

**GEBZE TECHNICAL UNIVERSITY**  
**ENVIRONMENTAL ENGINEERING DEPARTMENT**  
**UNDERGRADUATE PROGRAM CURRICULUM\***

**17.08.2021/04-09 sayılı Fakülte Kurulu Kararı; 02.09.2021/14-18 sayılı Senato Kararı, 31.01.2022/01-05 sayılı Fakülte Kurulu Kararı ve 10.02.2022/04-06 sayılı 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	BE
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								
<b>Semester Total Credits:</b>								<b>Semester Total Credits:</b>							
23								23							
30								30							
19								19							
4								4							
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
HİS 101	Principles of Atatürk And The History of Turkish Revolution I	2	2	2	0	0	SOC	HİS 102	Principles of Atatürk and The History of Turkish Revolution II	2	2	2	0	0	SOC
<b>Semester Total Credits:</b>								<b>Semester Total Credits:</b>							
20								20							
30								30							
18								18							
2								0							
2								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
MATH 215	Non-Technical Elective I	2	3	2	0	0	SOC								
ENG 300	Summer Practice I	0,5	1	0	1	0	BE								
<b>Semester Total Credits:</b>								<b>Semester Total Credits:</b>							
21,5								19							
31								29							
21								17							
1								0							
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 IV	3	5	3	0	0	BE	ENVE 4XX	Department Elective VIII	3	5	3	0	0	BE
ENVE 4XX	Department Elective V	3	5	3	0	0	BE	ENVE 4XX	Department Elective IX	3	5	3	0	0	BE
ENVE 4XX	Department Elective VI	3	4	3	0	0	BE	ENVE 4XX	Department Elective X	3	5	3	0	0	BE
ENVE 4XX	Department Elective VII	3	4	3	0	0	BE	ENVE 4XX	Department Elective XI	3	5	3	0	0	BE
ENG 400	Summer Practice II	0,5	1	0	1	0	BE	ENVE 4XX	Department Elective XII	3	4	3	0	0	BE
<b>Semester Total Credits:</b>								<b>Semester Total Credits:</b>							
17,5								17							
30								30							
14								15							
7								4							
0								0							

	<b>161</b>
<b>TOTAL CREDIT:</b>	
	<b>240</b>
<b>TOTAL ECTS:</b>	
<b>TOTAL Theoretical Credits</b>	<b>141</b>
<b>TOTAL Practice Credits</b>	<b>20</b>
<b>TOTAL Laboratory Credits</b>	<b>20</b>

**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
<b>Semester Total Credits:</b>		<b>2</b>	<b>30</b>				

\* 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		Abbreviations		Department Elective Courses	
Course	Prerequisite		Code	Course Name	
MATH 102	MATH 101	T: Theoretical	ENVE 311	Understanding Climate Change and Solutions	Alan Seçmeli 1
ENVE 202	ENVE 201	P: Practice	ENVE 430	Environmental Law and Management	Alan Seçmeli 10
ENVE 208	MATH 101	L: Laboratory	ENVE 313	Principles of Cleaner Production	Alan Seçmeli 1
ENVE 206	ENVE 101	BS: Basic Science	ENVE 314	Environmental Impact Assessment	Alan Seçmeli 2
ENVE 210	MATH 102	BE: Basic Engineering	ENVE 315	Energy and Environment	Alan Seçmeli 2
ENVE 212	MATH 101	ED: Engineering Design	ENVE 316	Marine Pollution	Alan Seçmeli 3
ENVE 318	ENVE 201, ENVE 206	SOC: Social Science	ENVE 319	Agricultural Waste Valuation and Management	Alan Seçmeli 3
ENVE 308	ENVE 206		ENVE 402	Soil&Groundwater Pollution	Alan Seçmeli 4
ENVE 403	ENVE 201, ENVE 206		ENVE 403	Wastewater Treatment Plant Design	Alan Seçmeli 5
ENVE 492	ENVE 491		ENVE 404	Environmental Economics	Açılmadı
ENVE 491	En az 160 AKTS kredisini başarı tamamlamış olmak.		ENVE 405	Environmental Modelling	Alan Seçmeli 12
*Mezun olmak için 40 AKTS veya daha az kredisini kalmış 9. yarıyıl ve üzerindeki öğrenciler ön şartlardan muaf tutularak derslere kayıtlıdır.					
<b>Non-Technical Elective Courses</b>					
Code	Course Name				
ENG 250	Economics		ENVE 411	Hazardous Waste Management	Alan Seçmeli 6
ENG 350	Labor Law		ENVE 412	Environmental Risk Assessment	Alan Seçmeli 5
ENG 451	Entrepreneurship		ENVE 413	Control, Instrumentation and Operation of Treatment Plants	Alan Seçmeli 8
ENG 452	Technological Entrepreneurship		ENVE 414	Anaerobic Treatment Technologies	Alan Seçmeli 8
ENG 453	Intellectual and Industrial Property Rights		ENVE 415	Sludge Treatment and Disposal	Alan Seçmeli 11
ENG 454	Patent Registration and Preparation of Description		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
<b>Compliance Indicators with Accreditation Criteria</b>					
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			