

GEBZE TECHNICAL UNIVERSITY
ENVIRONMENTAL ENGINEERING DEPARTMENT
UNDERGRADUATE PROGRAM CURRICULUM* (VER 1.1) Düzeltmiş
08.02.2021 tarih ve 2021/01-15 Fakülte Kurulu Kararı; 17.02.2021 tarih ve 2021/03-15 Senato Kararı

* Valid for students starting their 1st year in 2019-2020 Fall Semester and later

1st Year Fall Semester								1st Year Spring Semester							
Code	Course Name	Credit	ECTS	T	P	L	Type	Code	Course Name	Credit	ECTS	T	P	L	Type
MATH 101	Calculus I	5	7	4	2	0	BS	MATH 102	Calculus II	5	7	4	2	0	BS
PHYS 121	Physics I	4	6	4	0	0	BS	PHYS 122	Physics II	4	6	4	0	0	BS
PHYS 151	Physics Lab I	1	1	0	0	2	BS	PHYS 152	Physics Lab II	1	1	0	0	2	BS
CHEM 101	General Chemistry I	3	5	3	0	0	BS	ENVE 104	Technical Drawing	3	3	2	2	0	BE
CHEM 113	General Chemistry Lab I	1	1	0	0	2	BS	MATH 116	Linear Algebra	3	5	3	0	0	BS
ENVE 101	Intro. to Env. Engineering and Career Planning	2	3	2	0	0	BE	INF 101	Introduction to Computing	3	4	2	0	2	BE
INF 100	Intro. to Computer Systems	3	3	2	0	2	BE	TUR 102	Turkish II	2	2	2	0	0	SOC
TUR 101	Turkish I	2	2	2	0	0	SOC	ENGL 112	Academic English	2	2	2	0	0	SOC
ENGL 111	Business English	2	2	2	0	0	SOC								
Semester Total Credits:		23	30	19	2	6		Semester Total Credits:		23	30	19	4	4	

2nd Year Fall Semester								2nd Year Spring Semester							
Code	Course Name	Credit	ECTS	T	P	L	Type	Code	Course Name	Credit	ECTS	T	P	L	Type
ENVE 201	Environmental Chemistry I	3	4	2	0	2	BE	ENVE 202	Environmental Chemistry II	3	4	2	0	2	BE
ENVE 215	Earth Science	3	5	3	0	0	BS	ENVE 204	Environmental Microbiology	3	4	2	0	2	BS
ENVE 205	Hydrology and Water Resources	3	5	3	0	0	BE	ENVE 206	Fundamentals of Environmental Engineering Processes	3	5	3	0	0	BS
ENVE 213	Materials Science for Environmental Engineers	3	5	3	0	0	BE	ENVE 208	Statistics and Experimental Design	3	5	3	0	0	BS
ENVE 211	Statics and Strength of Materials	3	4	3	0	0	BE	ENVE 210	Fluids Mechanics	3	5	3	0	0	BE
MATH 215	Differential Equations	3	5	2	2	0	BS	ENVE 212	Engineering Thermodynamics	3	5	3	0	0	BS
SSTR 101	Principles of Atatürk And The History of Turkish Revolution I	2	2	2	0	0	SOC	SSTR 102	Principles of Atatürk and The History of Turkish Revolution II	2	2	2	0	0	SOC
Semester Total Credits:		20	30	18	2	2		Semester Total Credits:		20	30	18	0	4	

3rd Year Fall Semester								3rd Year Spring Semester							
Code	Course Name	Credit	ECTS	T	P	L	Type	Code	Course Name	Credit	ECTS	T	P	L	Type
ENVE 301	Water Supply and Sewerage Systems	3	4	3	0	0	BE/ED	ENVE 318	Water Treatment Plant Design	3	5	3	0	0	BE/ED
ENVE 303	Water Quality Management	3	4	3	0	0	BE	ENVE 304	Unit Operations and Processes in Environmental Engineering	3	5	3	0	0	BE
ENVE 305	Air Pollution and Control	3	4	3	0	0	BE	ENVE 306	Ecology and Toxicology	3	4	3	0	0	BS
ENVE 307	Solid Waste Management	3	4	3	0	0	BE/ED	ENVE 308	Fate and Transport Processes in Environmental Engineering	3	5	3	0	0	BE
ENVE 3XX	Department Elective I	3	5	3	0	0	BE	ENVE 310	Laboratory for Unit Operations and Processes	3	4	1	0	4	BE
ENVE 3XX	Department Elective II	3	5	3	0	0	BE	ENVE 3XX	Department Elective III	3	5	3	0	0	BE
ENG 401	Occupational Health and Safety I	1	1	1	0	0	SOC	ENG 402	Occupational Health and Safety II	1	1	1	0	0	SOC
	Non-Technical Elective I	2	3	2	0	0	SOC								
ENG 300	Summer Practice I	0,5	1	0	1	0	BE								
Semester Total Credits:		21,5	31	21	1	0		Semester Total Credits:		19	29	17	0	4	

4th Year Fall Semester								4th Year Spring Semester							
Code	Course Name	Credit	ECTS	T	P	L	Type	Code	Course Name	Credit	ECTS	T	P	L	Type
ENVE 491	Graduation Project I	2	6	0	4	0	ED	ENVE 492	Graduation Project II	2	6	0	4	0	ED
ENVE 401	Environmental Design Project	3	5	2	2	0	ED	ENVE 4XX	Department Elective VIII	3	5	3	0	0	BE
ENVE 4XX	Department Elective IV	3	5	3	0	0	BE	ENVE 4XX	Department Elective IX	3	5	3	0	0	BE
ENVE 4XX	Department Elective V	3	5	3	0	0	BE	ENVE 4XX	Department Elective X	3	5	3	0	0	BE
ENVE 4XX	Department Elective VI	3	4	3	0	0	BE	ENVE 4XX	Department Elective XI	3	5	3	0	0	BE
ENVE 4XX	Department Elective VII	3	4	2	0	0	BE	ENVE 4XX	Department Elective XII	3	4	3	0	0	BE
ENG 400	Summer Practice II	0,5	1	0	1	0	BE								
Semester Total Credits:		17,5	30	13	7	0		Semester Total Credits:		17	30	15	4	0	

	161
TOTAL CREDIT:	
	240
TOTAL ECTS:	
TOTAL Theoretical Credits	140
TOTAL Practice Credits	20
TOTAL Laboratory Credits	20

4th Year Spring Semester (Alternative)*							
Code	Course Name	Credit	ECTS	T	P	L	Type
ENVE 492	Graduation Project II	2	6				
ENG 498	Industrial Applications	0	24				ED
Semester Total Credits:		2	30				

* Students who complete 200 ECTS credits can take ENG 498 Industrial Applications course instead of 24 ECTS elective courses of the 4th Year Spring Semester.

Prerequisites

Course	Prerequisite
MATH 102	MATH 101
ENVE 202	ENVE 201
ENVE 208	MATH 101
ENVE 206	ENVE 101
ENVE 210	MATH 102
ENVE 212	MATH 101
ENVE 318	ENVE 201, ENVE 206
ENVE 308	ENVE 206
ENVE 403	ENVE 201, ENVE 206
ENVE 492	ENVE 491

Abbreviations

T: Theoretical
P: Practice
L: Laboratory
BS: Basic Science
BE: Basic Engineering
ED: Engineering Design
SOC: Social Science

Department Elective Courses

Code	Course Name	
ENVE 311	Understanding Climate Change and Solutions	Alan Seçmeli 1
ENVE 430	Environmental Law and Management	Alan Seçmeli 10
ENVE 313	Principles of Cleaner Production	Alan Seçmeli 1
ENVE 314	Environmental Impact Assessment	Alan Seçmeli 2
ENVE 315	Energy and Environment	Alan Seçmeli 2
ENVE 316	Marine Pollution	Alan Seçmeli 3
ENVE 319	Agricultural Waste Valuation and Management	Alan Seçmeli 3
ENVE 402	Soil&Groundwater Pollution	Alan Seçmeli 4
ENVE 403	Wastewater Treatment Plant Design	Alan Seçmeli 5
ENVE 404	Environmental Economics	Açılmadı
ENVE 405	Environmental Modelling	Alan Seçmeli 12
ENVE 411	Hazardous Waste Management	Alan Seçmeli 6
ENVE 412	Environmental Risk Assessment	Alan Seçmeli 5
ENVE 413	Control, Instrumentation and Operation of Treatment Plants	Alan Seçmeli 8
ENVE 414	Anaerobic Treatment	Alan Seçmeli 8
ENVE 415	Sludge Treatment and Disposal	Alan Seçmeli 11
ENVE 416	Industrial Wastewater Treatment	Alan Seçmeli 9
ENVE 417	Air Sampling and Analysis	Alan Seçmeli 11
ENVE 418	Membrane Processes	Alan Seçmeli 7
ENVE 419	Water Reclamation, Recovery and Reuse	Alan Seçmeli 9
ENVE 421	Site Remediation	Alan Seçmeli 6
ENVE 422	Radioactive Pollution and Control	Açılmadı
ENVE 425	Molecular Aspects of Environmental Microbiology	Alan Seçmeli 7
ENVE 427	Environmental Nanotechnology	Alan Seçmeli 4
ENVE 429	Industrial Waste Management	Alan Seçmeli 12
ENVE 526	Atmospheric Chemistry	Alan Seçmeli 10

Non-Technical Elective Courses

Code	Course Name
ENG 250	Economics
ENG 350	Labor Law
ENG 451	Entrepreneurship
ENG 452	Technological Entrepreneurship
ENG 453	Intellectual and Industrial Property Rights
ENG 454	Patent Registration and Preparation of Description

Compliance Indicators with Accreditation Criteria

Total ECTS	240
Percentage of Elective Courses (%)	25
Percentage of Mathematics and Basic Science Courses (%)	30
Percentage of Design Courses (%)	17

Total Credit	161
Number of credits of Elective Courses	26
Number of credits of Mathematics and Basic Science Courses	48
Number of credits of Design Courses	94