ADIYAMAN UNIVERSITY
ENGINEERING FACULTY
DEPARTMENT OF
ENVIRONMENTAL ENGINEERING

DESCRIPTION BOOKLET

2025-2026

CONTENTS

Department of Environmental Engineering

The Adyaman University Environmental Engineering Department was established in 2011 and started admitting students for the first time in the 2012-2013 academic year.

Head of Department

Prof. Dr. Yavuz DEMİRCİ

Vice Head of Department

Assist. Prof. Dr. Şeyma AKKURT

Academic Staff

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Assist. Prof. Dr. Turgay DERE

Assist. Prof. Dr. Kâmil B. VARINCA

Assist. Prof. Dr. Şeyma AKKURT

Department Secretary

Zübeyde GÜNEŞ

- **Mission & Vision**

Mission

To raise people with the skills and equipment required to recognize and solve environmental issues in the 21st century with engineering methods and to perform quality research in the field of environmental engineering.

Vision

To be a department that plays an active role in the sustainable development of our country, renews itself in line with the needs for the solution of universal and national environmental problems, and develops and implements contemporary education and research strategies in this regard.

Importance of Departments of Environmental Engineering

In the world, water, wastewater, industrial wastewater treatment, solid waste management, and air pollution control have gained importance, as well as water supply, wastewater collection, and disposal. With the rapid increase in the population of Turkey, the increase in the rate of migration to big cities has also increased the need for environmental engineers. For this reason, the need for engineers who know, understand, and interpret environmental problems shows the importance of the Environmental Engineering Department.

Why Department of Environmental Engineering?

Environmental engineering is an interdisciplinary branch of engineering that finds solutions to environmental problems. Environmental engineers develop engineering approaches to prevent pollution or clean up contaminated areas to protect the natural environment (air, water, and soil) and human health. It develops technologies for the best use of natural resources for a sustainable environment.

Job Oportunities for Our Graduate Students

Our graduates can work in different fields, such as industrial facilities, public institutions, public health institutions, research and development centers and laboratories, as well as consultancy firms. Working areas of environmental engineering include water and wastewater treatment, air pollution control, solid waste disposal, soil pollution, and noise pollution. Below are some organizations where our graduates can work.

- The Ministry of Environment, Forestry, and Water Affairs and its affiliates
- The Ministry of Environment and Urbanization and its affiliates
- The Ministry of Health and its affiliates
- The State Planning Organization
- The State Water Works
- Iller Bank
- Laboratories for Public Health

- Universities
- Local Authorities
- Treatment companies
- Industry associations
- Environmental Consulting Firms
- Engineering and Project Firms

Highest and Lowest Placement Scores According to Central Placement

Our department admits students with LYS (MF-4 score type) and DGS exams. However, our department has been closed to student admissions since the 2018–2019 academic year. The Master's Program was opened in our department in the 2022–2023 Fall Semester, and postgraduate education has started to be offered again.

Course Catalogue

1. Class					
First Semester					
Course Code	Course Name	ECTS	WCH T+A/C	C/E	La.
CEV101	Introduction to Environmental Engineering	4	2+1/3	C	T
CEV103	Mathematics 1	4	2+2/3	C	T
CEV105	Physics 1	4	2+2/3	C	T
CEV107	Chemistry 1	4	2+2/3	C	T
CEV109	Technical Drawing and Descriptive Geometry	4	2+2/3	C	T
TD101	Turkish I	2	2+0/2	C	T
YD101	English I	3	2+0/2	C	T
AİİT101	Ataturk's Principles and Turkish Revolution 1	2	2+0/2	C	T
CEV1..	University Elective Course 1	3	2+0/2	E	T
	Fall Semester Total:	**30**	18+9/ **23**		
Second Semester					
Course Code	Course Name	ECTS	WCH T+A/C	C/E	La.
CEV102	Environmental Microbiology 1	4	2+2/3	C	T
CEV104	Mathematics 2	4	2+2/3	C	T
CEV106	Physics 2	4	2+2/3	C	T
CEV108	Chemistry 2	4	2+2/3	C	T
TD102	Turkish II	2	2+0/2	C	T
YD102	English II	3	2+0/2	C	T
AİİT102	Ataturk's Principles and Turkish Revolution II	2	2+0/2	C	T
ENF102	Introduction to Information Technologies and Applications	4	2+0/2	C	T
CEV1..	University Elective Course 2	3	2+0/2	E	T
	Spring Semester Total :	**30**	18+8/ **22**		
	YEAR TOTAL ::	**60**			
2. Class					
Third Semester					
Course Code	Course Name	ECTS	WCH T+A/C	C/E	La.
CEV201	Environmental Chemistry 1	4	2+2/3	C	T
CEV203	Environmental Microbiology 2	4	2+2/3	C	T
CEV219	Materials in Environmental Engineering	3	2+0/2	C	T
CEV207	Fluid Mechanics and Hydraulics	4	2+2/3	C	T
CEV209	Computer Programming and Design	3	2+2/3	C	T
CEV215	Professional English 1	3	2+0/2	C	T
CEV2..	University Elective Course 3	3	2+0/2	E	T
CEV2..	Faculty Elective Course 1	3	2+2/3	E	T
CEV2..	Vocational Elective Course 1	3	2+0/2	E	T
	Fall Semester Total:	**30**	18+10 /**23**		
Fourth Semester					
Course Code	Course Name	ECTS	WCH T+A/C	C/E	La.
CEV202	Environmental Chemistry 2	4	2+2/3	C	T
CEV204	Environmental Engineering Ecology	3	2+0/2	C	T
CEV220	Static and Strength of Materials	4	2+2/3	C	T

CEV208	Physical Unit Operations in Environmental Engineering	4	2+2/3	C	T
CEV216	Professional English 2	3	2+0/2	C	T
CEV210	Computer Applications in Environmental Engineering	3	2+2/3	C	T
CEV2..	University Elective Course 4	3	2+0/2	E	T
CEV2..	Faculty Elective Course 2	3	2+2/3	E	T
CEV2..	Vocational Elective Course 2	3	2+0/2	E	T
	Spring Semester Total:	**30**	18+10 /**23**		
	YEAR TOTAL:	**60**			

3. Class

Fifth Semester

Course Code	Course Name	ECTS	WCH T+A/C	C/E	La.
CEV301	Chemical Unit Operations in Environmental Engineering	4	2+2/3	C	T
CEV303	Solid Waste Management	3	2+1/3	C	T
CEV305	Water Supply	4	2+2/3	C	T
CEV307	Water Quality and Management	3	2+1/3	C	T
CEV311	Air Pollution	3	2+1/3	C	T
CEV343	Reuse of Wastes	3	2+0/2	C	T
CEV3..	University Elective Course 5	4	2+2/3	E	T
CEV3..	Faculty Elective Course 3	3	2+0/2	E	T
CEV3..	Vocational Elective Course 3	3	2+0/2	E	T
	Fall Semester Total:	**30**	18+9/**23**		

Sixth Semester

Course Code	Course Name	ECTS	WCH T+A/C	C/E	La.
CEV302	Biological Unit Operations in Environmental Engineering	4	2+1/3	C	T
CEV304	Hazardous Waste Management	3	2+1/3	C	T
CEV306	Sewerage	3	2+2/3	C	T
CEV308	Water Treatment and Plant Design	4	2+2/3	C	T
CEV312	Air Pollution Control	3	2+1/3	C	T
CEV344	Industrial Microbiology	3	2+0/1	C	T
CEV3..	University Elective Course 6	4	2+0/2	E	T
CEV3..	Faculty Elective Course 4	3	2+0/2	E	T
CEV3..	Vocational Elective Course 4	3	2+0/2	E	T
	Spring Semester Total:	**30**	18+7/**22**		
	YEAR TOTAL:	**60**			

4. Class

Seventh Semester

Course Code	Course Name	ECTS	WCH T+A/C	C/E	La.
CEV401	Industrial Pollution Control	3	2+1/3	C	T
CEV403	Wastewater Treatment and Plant Design	4	2+2/3	C	T
CEV441	Environmental Engineering Practices	2	0+2/1	C	T
CEV447	Senior Design Project	3	0+2/1	C	T
CEV4..	Faculty Elective Course 5	3	2+0/2	E	T
CEV4..	Vocational Elective Course 5	3	2+0/2	E	T
CEV4..	Vocational Elective Course 6	3	2+0/2	E	T
CEV4..	Vocational Elective Course 7	3	2+0/2	E	T
CEV4..	Vocational Elective Course 8	3	2+0/2	E	T

CEV4..	Vocational Elective Course 9	3	2+0/2	E	T
	Fall Semester Total::	**30**	16+7/**20**		
Eight Semester					
Course Code	Course Name	ECTS	WCH T+A/C	C/E	La.
CEV404	Engineering Adaptation	15	0+2/0	C	T
MUHSEC 8	Engineering Elective Course (3 Courses Will Be Elected)	15	2+0/0	E	T
Total:	Spring Semester	**30**	6+2/0		
	YEAR TOTAL:	**60**			
	ECTS TOTAL ::	**240**			

* For elective courses determined by the Rectorate T+A/C → 2+0/2

Elective Cources					
1. Class					
First Semester					
University Elective Course 1					
Course Code	Course Name	ECTS	WCH	C/E	La.
CEV111	History of Science	3	2+0/2	E	T
CEV113	First Aid	3	2+0/2	E	T
Second Semester					
University Elective Course 2					
CEV110	Critical Analytical Thinking	3	2+0/2	E	T
CEV112	Communication	3	2+0/2	E	T
2. Class					
Third Semester					
University Elective Course 3					
Course Code	Course Name	ECTS	WCH	C/E	La.
CEV221	Sign Language	3	2+0/2	E	T
Faculty Elective Course 1					
CEV223	Soil Mechanics and Basic Construction	3	2+2/3	E	T
CEV225	Differential Equations	3	2+2/3	E	T
Vocational Elective Course 1					
CEV211	Numerical Analysis	3	2+0/2	E	T
CEV217	Reaction Kinetics	3	2+0/2	E	T
Fourth Semester					
University Elective Course 4					
CEV222	Scientific Research Methods	3	2+0/2	E	T
Faculty Elective Course 2					
CEV224	Surveying Techniques	3	2+2/3	E	T
Vocational Elective Course 2					
CEV212	Statistics for Engineers	3	2+0/2	E	T
CEV218	Thermodynamics	3	2+0/2	E	T
3. Class					
Fifth Semester					
University Elective Course 5					

Course Code	Course Name	ECTS	WCH	C/E	La.
CEV 337	Entrepreneurship	4	2+2/3	E	T
	Faculty Elective Course 3				
CEV339	Quality Management Systems	3	2+0/2	E	T
CEV341	Occupational Health and Safety	3	2+0/2	E	T
	Vocational Elective Course 3				
CEV313	Environmental Laws	3	2+0/2	E	T
CEV315	Environmental Sanitation	3	2+0/2	E	T
CEV317	Soil Pollution and Control	3	2+0/2	E	T
CEV319	Hydrology	3	2+0/2	E	T
CEV323	Design in Environmental Engineering	3	2+0/2	E	T
CEV327	Ecotoxicology	3	2+0/2	E	T
CEV329	Noise Pollution and Control	3	2+0/2	E	T
CEV331	Environmental Biotechnology	3	2+0/2	E	T
CEV333	Waste Disposal Methods	3	2+0/2	E	T
CEV335	Geographic Information Systems	3	2+0/2	E	T
Sixth Semester					
	University Elective Course 6				
CEV338	Business Law	4	2+0/2	E	T
AHL302	Ahi Community and Professional Ethics	4	2+0/2	E	T
	Faculty Elective Course 4				
CEV340	Environmental Management Systems	3	2+0/2	E	T
CEV342	Technology and Innovation Management	3	2+0/2	E	T
	Vocational Elective Course 4				
CEV314	Environmental Economics	3	2+0/2	E	T
CEV316	Water Pollution and Control	3	2+0/2	E	T
CEV318	Integrated Watershed Management	3	2+0/2	E	T
CEV322	Air Pollution Modeling	3	2+0/2	E	T
CEV324	Climate Change	3	2+0/2	E	T
CEV328	Groundwater Pollution and Control	3	2+0/2	E	T
CEV330	Natural Treatment Systems	3	2+0/2	E	T
CEV332	Biomonitoring	3	2+0/2	E	T
CEV334	Planning of Environmental Resources	3	2+0/2	E	T
CEV336	Renewable Energy Resources	3	2+0/2	E	T
	4. Class				
Seventh Semester					
	Faculty Elective Course 5				
Course Code	Course Name	ECTS	WCH	C/E	La.
CEV443	Risk Management	3	2+0/2	E	T
CEV445	Project Management	3	2+0/2	E	T
	Vocational Elective Course 5-9				
CEV 407	Environmental Impact Assessment	3	2+0/2	E	T
CEV 411	Landfill Design	3	2+0/2	E	T
CEV 413	Equipment and Operation of Treatment Plants	3	2+0/2	E	T
CEV 415	Membrane Applications	3	2+0/2	E	T
CEV 417	Biogas Production Technologies	3	2+0/2	E	T
CEV 421	Operation of Solid Waste Plants	3	2+0/2	E	T
CEV 423	Advanced Wastewater Treatment	3	2+0/2	E	T
CEV 425	Pumping Plant and Transmission Lines	3	2+0/2	E	T
CEV 427	Thermal Methods in Solid Waste Disposal	3	2+0/2	E	T
CEV 431	Control of Treatment Sludges	3	2+0/2	E	T
CEV 433	Anaerobic Treatment Technologies	3	2+0/2	E	T
CEV 435	Environmental Modeling	3	2+0/2	E	T
CEV 437	Biological Methods in Solid Waste Disposal	3	2+0/2	E	T

Eighth Semester					
MUH 402	Innovation and Product Development	5	2+0/0	E	T
MUH 404	Quality Control and Standards	5	2+0/0	E	T
MUH 406	Productivity Management	5	2+0/0	E	T
MUH 408	Organizational Behavior for Engineers	5	2+0/0	E	T
MUH 410	Business Establishment and State Support	5	2+0/0	E	T

WCH: Weekly Course Hours

T+U/K: Theorical + Application/Credit

ECTS: European Credit Transfer System

C/E: Compulsory/Elective

La.: Language (T: Turkish)

Graduate Course Catalog

1. Semester						
Course Code	**Course Name**	**T**	**U**	**National credit**	**ECTS**	**C/E**
BAT 550	Scientific Research Techniques And Publication Ethics	3	0	3	6	C
CEMYU 501	Directed Field Studies I	4	0	0	6	C
	Elective Course 1	3	0	3	6	E
	Elective Course 2	3	0	3	6	E
	Elective Course 3	3	0	3	6	E
			Total	**12**	**30**	
2. Semester						
Course Code	**Course Name**	**T**	**U**	**National credit**	**ECTS**	**C/E**
CEMYU 502	Directed Field Studies II	4	0	0	6	C
CEMYS 502	Master Seminar	0	2	0	6	C
	Seçmeli Ders 4	3	0	3	6	E
	Seçmeli Ders 5	3	0	3	6	E
	Seçmeli Ders 6	3	0	3	6	E
			Total	**9**	**30**	

3. Semester						
Course Code	**Course Name**	**T**	**U**	**National credit**	**ECTS**	**C/E**
CEMYU 503	Directed Field Studies III	4	0	0	6	C
CEMYT 503	Thesis Studies I	0	0	0	24	C
			Total	**0**	**30**	

4. Semester						
Course Code	**Course Name**	**T**	**U**	**National Credit**	**ECTS**	**C/E**
CEMYU 504	Directed Field Studies IV	4	0	0	6	C
CEMYT 504	Thesis Studies II	0	0	0	24	C
			Total	**0**	**30**	

General		
Semester	**Course Hour (T/U/K)**	**ECTS**
1. Semester	16/0/12	30
2. Semester	13/2/9	30
3. Semester	4/0/0	30
4. Semester	4/0/0	30
Total	**37/2/21**	**120**

1. Semester Elective Courses

Course Code	Course Name	T	U	K	ECTS
CEM 501	Advanced Environmental Engineering Microbiology	3	0	3	6
CEM 503	Environmental Biotechnology-I	3	0	3	6
CEM 505	Advanced Wastewater Treatment Technologies	3	0	3	6
CEM 507	Environmental Biophysics	3	0	3	6
CEM 509	Drought and Water Management	3	0	3	6
CEM 511	Computer Aided Drawing for Scientific Studies	3	0	3	6
CEM 513	Integrated Waste Management and Zero Waste	3	0	3	6
CEM 515	Geographic Information System (GIS) in Environmental Monitoring and Assessment	3	0	3	6
CEM 517	Adsorption and Ion Exchange in Environmental Engineering	3	0	3	6
CEM 519	Soil Pollution and Control	3	0	3	6
CEM 521	Global Climate Change	3	0	3	6
CEM 523	Waste Management in Industries	3	0	3	6
CEM 525	Radioactive Contamination	3	0	3	6
CEM 527	Energy Efficiency in Wastewater Treatment	3	0	3	6
CEM 529	Natural Systems in Wastewater Treatment	3	0	3	6
CEM 531	Industrial Air Pollutants	3	0	3	6
CEM 533	Particle Control in Air Pollution	3	0	3	6
CEM 535	Flue Gas Measurement and Analysis	3	0	3	6
CEM 537	Filtration	3	0	3	6
CEM 539	Air Pollution Modeling	3	0	3	6
CEM 541	Fuzzy Logic Modelling in Engineering	3	0	3	6
CEM 543	Wastewater Treatment Technologies	3	0	3	6
CEM 545	Novel Materials for Environmental Applications	3	0	3	6
CEM 547	Life Cycle Analysis Principles	3	0	3	6

2. Semester Elective Courses

Course Code	Course Name	T	U	K	ECTS
CEM 504	Biochemical Processes in Wastewater Treatment Systems	3	0	3	6
CEM 506	Water Chemistry	3	0	3	6
CEM 508	Energy Production from Waste and Biomass	3	0	3	6
CEM 510	Biological Nitrogen and Phosphorus Removal from Wastewater	3	0	3	6
CEM 512	Physico-Chemical Processes of Wastewater Treatment Systems	3	0	3	6
CEM 514	Advanced Oxidation Processes	3	0	3	6
CEM 516	Statistics in Environmental Engineering	3	0	3	6
CEM 518	Environmental Applications of Remote Sensing	3	0	3	6
CEM 520	Assessment and Management of Environmental Noise	3	0	3	6
CEM 522	Recycling and Reuse of Wastewater	3	0	3	6
CEM 524	Eutrophication	3	0	3	6

CEM 526	Membrane Processes for Wastewater Treatment	**3**	**0**	**3**	**6**
CEM 528	Environmental Micropollutants	**3**	**0**	**3**	**6**
CEM 530	Gaining Matter and Energy from Solid Waste	**3**	**0**	**3**	**6**
CEM 532	Environmental Biotechnology-II	**3**	**0**	**3**	**6**
CEM 534	Emission-Immission Sampling Systems of Industrial Air Pollutants	**3**	**0**	**3**	**6**
CEM 536	Management of Special Wastes	**3**	**0**	**3**	**6**
CEM 538	Greenhouse Gas Emissions and Monitoring	**3**	**0**	**3**	**6**
CEM 540	Zero Waste Approaches and Sustainable Resource Recovery	**3**	**0**	**3**	**6**
CEM 542	Applications of Prediction Models in Environmental Engineering	**3**	**0**	**3**	**6**
CEM 544	Advanced Techniques in Sedimentation Pools	**3**	**0**	**3**	**6**
CEM 546	Waste Gas Control	**3**	**0**	**3**	**6**
CEM 548	Dispersion Models of Air Pollution	**3**	**0**	**3**	**6**
CEM 550	Agro-industrial Waste Valorization	**3**	**0**	**3**	**6**
CEM 552	Water and Carbon Footprint in the Context of Environmental Sustainability	**3**	**0**	**3**	**6**
CEM 554	Losses in Water Networks and Prevention Methods	**3**	**0**	**3**	**6**

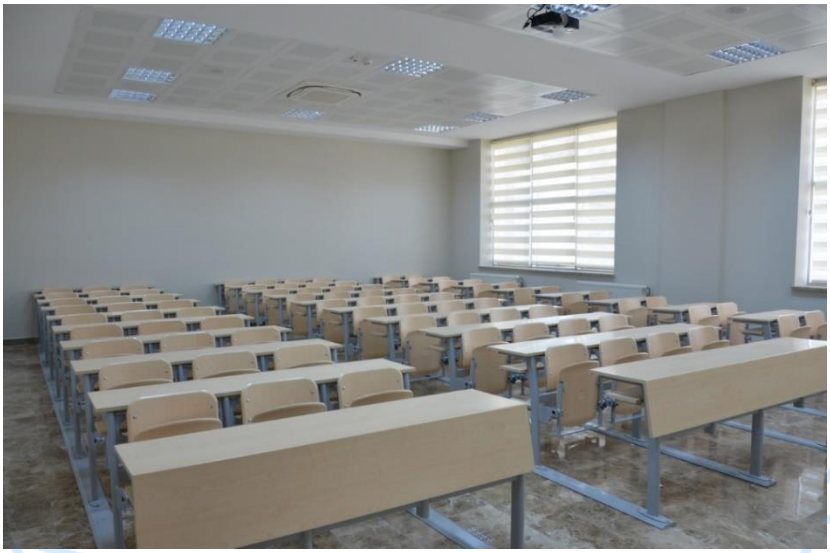
Activities

The workshop on the subject of "biogas," which has been emphasized and researched in recent years as a renewable energy source by our department, was held at the Adiyaman University Central Research Laboratory.

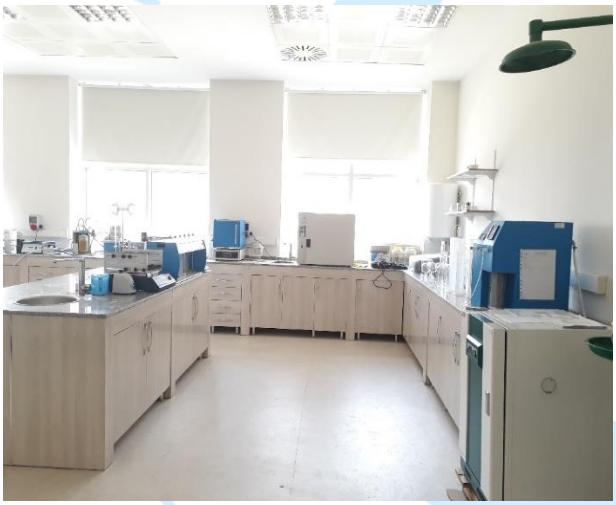
Another scientific event organized by our department was the Environmental Engineering Education and Research Workshop in Turkey in 2018. The current situation and future of education in Environmental Engineering Departments in Turkey were discussed, along with suggestions.

The latest scientific event organized with the contributions of our department is the 1st Adiyaman Water Workshop, in cooperation with Adiyaman University and Adiyaman Municipality, on Tuesday, March 22, 2022, at the Adiyaman University Rectorate conference hall. In the workshop, which was held in three different sessions, the importance of water resources and water pollution issues were discussed through oral presentations.

Classrooms;



Laboratories;



Some of the devices in our laboratory;

- Atomic Absorption Spectrophotometry (AAS)
- Total Organic Carbon Analyzer (TOC)
- UV Spectrophotometer
- Incubator
- Distilled Water Device
- COD Heater Unit
- Oven
- Ash Furnace
- Jar Test Unit
- pH Meter
- Magnetic Stirrer
- Precision scales
- Microscope etc.

ENGINEERING FACULTY

ENVIRONMENTAL ENGINEERING DEPARTMENT

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