

## GTU Civil Engineering Undergraduate Courses

09.01.2023/01-08 sayılı Fakülte Kurul Kararı ve 19.01.2023/02-09 sayılı Senato Kararı, 27.02.2024/02-01 sayılı Fakülte Kurul Kararı ve 29.02.2024/07-02 sayılı Senato Kararı

First Semester							
Code	Course Name	ECTS	C	T	U	L	Type
CE 101	Introduction to Civil Engineering and Career Planning	2	1	1	0	0	MT
CHEM 101	General Chemistry I	5	3	3	0	0	TB
CHEM 113	General Chemistry Laboratory I	1	1	0	0	2	TB
ENGL 111	Business English	2	2	2	0	0	SOS
MATH 101	Calculus I	7	5	4	2	0	TB
PHYS 121	Physics I	6	4	4	0	0	TB
PHYS 151	Physics Laboratory I	1	1	0	0	2	TB
HIS 101	Principles of Atatürk and the History of Turkish Revolution I	2	2	2	0	0	SOS
TUR 101	Turkish I	2	2	2	0	0	SOS
<b>Total credit per semester</b>		<b>28</b>	<b>21</b>	<b>18</b>	<b>2</b>	<b>4</b>	

Third Semester							
Code	Course Name	ECTS	C	T	U	L	Type
CE 201	Probability, Statistics, Risk and Reliability for Civil Engineers	5	3	3	0	0	TM
CE 205	Strength of Materials I	5	3	2	2	0	TM
CE 221	Geology for Civil Engineers	3	2	2	0	0	TM
CE 231	Materials Science for Civil Engineers	4	3	3	0	0	TM
CE 281	Introduction to Building Science and Design	5	3	2	2	0	MT
MATH 215	Differential Equations	5	3	2	2	0	TB
	Non-Technical Elective Course I	3	3	3	0	0	SOS
<b>Total credit per semester</b>		<b>30</b>	<b>20</b>	<b>17</b>	<b>6</b>	<b>0</b>	

Fifth Semester							
Code	Course Name	ECTS	C	T	U	L	Type
MATH 214	Numerical Methods	5	3	3	0	0	TB
CE 311	Theory of Structures I	5	3	2	2	0	MT
CE 321	Soil Mechanics	5	3	2	1	1	TM
CE 351	Transportation and Railway Engineering	5	3	2	2	0	MT
CE 361	Hydraulics	5	3	2	1	1	MT
CE XXX	Department Elective Courses	4	3	3	0	0	MT
ENG 300	Summer Practice I	1	0	0	0	0	MT
ENG 401	Occupational Health and Safety I	1	1	1	0	0	SOS
<b>Total credit per semester</b>		<b>31</b>	<b>19</b>	<b>15</b>	<b>6</b>	<b>2</b>	

Seventh Semester							
Code	Course Name	ECTS	C	T	U	L	Type
CE 441	Construction Management	5	3	3	0	0	MT
CE 491	Graduation Project I	6	3	0	6	0	MT
CE XXX	Department Elective Courses	5	3	2	2	0	MT
CE XXX	Department Elective Courses	5	3	2	2	0	MT
CE XXX	Department Elective Courses	4	3	3	0	0	MT
XXX	Technical Elective	4	3	3	0	0	MT
ENG 400	Summer Practice II	1	0	0	0	0	MT
<b>Total credit per semester</b>		<b>30</b>	<b>18</b>	<b>13</b>	<b>10</b>	<b>0</b>	

Second Semester							
Code	Course Name	ECTS	C	T	U	L	Type
CE 102	Technical Drawing for Civil Engineers	3	2	1	0	2	TM
CE 105	Engineering Mechanics	5	4	3	2	0	TM
ENGL 112	Academic English	2	2	2	0	0	SOS
CE 103	Introduction to Computers and Programming for Civil Engineers	4	3	2	0	2	TB
MATH 102	Calculus II	7	5	4	2	0	TB
PHYS 122	Physics II	6	4	4	0	0	TB
PHYS 152	Physics Laboratory II	1	1	0	0	2	TB
HIS 102	Principles of Atatürk and the History of Turkish Revolution II	2	2	2	0	0	SOS
TUR 102	Turkish II	2	2	2	0	0	SOS
<b>Total credit per semester</b>		<b>32</b>	<b>25</b>	<b>20</b>	<b>4</b>	<b>6</b>	

Fourth Semester							
Code	Course Name	ECTS	C	T	U	L	Type
CE 202	Topography	3	2	1	2	0	TM
CE 206	Strength of Materials II	5	3	2	1	1	TM
CE 232	Construction Materials	5	3	2	1	1	MT
CE 241	Engineering Economics for Civil Engineers	4	3	3	0	0	TM
CE 261	Fluid Mechanics	5	3	2	1	1	TM
MATH 116	Linear Algebra	5	3	3	0	0	TB
	Non-Technical Elective Course II	3	3	3	0	0	SOS
<b>Total credit per semester</b>		<b>30</b>	<b>20</b>	<b>16</b>	<b>5</b>	<b>3</b>	

Sixth Semester							
Code	Course Name	ECTS	C	T	U	L	Type
CE 312	Theory of Structures II	5	3	2	2	0	MT
CE 313	Reinforced Concrete Structures	5	3	2	2	0	MT
CE 322	Foundation Engineering	5	3	2	2	0	MT
CE 362	Water Resources Engineering	5	3	2	2	0	MT
CE XXX	Department Elective Courses	4	3	3	0	0	MT
CE 411	Steel Structures	4	3	2	2	0	MT
ENG 402	Occupational Health and Safety II	1	1	1	0	0	SOS
<b>Total credit per semester</b>		<b>29</b>	<b>19</b>	<b>14</b>	<b>10</b>	<b>0</b>	

Eighth Semester							
Code	Course Name	ECTS	C	T	U	L	Type
CE 492	Graduation Project II	6	3	0	6	0	MT
CE XXX	Department Elective Courses	6	4	3	2	0	MT
CE XXX	Department Elective Courses	6	4	3	2	0	MT
CE XXX	Department Elective Courses	6	4	3	2	0	MT
CE XXX	Department Elective Courses	6	4	3	2	0	MT
<b>Total credit per semester</b>		<b>30</b>	<b>19</b>	<b>12</b>	<b>14</b>	<b>0</b>	

or

Eighth Semester							
Code	Course Name	ECTS	C	T	U	L	Type
CE 492	Graduation Project II	6	3	0	6	0	MT
ENG 498	Industrial Applications	24	0	0	0	0	MT
<b>Total credit per semester</b>		<b>30</b>	<b>3</b>	<b>0</b>	<b>6</b>	<b>0</b>	

**Department Elective Courses**

<i>Code</i>	<i>Anabilim Dalı</i>	<i>Course Name</i>	<i>ECTS</i>	<i>C</i>	<i>T</i>	<i>U/L</i>	<i>Type</i>
CE 302	BÖLÜM	Advanced Programming Techniques for Engineers	4	3	2	2	MT
CE 323	GEOTEKNİK	Natural Hazards and Disasters	4	3	3	0	MT
CE 324	GEOTEKNİK	Geoenvironmental Engineering	4	3	3	0	MT
CE 331	MALZEME	Concrete Technology	4	3	3	0	MT
CE 332	MALZEME	Durability of Concrete	4	3	3	0	MT
CE 342	İŞLETME	Construction Law and Engineering Ethics	4	3	3	0	MT
CE 352	ULAŞTIRMA	Traffic Engineering	4	3	3	0	MT
CE 363	HİDROLİK	Introduction to Coastal Engineering	4	3	3	0	MT
CE 364	HİDROLİK	Hydrology	4	3	3	0	MT
CE 405	BÖLÜM	Finite Element Method and Applications	5	3	2	2	MT
CE 415	YAPI	Dynamics of Structures	5	3	2	2	MT
CE 416	YAPI	Performance-Based Design	5	3	2	2	MT
CE 418	YAPI	Computer-Aided Structural Analyses	5	3	2	2	MT
CE 419	YAPI	Pre-stressed Concrete	5	3	2	2	MT
CE 423	GEOTEKNİK	Modern Techniques in Foundation Engineering	5	3	2	2	MT
CE 424	GEOTEKNİK	Soil Improvement	5	3	2	2	MT
CE 425	GEOTEKNİK	In-situ Tests in Geotechnical Engineering	5	3	2	2	MT
CE 426	GEOTEKNİK	Design of Reinforced Soil Structures	5	3	2	2	MT
CE 446	İŞLETME	Construction Planning and Scheduling	5	3	2	2	MT
CE 444	İŞLETME	Entrepreneurship	5	3	2	2	MT
CE 445	İŞLETME	Construction Health and Safety	5	3	2	2	MT
CE 464	HİDROLİK	Dams	5	3	2	2	MT
CE 465	HİDROLİK	Highway Drainage and Hydraulics	5	3	2	2	MT
CE 466	HİDROLİK	Marine Hazards and Tsunamis	5	3	2	2	MT
CE 412	YAPI	Design of Reinforced Concrete Structures	6	4	3	2	MT
CE 413	YAPI	Earthquake-Resistant Design of Steel Structures	6	4	3	2	MT
CE 417	YAPI	Earthquake-Resistant Design of Reinforced Concrete Structures	6	4	3	2	MT
CE 422	GEOTEKNİK	Design of Foundations, Retaining Structures and Slopes	6	4	3	2	MT
CE 442	İŞLETME	Civil Engineering system analysis and Design	6	4	3	2	MT
CE 443	GEOTEKNİK	Introduction to Geotechnical Earthquake Engineering	6	4	3	2	MT
CE 451	ULAŞTIRMA	Highway Engineering Design	6	4	3	2	MT
CE 461	HİDROLİK	Water Supply and Waste Water Disposal Design	6	4	3	2	MT
CE 462	HİDROLİK	Coastal and Harbor Structures Design	6	4	3	2	MT
CE 414	YAPI	Bridge Design	6	4	3	2	MT
CE 421	GEOTEKNİK	Design and Construction of Underground Structures	6	4	3	2	MT
CE 463	HİDROLİK	Marine Structures Design	6	4	3	2	MT
CE 460	HİDROLİK	Introduction to Underwater Operations and Design	6	4	3	2	MT

**Prerequisites**

<i>Code</i>	<i>Anabilim Dalı</i>	<i>Course Name</i>	<i>Prerequisite/s</i>
MATH 102	FAKÜLTE	Calculus II	MATH 101
MATH 215	FAKÜLTE	Differential Equations	MATH 102
CE 201	BÖLÜM	Probability, Statistics, Risk and Reliability for Civil Engineers	CE 103
CE 206	MEKANİK	Strength of Materials II	CE 205
CE 261	HİDROLİK	Fluid Mechanics	MATH102, CE105 derslerinden DD ve üzeri not almış olmak
CE 281	Farklı Disiplin	Introduction to Building Science and Design	YOK
CE 311	YAPI	Theory of Structures I	CE 105
CE 312	YAPI	Theory of Structures II	CE 311
CE 313	YAPI	Reinforced Concrete Structures	CE 232, CE 205
CE 321	GEOTEKNİK	Soil Mechanics	<del>CE 221, CE 205</del> CE 321 dersinden minimum DD almış olmak
CE 322	GEOTEKNİK	Foundation Engineering	olmak
CE 361	HİDROLİK	Hydraulics	CE 261
CE 362	HİDROLİK	Water Resources Engineering	CE 361
CE 363	HİDROLİK	Introduction to Coastal Engineering	CE 261
CE 364	HİDROLİK	Hydrology	CE 261, CE 361
CE 411	YAPI	Steel Structures	CE 205, CE 232
CE 412	YAPI	Design of Reinforced Concrete Structures	CE 206, CE 313
CE 492	BÖLÜM	Graduation Project II	CE 491 CE 322 dersinden minimum DD almış olmak
CE 422	GEOTEKNİK	Design of Foundations, Retaining Structures and Slopes	CE 411 dersinden minimum DD almış olmak
CE 413	YAPI	Earthquake-Resistant Design of Steel Structures	olmak
CE 415	YAPI	Dynamics of Structures	CE312 CE 412 dersinden minimum DD almış olmak
CE 417	YAPI	Earthquake-Resistant Design of Reinforced Concrete Structures	olmak
CE 443	GEOTEKNİK	Introduction to Geotechnical Earthquake Engineering	CE321, CE322
CE 465	HİDROLİK	Highway Drainage and Hydraulics	CE361
CE 425	GEOTEKNİK	In-situ Tests in Geotechnical Engineering	CE 321
CE 442	İŞLETME	Civil Engineering system analysis and Design	CE 241 CE103, INF212, BENG215, MAK108,
CE 302	BÖLÜM	Advanced Programming Techniques for Engineers	INF101/ENF101 derslerinden birini almış olmak ve bunlardan en az DD almış olmak
CE 466	HİDROLİK	Marine Hazards and Tsunamis	YOK
CE 462	HİDROLİK	Coastal and Harbor Structures Design	YOK