

GTU Civil Engineering Undergraduate Courses

First Semester							Second Semester								
Code	Course Name	ECTS	C	T	U	L	Type	Code	Course Name	ECTS	C	T	U	L	Type
CE 101	Introduction to Civil Engineering	2	1	1	0	0	MT	CE 102	Technical Drawing	3	2	1	2	2	TM
CHEM 101	General Chemistry I	5	3	3	0	0	TB	CE 105	Engineering Mechanics	5	4	3	2	0	TM
CHEM 113	General Chemistry Laboratory I	1	1	0	2	2	TB	ENGL 112	Academic English	2	2	2	0	0	SOS
ENGL 111	Business English	2	2	2	0	0	SOS	CE 103	Introduction to Computers and Programming for Ci	4	3	2	2	2	TB
MATH 101	Calculus I	7	5	4	2	0	TB	MATH 102	Calculus II	7	5	4	2	0	TB
PHYS 121	Physics I	6	4	4	0	0	TB	PHYS 122	Physics II	6	4	4	0	0	TB
PHYS 151	Physics Laboratory I	1	1	0	2	2	TB	PHYS 152	Physics Laboratory II	1	1	0	2	2	TB
HIS 101	Principles of Atatürk and the History of Turkish Rev	2	2	2	0	0	SOS	HIS 102	Principles of Atatürk and the History of Turkish Rev	2	2	2	0	0	SOS
TUR 101	Turkish I	2	2	2	0	0	SOS	TUR 102	Turkish II	2	2	2	0	0	SOS
Total credit per semester		28	21	18	6	4		Total credit per semester		32	25	20	10	6	
Third Semester							Fourth Semester								
Code	Course Name	ECTS	C	T	U	L	Type	Code	Course Name	ECTS	C	T	U	L	Type
CE 201	Probability, Statistics, Risk and Reliability for Civil E	5	3	3	0	0	TM	CE 202	Topography	3	2	1	2	0	TM
CE 205	Strength of Materials I	5	3	2	2	0	TM	CE 206	Strength of Materials II	5	3	2	2	1	TM
CE 221	Geology for Civil Engineers	3	2	2	0	0	TM	CE 232	Construction Materials	5	3	2	2	1	MT
CE 231	Materials Science for Civil Engineers	4	3	3	0	0	TM	CE 241	Engineering Economics for Civil Engineers	4	3	3	0	0	TM
CE 281	Introduction to Building Science and Design	5	3	2	2	0	MT	CE 261	Fluid Mechanics	5	3	2	2	1	TM
MATH 215	Differential Equations	5	3	2	2	0	TB	MATH 116	Linear Algebra	5	3	3	0	0	TB
	Non-Technical Elective Course I	3	3	3	0	0	SOS		Non-Technical Elective Course II	3	3	3	0	0	SOS
Total credit per semester		30	20	17	6	0		Total credit per semester		30	20	16	8	3	
Fifth Semester							Sixth Semester								
Code	Course Name	ECTS	C	T	U	L	Type	Code	Course Name	ECTS	C	T	U	L	Type
MATH 214	Numerical Methods	5	3	3	0	0	TB	CE 312	Theory of Structures II	5	3	2	2	0	MT
CE 311	Theory of Structures I	5	3	2	2	0	MT	CE 313	Reinforced Concrete Structures	5	3	2	2	0	MT
CE 321	Soil Mechanics	5	3	2	2	1	TM	CE 322	Foundation Engineering	5	3	2	2	0	MT
CE 351	Transportation and Railway Engineering	5	3	2	2	0	MT	CE 362	Water Resources Engineering	5	3	2	2	0	MT
CE 361	Hydraulics	5	3	2	2	1	MT	CE XXX	Department Elective Courses	4	3	3	0	0	MT
CE XXX	Department Elective Courses	4	3	3	0	0	MT	CE 301	Introduction to Civil Engineering Design	4	3	2	2	0	MT
ENG 300	Summer Practice I	1	0	0	0	0	MT	ENG 402	Occupational Health and Safety II	1	1	1	0	0	SOS
ENG 401	Occupational Health and Safety I	1	1	1	0	0	SOS								
Total credit per semester		31	19	15	8	2		Total credit per semester		29	19	14	10	0	
Seventh Semester							Eighth Semester								
Code	Course Name	ECTS	C	T	U	L	Type	Code	Course Name	ECTS	C	T	U	L	Type
CE 411	Steel Structures	5	3	2	2	0	MT	CE 492	Graduation Project	6	3	0	6	0	MT
CE 441	Construction Management	5	3	3	0	0	MT	CE XXX	Department Elective Courses	6	4	3	2	0	MT
CE 491	Graduation Project Study	6	3	0	6	0	MT	CE XXX	Department Elective Courses	6	4	3	2	0	MT
CE XXX	Department Elective Courses	5	3	2	2	0	MT	CE XXX	Department Elective Courses	6	4	3	2	0	MT
CE XXX	Department Elective Courses	4	3	3	0	0	MT	CE XXX	Department Elective Courses	6	4	3	2	0	MT
XXX	Technical Elective	4	3	3	0	0	MT								
ENG 400	Summer Practice II	1	0	0	0	0	MT								
Total credit per semester		30	18	13	10	0		Total credit per semester		30	19	12	14	0	
								or							
							Eighth Semester								
Code	Course Name	ECTS	C	T	U	L	Type	Code	Course Name	ECTS	C	T	U	L	Type
								CE 492	Graduation Project	6	3	0	6	0	MT
								ENG 498	Industrial Applications	24	16	0	32	0	MT
Total credit per semester		30	19	0	38	0									

Department Elective Courses							
Code	Course Name	ECTS	C	T	U	L	Type
CE 302	Advanced Programming Techniques for Engineers	4	3	2	2	2	MT
CE 323	Natural Hazards and Disasters	4	3	3	0	0	MT
CE 324	Geoenvironmental Engineering	4	3	3	0	0	MT
CE 331	Concrete Technology	4	3	3	0	0	MT
CE 332	Durability of Concrete	4	3	3	0	0	MT
CE 342	Construction Law and Engineering Ethics	4	3	3	0	0	MT
CE 352	Traffic Engineering	4	3	3	0	0	MT
CE 363	Introduction to Coastal Engineering	4	3	3	0	0	MT
CE 364	Hydrology	4	3	3	0	0	MT
CE 415	Earthquake Resistant Design of Structures	5	3	2	2	0	MT
CE 417	Seismic Design of Reinforced Concrete and Steel Structures	5	3	2	2	0	MT
CE 418	Computer-Aided Structural Analyses	5	3	2	2	0	MT
CE 419	Pre-stressed Concrete	5	3	2	2	0	MT
CE 423	Modern Techniques in Foundation Engineering	5	3	2	2	0	MT
CE 424	Soil Improvement	5	3	2	2	0	MT
CE 425	Geotechnical Tests for Design and Construction	5	3	2	2	0	MT
CE 426	Design of Reinforced Soil Structures	5	3	2	2	0	MT
CE 443	Introduction to Geotechnical Earthquake Engineering	5	3	2	2	0	MT
CE 443	Construction Planning and Scheduling	5	3	2	2	0	MT
CE 445	Construction Health and Safety	5	3	2	2	0	MT
CE 412	Design of Reinforced Concrete Structures	6	4	3	2	0	MT
CE 413	Design of Steel Structures	6	4	3	2	0	MT
CE 422	Design of Foundations, Retaining Structures and Slopes	6	4	3	2	0	MT
CE 442	Civil Engineering system analysis and Design	6	4	3	2	0	MT
CE 451	Highway Engineering Design	6	4	3	2	0	MT
CE 461	Water Supply and Waste Water Disposal Design	6	4	3	2	0	MT
CE 462	Coastal and Harbor Structures Design	6	4	3	2	0	MT
CE 414	Bridge Design	6	4	3	2	0	MT
CE 421	Design and Construction of Underground Structures	6	4	3	2	0	MT
CE 463	Marine Structures Design	6	4	3	2	0	MT

Prerequisites		
<i>Code</i>	<i>Course Name</i>	<i>Prerequisite/s</i>
MATH 102	Calculus II	MATH 101
MATH 215	Differential Equations	MATH 102
CE 105	Engineering Mechanics	PHYS 121
CE 201	Probability, Statistics, Risk and Reliability for Civil Engineers	CE 103
CE 205	Strength of Materials I	CE 105
CE 206	Strength of Materials II	CE 205
CE 231	Materials Science	CHEM 101
CE 261	Fluid Mechanics	MATH 215, CE 105
CE 281	Introduction to Building Science and Design	CE 101, CE 102
CE 312	Theory of Structures II	CE 311
CE 313	Reinforced Concrete Structures	CE 232, CE 205
CE 321	Soil Mechanics	CE 221, CE 205
CE 322	Foundation Engineering	CE 321
CE 361	Hydraulics	CE 261
CE 362	Water Resources Engineering	CE 361
CE 411	Steel Structures	CE 205, CE 232