa.com.tr	90.212.285.6270
Goktekin, Aytin	PhD., PE	Professor Emeritus	Drilling/Production/EOR	gtka@itu.edu.tr	90.212.285.6276
Gürkan, Argun	PhD., PE	Professor	Formation Evaluation/EOR	gargun@itu.edu.tr	90.212.285.6271
Mihcakan, I. Metin	PhD., PE	Assistant Professor	Natural Gas Engineering/Reservoir/EOR	mihcakan@itu.edu.tr	90.212.285.6266
Onur, Mustafa	PhD., PE	Professor	Well Testing/Reservoir/Simulation /Optimization/Geothermal	onur@itu.edu.tr	90.212.285.6269
Satman, Abdurrahman	PhD., PE	Head & Professor	Reservoir/Natural Gas Engineering/Geothermal	mdsatman@itu.edu.tr	90.212.285.6268
Serpen, Umran	PhD., PE	Lecturer	Geothermal/Drilling/Well Completions/Economics	serpen@itu.edu.tr	90.212.285.6280
Topuz, Hamit	PhD., ChE	Part-Time Faculty	Marketing/Oil Products	htopuzmastas@superonline.com	90.212.285.6270
Yamanlar, Senol	PhD., PE	Assistant Professor	Production/Fluid Properties/Natural Gas	yamanlar@itu.edu.tr	90.212.285.6192
Yildiz, H. Ozgür	PhD., PE	Assistant Professor	Rock Properties/ Petrophysics/EOR	hyildiz@itu.edu.tr	90.212.285.6312

ENROLLMENT & DEGREES CONFERRED INFORMATION

UNDERGRADUATE ENROLLMENT DEGREES CONFERRED

Academic Year	Freshman	Sophomore	Junior	Senior	B.S.	M.S.	Ph.D.
1990-1991					33	4	1
1991-1992					31	1	0
1992-1993					27	1	0
1993-1994					22	0	0
1994-1995					20	3	0
1995-1996					15	3	0
1996-1997					35	3	1
1997-1998					27	4	1
1998-1999					30	0	0
1999-2000					26	3	2
2000-2001					24	1	0
2001-2002	53	35	30	29	17	0	0

Cumulative Bachelor Degrees Awarded: 628

Cumulative Master's Degrees Awarded: 142

Cumulative Doctorate Degrees Awarded: 7

CURRICULUM ANALYSIS

MATHEMATICS

Course Type	Hours Required
Calculus	10
Diff. Equations	4
Probability and Statistics	3
Numerical Methods	3
Elective	3

PHYSICS

Course Type	Hours Required
Physics	8
Elective	3

CHEMISTRY

Course Type	Hours Required
General Chemistry	8
Physical Chemistry	4

GENERAL ENGINEERING

Course Type	Hours Required
Info. & Eng. Comp.	5
Engineering Mechanics	3
General Geology	3
Thermodynamics	3
Static & Strength of Mater.	3
Fluid Mechanics	3
Transport Phenomena	3
Operations Research	3
Engineering Ethics	1
Elective	3

HSS

Course Type	Hours Required
Atatürk's Principles-History of Revolution	4
Economics	3
Elective	9

PETROLEUM ENGINEERING

Course Type	Hours Required
Intro. to Petroleum & Natural Gas Eng.	1
Rock Properties	3
Fluid Properties	3
Petroleum. & Natural Gas Lab.	1
Drilling Engineering	3
Petroleum. & Natural Gas Geology	3
Drilling Fluids Lab.	1
Production Engineering	3
Reservoir Engineering	3
Formation Evaluation	3
Natural Gas Engineering	3
Enhanced Oil Recovery	3
Petroleum & Natural Gas Economics.	3
Graduation Design Project	3
Electives	9

COMMUNICATION

Course Type	Hours Required
English	9
Turkish	4

OTHER

Course Type	Hours Required
Physical Education	1

