

**Department of Computer Engineering**  
Undergraduate Curriculum

FIRST SEMESTER						SECOND SEMESTER					
Course Code	Course Name	T	A	CR	ECTS	Course Code	Course Name	T	A	CR	ECTS
ATA121	Ataturk's Principles and the History of Turkish Renovation I	2	0	2	2	ATA122	Ataturk's Principles and the History of Turkish Renovation II	2	0	2	2
CHEM1007	Basic Chemistry	4	0	6	6	CSE1142	Computer Programming II	3	2	7	7
CSE1100	Introduction to Computer Engineering	2	0	2	2	MATH1002	Calculus II	4	0	6	6
CSE1141	Computer Programming I	3	2	6	6	MATH2056	Linear Algebra	3	0	4	4
MATH1001	Calculus I	4	0	6	6	PHYS1102	Physics II	3	0	4	4
PHYS1101	Physics I	3	0	4	4	PHYS1104	Physics Lab	0	2	2	2
PHYS1103	Physics Lab I	0	2	2	2	NTExxx	Non-Technical Elective -1	2	0	3	3
TRD121	Turkish Language I	2	0	2	2	TRD122	Turkish Language II	2	0	2	2
<b>Total</b>		<b>20</b>	<b>4</b>	<b>30</b>	<b>30</b>	<b>Total</b>		<b>19</b>	<b>4</b>	<b>30</b>	<b>30</b>

THIRD SEMESTER						FOURTH SEMESTER					
Course Code	Course Name	T	A	CR	ECTS	Course Code	Course Name	T	A	CR	ECTS
CSE2023	Discrete Computational Structures	3	0	6	6	CSE2138	Systems Programming	3	2	7	7
CSE2025	Data Structures	3	2	8	8	CSE2046	Analysis of Algorithms	3	0	6	6
ECON2003	Introduction to Economics	3	0	4	4	ECON2004	Engineering Economy	2	0	4	4
EE2031	Electric Circuits	3	0	5	5	EE2032	Electronics	2	2	5	5
MATH2055	Differential Equations	3	0	4	4	MATH2059	Numerical Methods	3	0	4	4
NTExxx	Non-Technical Elective - 2	2	0	3	3	STAT2053	Introduction to Probability and Statistics	3	0	4	4
<b>Total</b>		<b>17</b>	<b>2</b>	<b>30</b>	<b>30</b>	<b>Total</b>		<b>16</b>	<b>4</b>	<b>30</b>	<b>30</b>

FIFTH SEMESTER						SIXTH SEMESTER					
Course Code	Course Name	T	A	CR	ECTS	Course Code	Course Name	T	A	CR	ECTS
CSE3000	Summer Practice I	0	0	10	10	CSE3038	Computer Organization	3	2	7	7
CSE3015	Digital Logic Design	3	2	7	7	CSE3044	Software Engineering	3	2	7	7
CSE3033	Operating Systems	3	2	7	7	CSE3048	Introduction to Signals and Systems	3	0	5	5
CSE3055	Database Systems	3	2	7	7	CSE3064	Formal Languages and Automata Theory	3	0	6	6
CSE3063	Object-Oriented Software Design	3	0	5	5	IE3035	Operations Research	3	0	5	5
IE3081	Modeling and Discrete Simulation	3	0	4	4						
<b>Total</b>		<b>15</b>	<b>6</b>	<b>40</b>	<b>40</b>	<b>Total</b>		<b>15</b>	<b>4</b>	<b>30</b>	<b>30</b>

SEVENTH SEMESTER						EIGHTH SEMESTER					
Course Code	Course Name	T	A	CR	ECTS	Course Code	Course Name	T	A	CR	ECTS
CSE4000	Summer Practice II	0	0	10	10	CSE4198	Engineering Project II	0	2	5	5
CSE4117	Microprocessors	3	2	6	6	NTExxx	Non-Technical Elective - 3	2	0	3	3
CSE4074	Computer Networks	3	0	5	5	ENG_FTExxx	Faculty Technical Elective	3	0	5	5
CSE4197	Engineering Project I	0	2	4	4	TExxx	Technical Elective - 3	3	0	5	5
TExxx	Technical Elective - 1	3	0	5	5	TExxx	Technical Elective - 4	3	0	5	5
TExxx	Technical Elective - 2	3	0	5	5	TExxx	Technical Elective - 5	3	0	5	5
UExxx	University Elective	2	0	3	3	ISG122	Work Safety	2	0	2	2
ISG121	Work Safety	2	0	2	2						
<b>Total</b>		<b>16</b>	<b>4</b>	<b>40</b>	<b>40</b>	<b>Total</b>		<b>16</b>	<b>2</b>	<b>30</b>	<b>30</b>

T: Theoretical Hours, A: Applied Hours, CR: Credits, ECTS: ECTS Credits, Total Credits: 260, Total ECTS Credits: 260, Total Contact Hours: 164, Total Number of Courses: 54

TECHNICAL ELECTIVES			
CSE4026	Introduction to Robotics and Control Theory	CSE4063	Fundamentals of Data Mining
CSE4032	Introduction to Distributed Systems	CSE4066	Introduction to Cryptography
CSE4034	Advanced Unix Programming	CSE4070	Software Frameworks
CSE4038	Introduction to Parallel Processing	CSE4075	Wireless and Mobile Networks
CSE4040	Cloud Computing	CSE4082	Artificial Intelligence
CSE4044	Software Project Management	CSE4083	Computer Graphics
CSE4053	Information Systems: Analysis & Design	CSE4084	Multimedia Systems
CSE4054	Distributed Databases	CSE4085	Human Computer Interaction
CSE4056	Management of Information Systems	CSE4086	Mobile Device Programming
CSE4057	Information Systems Security	CSE4087	Embedded System Design
CSE4058	Fundamentals of Electronic Commerce	CSE4088	Introduction to Machine Learning
CSE4059	Internet Programming	CSE4093	Special Topics in Computer Engineering I
CSE4060	Principles of Programming Languages	CSE4094	Special Topics in Computer Engineering II
CSE4061	Compiler Design	CSE4095	Special Topics in Computer Engineering III
CSE4062	Intro. to Data Science and Analytics	CSE4096	Special Topics in Computer Engineering IV

Courses from other departments or from the graduate programs can be taken as technical electives with the consent of the instructor and the approval of the academic advisor. Only one of the technical electives with 4XXX code can be taken from the other engineering departments. Some technical electives may have prerequisite(s).