



Ege University Faculty of Agriculture

Department of
Agricultural Machinery
and Technologies
Engineering



"Discover, Learn, Apply"



DEPARTMENT OF AGRICULTURAL MACHINERY AND TECHNOLOGIES ENGINEERING

Establishment

Established by Prof. Dr. Emin MUTAF at today's EU Conservatory building and served there until 1971.

1958

1972

Chair of Agricultural Tools and Machinery

Moved to the current building on campus and still continues its activities at the same structures.

1982

Department of Agricultural Mechanization

The name of the Chair of Agricultural Tools and Machinery was changed to the Department of Agricultural Mechanization.

1991

Department of Agricultural Machinery

The name of the Department of Agricultural Mechanization was changed to the Department of Agricultural Machinery

2014

Department of Agricultural Machinery and Technologies Engineering

With the approval of the Higher Education Council, department's name was changed to Agricultural Machinery and Technologies Engineering.

2022

Accreditation

As of 28.03.2022, it has been registered as an accredited organization by ZİDEK for 2 years.

2024

Accreditation

As of 30.10.2024, it has been registered as an accredited organization by ZİDEK for 1 years.

MISSION & VISION

As a pioneering and leading research university in Turkey and in the world; Ege University's mission is to meet the regional, national and universal needs in the field of research and education, to present the R&D experience to the benefit of the society, to raise individuals who are committed to their basic values, who are professionally and culturally equipped, who are open to change and who adopt scientific thinking as a way of life.

The vision of Ege University is to become a world university pioneering in scientific research, having a strong cooperation and communication network with its national and international stakeholders, having a student-oriented, green, sustainable, accessible and livable campus, contributing to economic, social and cultural life and having a strong financial structure.

The mission of the Faculty of Agriculture;

To be among the world's leading agricultural faculties, to organize innovative research and student-oriented educational activities on agricultural sciences, to produce scientific and technological solutions to regional, national and universal needs, to raise individuals who are committed to national values, who have a perspective, who can think analytically, apply scientific techniques, and who have strong cultural and social aspects.

The mission of the Department of Agricultural Machinery and Technologies Engineering;

Founded in 1971, the Department of Agricultural Machinery and Technologies Engineering consists of "Agricultural Machinery", "Agricultural Tractors" and "Energy in Agriculture" scientific sub-disciplines.

The objectives of the department are;

- to raise engineers who are equipped with contemporary, sufficient and latest agricultural technologies knowledge, who have capacities of questioning, analytical thinking and providing fast and most accurate solutions to problems, who can follow national and international developments within the sector and who have a good reputation within the society,
- to contribute to the development of agriculture in Turkey, Aegean region and Izmir province, with up-to-date and contemporary solutions,
- to provide research, development, testing and trial support to our country's agricultural machinery manufacturing sector in accordance with the needs of our country in order to contribute to the production of robust, high quality, cheap and internationally marketable agricultural machinery.



**DEPARTMENT OF AGRICULTURAL
MACHINERY AND TECHNOLOGIES
ENGINEERING
ORGANISATION CHART OF MANAGEMENT**



Prof. Dr. Harun YALÇIN

Head of Department



Asst. Prof. Dr. İkbâl AYGÜN

Deputy Head of Department

DEPARTMENT OF AGRICULTURAL MACHINERY AND TECHNOLOGIES ENGINEERING

ACADEMIC STAFF



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Planting-Drilling and Fertilizing Machines
Biological Materials
Ergonomics and Work Safety



Prof. Dr. R. Cengiz AKDENİZ

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Mixed Feed Production Technology
Energy in Agriculture
University-Industry Relationship and
Technology Transfer



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Precision Farming Technologies
Operations Research
Management and Systems Analysis
Information Technology in Agriculture



Prof. Dr. Vedat DEMİR

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Irrigation Machinery
Greenhouse Mechanization
Drying Techniques of Agricultural Materials



Prof. Dr. Harun YALÇIN

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Conservation Tillage and No-Till Planting
Soil Tillage Systems
Silage Mechanization



Prof. Dr. Bülent ÇAKMAK

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Properties of Materials
Design and Construction of Agricultural
Machines
Computer Aided Design and Manufacturing



Prof. Dr. Arif Behiç TEKİN

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Precision Farming Techniques (Sensor,
Artificial Intelligence and Autonomous
Vehicles)
Systems Analysis
Planning in Agricultural Mechanization



Prof. Dr. Hüseyin GÜLER

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Plant Protection Machines
Fertilizing Machines
Smart Farming Applications in Plant
Protection and Fertilizing Machines



Assoc. Prof. Dr. Tuncay GÜNHAN

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Drying Techniques of Agricultural
Products
Greenhouse Mechanization
Measurement and Automation in
Agricultural Machinery

DEPARTMENT OF AGRICULTURAL MACHINERY AND TECHNOLOGIES ENGINEERING

ACADEMIC STAFF



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Planting-Drilling and Fertilizing Machines
Mathematical Modelling and Optimization
Pressurized Irrigation Systems



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Irrigation Machines
Irrigation Systems Design
Agricultural Electrification



Asst. Prof. Dr. İkbâl AYĞÜN

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Application of Microwave Technologies
for Weed Management
Artificial Intelligence
Ergonomics



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Planting-Drilling and Fertilizing Machines
Plant Protection Machines
Application Techniques of Environmentally
Friendly Plant Protection Products



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Agricultural Tractors
GNSS-Based Auto-Steering Systems for
Agricultural Machinery
Granular Spreaders



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Mechanization of Animal Production
Milking Machines
Pressurized Irrigation Systems

EDUCATIONAL OBJECTIVES

Graduates are aimed to;

- be employed at national and international companies and various organizations on design, application, manufacturing, development, planning and management of agricultural machinery and mechanization systems
- be eligible for graduate or post-graduate education and/or employment as an academic staff member of various universities
- work in managerial and responsible engineer positions in all agriculture-related production and machinery manufacturing companies.

Program Educational Objectives	Faculty of Agriculture Self-Duties	Ege University Self-Duties
With their title of Agricultural Engineer (Agricultural Machinery and Technologies Program), actively work in the relevant fields of agriculture and agro-industry sectors.	Individuals who are committed to national values, have a perspective, can think analytically, apply scientific techniques, and have strong cultural and social aspects	Meeting regional, national and universal requirements
Work effectively in the planning, design, production and evaluation stages of those projects in Agricultural and Agricultural Machinery sectors,	To produce scientific and technological solutions to regional, national and universal needs,	To present R&D accumulation for the benefit of the society,
To receive graduate education and/or to work as a lecturer, researcher, expert in academic institutions (University, Research Centres, Research Institutes, etc.)	To organize innovative research and student-oriented educational activities on agricultural sciences,	Meeting the regional, national and universal requirements of research and education
In order to increase the products and productivity within the plant and animal production sectors; to be capable of working on design, manufacture, development, experimental applications, quality control, marketing, repair and maintenance, occupational safety and environmental issues of all types of agricultural machinery and mechanization system technologies.	Individuals who are committed to national values, have a perspective, can think analytically, and can apply scientific techniques	Individuals who are professionally and culturally equipped, open to change, adopted way of scientific thought at their lives.



You can access the details of the education program of our faculty and department via QR code.

PROGRAM OUTCOMES

1. Ability to use the theoretical and practical knowledge gained in mathematics, basic sciences and engineering sciences courses that will be the basis of engineering education in complex engineering problems in the field of Agricultural Machinery and Technologies Engineering,
2. Ability to identify, formulate and solve complex problems in the field of Agricultural Machinery and Technologies Engineering, to select and implement appropriate analysis and modelling methods,
3. Ability to design a complex system, process, device or product in the field of Agricultural Machinery and Technologies Engineering, in order to meet specific requirements within the realistic constraints of present situation and possibilities, by applying valid engineering standards and regulations,
4. Ability to select and use modern engineering tools/techniques and information technologies for the solution of complex problems in the field of Agricultural Machinery and Technologies Engineering, and to effectively apply modern design methods,
5. Ability to review of research literature, collect data, design and conduct experiments, analyze and interpret results in order to examine all kinds of problems and issues to be encountered in the field of Agricultural Machinery and Technologies Engineering,
6. Ability to work effectively in disciplinary and multidisciplinary teams and to communicate effectively in oral and written Turkish language,
7. Ability to prepare design, production and analysis reports in the field of Agricultural Machinery and Technologies Engineering, to make effective presentations, to understand written reports, to receive instructions and to give clearly understandable instructions,
8. Awareness of lifelong learning, access to information, ability to follow developments in science and technology and ability to constantly renew him/her-self,
9. Knowledge of project management, risk management, applications in business life, standards used, entrepreneurship, innovation, sustainability and development in the field of Agricultural Machinery and Technologies Engineering,
10. With a sense of professional ethics and responsibility, to have knowledge about health, environment, economy and security problems in universal and social dimensions, and to be aware of the legal consequences of engineering solutions applied in this context.

CAREER OPPORTUNITIES

There are numerous job opportunities in every unit where our department students find internship opportunities. In addition to these,

- Ministry of Agriculture and Forestry
- Ministry of Environment, Urbanization and Climate Change and Affiliated Organizations
- Vocational Schools
- Universities
- Faculties
- Agricultural Vocational High Schools
- Municipalities
- Agricultural Research Institutes
- Central Directorate of Seed Registration and Certification
- Directorate of Testing Centre of Agricultural Equipment and Machinery
- Agricultural Credit Cooperatives
- General Directorate of State Hydraulic Works
- Turkish Grain Board
- Agricultural Insurance Companies
- Various Public and Private Sector Banks Providing Agricultural Loans
- State Farms Affiliated to TİGEM
- Agrochemical Companies
- Agricultural Quarantine Directorates
- Certification Bodies
- Tractor Manufacturers
- Agricultural Tools and Machinery Manufacturers
- Fertilizer Companies
- Private Livestock Enterprises
- Organic Farming Companies
- Domestic and Foreign Companies Providing Inputs and Technical Support to the Animal Production Sector
- Private Sector Organizations
- Agro-Industrial Enterprises
- Chambers of Commerce, Commodity Exchanges, Chambers of Industry and Unions of Exporters' Associations

EDUCATION AND RESEARCH OPPORTUNITIES

The Department of Agricultural Machinery and Technologies studies various projects on problems of agricultural mechanization and deals with solving those problems and developing the sector. Experts trained in diverse scientific disciplines successfully carry out many national and internationally supported projects. The department, has the facilities to carry out these researches with its advanced laboratories.

In addition to publication activities, the results obtained from the studies are conveyed to scientists, public or private institutions and farmers working in the relevant field through events such as congresses, symposiums, workshops, seminars and farmers' meetings held in certain periods.

The laboratories of the department also provide consultancy services regarding the testing of agricultural machinery in order to determine its conformity with national and international standards and the issuance of test reports on its suitability for Turkish agriculture.

Tractors and Engines Laboratory	Agricultural Machinery Test and Research Laboratory
Hydraulics and Pneumatics Laboratory	Drying Machinery and Systems Laboratory
Mechatronics Laboratory	Electrical, Electronics and Measurement Laboratory
Milking Machines Test Laboratory	Plant Protection Machinery and Systems Laboratory
Milk Cooling Tanks Test Laboratory	Fine Mechanics Workshop
Agricultural Trailers Testing Track	Farm Machinery Fleet comprising 243 machines
Irrigation Equipment Testing Laboratory	Emin Mutaf Agricultural Machinery Amphitheatre
Irrigation Pumps Testing Laboratory	Undergraduate and Graduate Classrooms
Soil Mechanics - Biological Materials and Seeding/Planting Techniques Laboratory	Meeting Room
Computer Aided Design and 3D Rapid Manufacturing Laboratory	Mini Meeting Room
Compound Feeds Preparation Machines and Systems Laboratory	Library
Material Testing Laboratory	Computer Room

The physical infrastructure facilities of our department are demonstrated on the following page.



Test Laboratory



Tractor Laboratory



***Irrigation Machinery and Systems
Laboratory - Pump Testing Laboratory***



Fine Mechanics Workshop



Milk Cooling Tanks Test Laboratory



Automation Laboratory



Sowing Machines Testing Unit



Emin Mutfak Agricultural Machinery Amphitheatre



Rapid Prototyping Laboratory



Hydraulics and Pneumatics Laboratory



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WEB SITE



INSTAGRAM

