

## **ENGINEERING FACULTY**

### **OUR HISTORY**

Engineering Faculty was founded in 1969 as Faculty of Engineering Sciences, affiliated to Ege University and started education at the undergraduate level. In 1982, Departments of Architecture, Urban and Regional Planning of Faculty of Fine Arts were merged with the Department of Historical Restoration and connected to Dokuz Eylül University, and was founded as The Faculty of Engineering and Architecture. In 1992, since the Departments of Architecture and City and Regional Planning were separated and connected to Faculty of Architecture of Dokuz Eylül University, it was named Dokuz Eylül University Faculty of Engineering. In the following years, it has been restored to its present structure, which consists of eleven departments. The evening education program, which was started in 1992, is carried out only in Civil and Mechanical Engineering Departments.

Our faculty is an educational institution with a deep-rooted history and tradition. All faculty programs have educational accreditation by MÜDEK. Educational policies meeting the needs of engineers in many provinces, especially in the Aegean Region and İzmir help engineer candidates to find jobs and advance in their careers. In addition, it has a strong infrastructure with its laboratory facilities and experienced academic staff. Graduates of our faculty have both foreign job opportunities in Public Institutions and Private Sectors. They show high success in finding a job and developing their career in the sector.

### **OUR AIM**

The aim of the Faculty of Engineering is to make contributions that advance universal science by conducting scientific and original research and disseminating its results; to train creative, innovative and entrepreneurial engineers with high environmental and social awareness; to play active roles in education, science and research; to make progressive contributions to national enlightenment and economic development of our country by undertaking a common mind with all the stakeholders of the faculty; to undertake an innovative and progressive task in the fields of education and priority research where our country can compete internationally in the field of engineering, responding to the needs of all components of the society, industry and government throughout the country and in the Aegean Region and to lead in their enlightenment and structuring.

### **FEATURED TECHNICAL FACILITIES**

7 Environment, 16 Electrical - Electronics, 6 Construction, 7 Geophysics, 6 Geology, 16 Mining, 15 Metallurgy and Materials, 25 Machines, 13 Textile Laboratories, Conference Hall, Computer Laboratories

## **FEATURED EDUCATIONAL PROGRAMS:**

Minor and Double Major Opportunities, Erasmus+, Mevlana and Farabi Exchange Programs

### **DEPARTMENT OF COMPUTER ENGINEERING**

The Department of Computer Engineering primarily aims to train computer engineers who are sensitive to the problems of the country, who have a universal perspective, and are adhere to professional ethical values, and can use current technology effectively. It aims to contribute to science, and to share the results of research and development activities with the society.

In the Department of Computer Engineering, education is given in 100% English. 1 year English preparatory program is compulsory. Education is done with the course passing system. Relative grade evaluation system is applied.

#### **Career Areas**

Graduates of Computer Engineering Department are employed in private institutions, public institutions, banks, universities, in companies that produce and market hardware and software as a computer software engineer, and in data processing centers. They can also work on hardware - software integration as experts in circuit design.

### **ENVIRONMENTAL ENGINEERING DEPARTMENT**

Dokuz Eylül University Environmental Engineering Department is based on fundamental and engineering sciences aiming to educate individuals equipped with theoretical and applied knowledge of environmental engineering; knowing the principles of the use of air, water and soil environments by considering the current and future balances; being able to design engineering structures in order to protect and develop these environments and keeping the environment clean; producing and implementing projects;and having investigative features. The faculty also aims to train individuals to have learned the basics of monitoring technological development,to have the ability to defend their opinion in front of the public, and to be able to work in a team and manage. It aims to educate individuals who are professionally aware of social problems and ethical responsibilities.

In the Department of Environmental Engineering, education is given in 100% Turkish language. Education is done with the course passing system. Relative grade evaluation system is applied.

#### **Career Areas**

Environmental engineers can work in drinking and utility water supply, transmission, treatment and distribution, collection, treatment, recovery and removal of domestic and industrial wastewater, collection, discharge and treatment of surface drainage and storm water, collection, transportation, recovery, removal and disposal of solid wastes. processing, management and

disposal of harmful and hazardous wastes, prevention of air pollution; at the source control, selection and applications of treatment technologies, Environmental Impact Assessment (EIA) studies planning and coordination, preparation and implementation of EIA reports, modeling of environmental resources, controlling, management and consultancy services for the prevention of environmental pollution, different environmental sampling, measurement and evaluation, control and prevention of noise pollution, and prevention of pollution of soil and underground water resources, controlling determination of pollution of polluting resources. They can also work in implementation and management services.

Among the public institutions and organizations where an environmental engineer can work are the Ministry of Environment and Urbanization and related directorates, Ministry of Agriculture and Forestry and related directorates, General Directorate of Provincial Bank and its subsidiaries, General Directorate of DSI and its subsidiaries, mayorships and related institutions. Environmental engineers who prefer private sector can work in infrastructure and treatment plant construction or operation, industrial zones, occupational health and safety units of various industrial enterprises and organizations, environmental industrial organizations, project bureaus, EIA bureaus, which work on subjects within the scope of engineering, They can work in environmental consultancy companies, universities, institutes, centers and private organizations that provide laboratory services.

### **DEPARTMENT OF ELECTRICAL - ELECTRONICS ENGINEERING**

The aim of the department is to train engineers who cover all basic areas of Electrical and Electronics Engineering, especially telecommunications, electromagnetic fields, signal processing, electronics, power systems, etc. It also aims to train individuals who are good researchers, and use abilities and skills effectively and have life-long learning skills that can be used creatively for the benefit of society. They provide knowledge in new areas as well as being capable of leading social and scientific progress. They can also produce innovative solutions to current and future technological needs.

In the Department of Electrical and Electronics Engineering, education is given in 100% English. 1 year English the preparatory program is mandatory. Education is done with the course passing system. Relative grade evaluation system is applied.

#### **Career Areas**

Graduates of Electrical and Electronics Engineering Department work in public institutions such as Ministry of Energy, State Planning Organization, the Energy Market Supervisory Authority, Turkey Electricity Transmission AŞ; communication, maintenance, medical industry. They can work as a R&D engineer, maintenance engineer, software engineer and production engineer in all private and public sector organizations operating in industry, power generation, transmission, distribution sector and industrial areas and are involved in the production and development of the product.

## **DEPARTMENT OF INDUSTRIAL ENGINEERING**

The Department of Industrial Engineering aims to train engineers who have a sense of social responsibility, have adopted the ethical values of its profession and have the principles of life-long learning and self-development, and meet the needs of the economy and industry, have creative and analytical thinking, are capable of adapting to changes, and prone to teamwork and interdisciplinary cooperation.

It has a young and dynamic faculty staff adopting the principle of providing a qualified education. The Department of Industrial Engineering provides undergraduate and graduate education programs to meet the needs of the economy and industry and updates itself constantly.

The undergraduate program has the accreditation of “Engineering Education Programs Evaluation and Accreditation Association (MÜDEK)” and has the “EUR - ACE” label. The department's accreditation and continuous improvement works are carried out without interruption.

In the Department of Industrial Engineering, education is given in 100% Turkish language. Education is done with course passing system. Relative grade evaluation system is applied.

### **Career Areas**

Graduates of Industrial Engineering Department are preferred in companies in very different sub-sectors in both manufacturing and service sectors. As an example of employment areas in the manufacturing sector, graduates work in numerous sectors such as automotive, machinery manufacturing, electronics, consumer durables, food, petro-chemistry. In the service sector, they can work for financial institutions, logistics companies, health institutions, consultancy firms etc. There are job opportunities in many different sub-sectors. In addition to the private sector, graduates have many career opportunities in public institutions, especially Ministries, KOSGEB, Information Technologies and Communication Authority, Competition Authority and Municipalities.

## **CIVIL ENGINEERING DEPARTMENT**

The primary goal of Civil Engineering Department is to train engineers to serve the society by producing research-based knowledge. They are investigative, creative, and confident. They are able to closely follow and use the developments in technology; they apply their profession according to scientific and ethical rules and have humane values.

In the Civil Engineering Department, education is given in 100% Turkish language. Education is done with course passing system. Relative grade evaluation system is applied.

### **Career Areas**

Graduates of Civil Engineering Department are able to plan, design, construct new buildings

such as housing and industrial buildings, transportation structures such as roads and railways, dams and similar water structures. They work on the assessment and strengthening of existing structures. They have a wide range of employment opportunities in public institutions such as Ministry of Environment and Urbanization, Ministry of Transport and Infrastructure, State Hydraulic Works, General Directorate of Highways, Provincial Bank, and Municipalities. They can also work for contracting companies doing business on these issues at home and abroad.

## **DEPARTMENT OF GEOPHYSICAL ENGINEERING**

Geophysical Engineering Department is a science and engineering branch that produces information about the underground and the earth by combining basic sciences such as mathematics, physics and geology with today's electronics and software technology.

In Geophysical Engineering, the primary goal is to train individuals who can use the basic and engineering sciences theoretically and practically, gain the ability to analyze and interpret issues related to Geophysical Engineering and constantly renew themselves, who are able to train for research and technological development, can work in an interdisciplinary team and manage, solve social problems with ethical responsibility, who are conscious about the protection of cultural heritage and the environment, knowledgeable about the environmental problems of the age, and earthquakes and other natural hazards socially and economically affecting the society. It also aims to raise individuals who are equipped with the necessary information about the search for natural resources.

Students who are placed in the first three in our department are given a non-refundable YÖK scholarship. Students who are among the top 5 choices of Geophysical Engineering in the 2022 YKS exam success ranking are given scholarships for 9 months each year during their education period (OUR CEVHER IS YOU). Scholarship, internship and employment support (6000 TL per month) is planned to be given to students who will study in the field of oil and natural gas within the scope of the cooperation protocol signed between the Council of Higher Education and the Turkish Petroleum Offshore Technology Center (TP-OTC). In the Department of Geophysical Engineering, 100% Turkish language education is given. Education is done with the course passing system. Relative grade evaluation system is applied.

### **Career Areas**

Graduates of Geophysical Engineering Department can work for State Hydraulic Works, Mineral Research and Exploration, Mineral Petroleum Affairs, Etimaden, İl Bank, General Directorates of Highways and UDH Infrastructure Investments, Turkish Petroleum Corporation (TPAO), BOTAŞ, Disaster and Emergency Management Presidency, Turkish Armed Forces Forces. They can work in the Ministries of Environment, Urbanism and Climate Change, Energy and Natural Resources, Transport and Infrastructure, Agriculture and Forestry, Labor and Social Security and many other institutions. In addition, Geophysical Engineers can find wide job opportunities in the occupational safety sector after obtaining the occupational safety expertise

certificate (A, B, C). As for the private sector, they work for independent research companies, ground surveys, mining sector, oil and natural gas sector, coal sector, under ground water. They can also be employed in companies operating in the fields of exploration, geothermal, environmental problems, raw material exploration and marine research.

## **DEPARTMENT OF GEOLOGICAL ENGINEERING**

Geological Engineering education begins with the basic engineering courses and by analysing the evolutionary processes of the earth we live on from its formation to the present day. It continues by examining the origins of the rocks that make up the earth's crust, the form they are found, their internal structures, chemical, physical and mechanical properties, their economic values and their geological, environmental and engineering evaluations in terms of human - nature interaction.

Geological engineer researches and finds underground natural resources, mineral, petroleum, industrial raw materials, groundwater, geothermal energy resources with scientific and technical methods and calculates their reserves. In addition, it plays an active role in the planning of new and existing settlement areas, ports, airports, dams, tunnels, bridges, highways and railways and carries out research and investigations in these areas.

Geological engineers make geological maps of the earth. They also benefit from new technologies such as Geographical Information Systems and Remote Sensing in mapping studies. They analyse events such as the determination of areas to be affected by active faults and volcanic activities, integrate the information obtained from the earth and underground and transform it into practice. Geological engineers work in close co-operation with geophysical, mining, civil and environmental engineers.

As a result of the cooperation of the Council of Higher Education (YÖK) and the Istanbul Mineral Exporters' Association (İMİB), starting from the 2020-2021 academic year, it has been announced that students who rank among the first 50 thousand in the university exam and who prefer at least one of the mining, geology and ore dressing engineering departments in their first 5 preferences and get into, will receive non-refundable grant at the rate of net minimum wage, and their employment will be facilitated.

The Department of Geological Engineering provides 100% education in Turkish language. Education is carried out with the course passing system. Relative grade evaluation system is applied.

### **Career Areas**

Graduates of the Department of Geological Engineering find job opportunities in the public and private sectors with the title of Geological Engineer. For the public sector; Universities, Mineral Research and Exploration Institute, Turkish Petroleum, Provincial Bank, General Directorate of Highways, General Directorate of State Hydraulic Works, Eti Maden, Turkish

Coal Enterprises and municipalities. In the private sector, various drilling and mining companies, cement plants and marble quarries and factories can be given as examples. In addition, the Geological Engineer can find job opportunities both in his own sector and in different sectors after obtaining the safety practice certificate (A, B, C).

## **DEPARTMENT OF MINING ENGINEERING**

The aim of the Bachelor of Engineering of Mines carried out by the Department of Mining Engineering is to train mining engineers and scientists who will process the resources of our country in the most efficient way, who are experts in their fields, who are researching, questioning, and lifelong learning, who have a sense of environmental and ethical responsibility, who are entrepreneurial and can successfully take part in group work, to produce knowledge and develop technologies to solve the problems in the mining sector.

Our department; with the vision of ensuring social happiness and development by prioritizing the environment and human health, commitment to Atatürk's Principles, respect for people and the environment, commitment to science and engineering ethics, academic freedom, transparency, leadership, universality, reliability, interdisciplinary work, support for university - industry cooperation and upholding its core values, advocate national mining policies. The Department of Mining Engineering provides education, research, project and analysis services in laboratories affiliated to 3 departments: Mining, Ore Dressing and Mine Mechanization and Technology.

Within the scope of the cooperation protocol signed between YÖK and İMİB, students who enter the first 50 thousand in the university exam and prefer the Mining Engineering Department in their first 5 preferences and get into, will be received non-refundable grant at the amount of net minimum wage; for those between 50 thousand and 65 thousand will be given the half of the net minimum wage amount, and for those between 65 thousand and 80 thousand will be given one third of the net minimum wage amount by İMİB. Scholarships from other institutions and organizations will not constitute an obstacle to this educational scholarship. İMİB will help students who have successfully completed mining engineering programs and given educational scholarships to employ in companies operating in the mining sector.

The education language of the Department of Mining Engineering is 100% Turkish. Education is carried out with the course passing system. The relative grade grading system is applied.

### **Career Areas**

Graduates of the Department of Mining Engineering are authorized to design, plan, and construct both underground and open-pit mining operations. Graduates are authorized to prepare and sign mining and ore preparation projects. They can work as technical supervisors in mining enterprises, and they acquire the necessary skills for the efficient use of natural resources. Graduates can find employment opportunities both in the public sector and in the private sector.

Examples of some of the major public institutions can be the Ministry of Energy and Natural Resources, Ministry of Environment and Urbanization, Ministry of Forestry and Water Affairs, general directorates under the ministries (General Directorate of Mineral Research and Exploration, Turkish coal Enterprises, the Turkish Hard Coal Enterprises, State Hydraulic Works, etc.), provincial directorates of ministries and municipalities. Although there is no direct mining activity, road, tunnel and dam constructions also provide graduates with additional job opportunities.

## **DEPARTMENT OF MECHANICAL ENGINEERING**

The Department of Mechanical Engineering aims students to be able to define engineering problems related to thermal and mechanical systems; design thermal and mechanical systems and/or parts related to these systems by taking mathematics, science and engineering knowledge, efficiency, economy, conformity to standards, environmental awareness, etc. into account; develop solutions by using modern engineering tools, analysis and measurement methods; work effectively in teams in production industries and engineering, communicate effectively in written and oral communication; have the necessary infrastructure for professional development; understand the necessity of lifelong learning; be aware of the ethical responsibilities, universal and social effects of the profession; and be sensitive to the problems of the modern age.

At the Department of Mechanical Engineering 30% of the education is in English. There is also a mandatory one-year English preparatory program. Education is carried out with the course passing system. Relative grade evaluation system is applied.

### **Career Areas**

Graduates of the Department of Mechanical Engineering can work in manufacturing, automotive, heat, energy, design, production, measurement, automation, composite materials, welding techniques, robotics, hydraulics and pneumatics.

## **DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING**

The Department of Metallurgical and Materials Engineering aims to raise engineers and scientists who are inquisitive, creative, innovative, socially responsible and ethical, and who know how to learn and make positive contributions to the regional and national industry. The education program of the department is accredited by Association for Evaluation and Accreditation of Engineering Programs (MÜDEK). The department has 15 laboratories (Mechanics, Metallography, Characterization, Ceramics, Plastic Forming, Sample Preparation, Chemistry, Corrosion, Casting, Heat Treatment, X-Rays, Electronic Materials, Tribology, Simulation and Advanced Materials) to carry out educational and research activities.

In addition to its laboratory facilities and modern devices, joint R&D studies are carried out



on the subjects required by the industry with its knowledgeable, experienced and academic staff who have many years of experience in conducting applied projects with the industry. In the laboratories of the department physical, chemical, mechanical, electrical, thermal, optical and magnetic properties of engineering materials and their behavior can be studied with modern devices. R&D studies of traditional and advanced materials based on metals, ceramics, polymers and composites are carried out.

The Department of Metallurgy and Materials Engineering offers formal education in 30% English. There is also a mandatory one-year English preparatory program. Education is carried out with the course passing system. The relative grading system is applied.

### **Career Areas**

Graduates of the Department of Metallurgical and Materials Engineering can work in automotive, defence, petrochemical, aerospace, energy and white goods industries, integrated metal production facilities, rolling mills, foundries, heat treatment, powder metallurgy, forging industry facilities, ceramic, polymer and composite material production and forming facilities. Our graduates can work as production, quality control and R & D engineers or directors in these facilities, as well as researchers in various research centres in domestic and abroad.

### **DEPARTMENT OF TEXTILE ENGINEERING**

Textile Engineering is concerned with the production and design of textile materials that require advanced technology with different functional properties besides traditional textile structures. In addition to traditional textile products, technical textiles such as military textiles used in the defence industry, sports and space clothing are also within the scope of Textile Engineering. Graduates of Textile Engineering have satisfactory job opportunities in both production and design, and they also find various scholarship opportunities during their education life.

As a result of the co-operation of the Exporters' Associations and the Turkish Textile Industry Employers' Union with the Council of Higher Education (YÖK), scholarships have been awarded to students who are admitted to the Department of Textile Engineering since 2019. Provided that one of the first five preferences is Textile Engineering Departments, minimum wage is given to students ranked in the first 20,000, 70% of the minimum wage to those ranked between the first 20,000-50,000, and 50% of the minimum wage to those ranked between 50,000-80,000 as a non-refundable scholarship.

The curriculum of the department is designed to educate engineers who can solve real engineering and design problems that may be encountered in working life, including courses in different disciplines such as machinery, computer, materials, electronics, chemistry, physics, biomedical as well as basic engineering courses.

In our department, studies are carried out in the fields of protective and medical textiles,

wearable smart clothing, sportswear, weaving and knitting fabric structures, functional fibre production techniques, textile-based composite structures, recycled textiles and comfort features that require advanced technology. We have different laboratories where research projects related to these fields are carried out and which also provide testing and analysis services to the sector. Physical Textile Testing Laboratory and Chemical Textile Testing Laboratory are accredited by the Turkish Accreditation Agency (TÜRKAK) according to ISO/IEC 17025:2017 standard. In addition, our department has finishing and printing laboratories, nanotechnology laboratory, CAD/CAM laboratory, design and animation laboratory, comfort laboratory, microscope laboratory and fibre application, spinning, weaving, knitting and garment workshops.

The Department of Textile Engineering provides education in 30% English language. 1 year English preparatory programme is compulsory. Education and training is carried out with the course passing system. Relative grade evaluation system is applied.

### **Career Areas**

Graduates of the Department of Textile Engineering can work in spinning, weaving, knitting, finishing and garment companies, companies selling textile materials, chemicals, accessories, machinery, intermediary companies engaged in import-export, textile laboratories, public institutions, R&D centers and teaching institutions.