COMPUTER ENGINEERING DOUBLE MAJOR PROGRAM
FOR
MECHATRONICS ENGINEERING STUDENTS
03/11/2020

COMPUTER ENGINEERING PROGRAM	MECHATRONICS ENGINEERING PROGRAM

FRESHMAN 1st Term

Course Code	Course Name	ECTS	Equal Course	Course Name	ECTS
CMPE 109	**Fundamentals of Computing**	**2.5**			4
CMPE 113	Computer Programming I	4	CMPE 102	Computer Programming	4
MATH 151	Calculus I	7	MATH 151	Calculus I	7
PHYS 101	General Physics I	6	PHYS 101	General Physics I	6
CEAC 105	General Chemistry	5	CHE 105	General Chemistry	5
ENG 101	English for Academic Purposes I	3.5	ENG 101	English for Academic Purposes I	3.5
HIST 111	Principles of Atatürk and History of Turkish Revolution I	2	HIST 111	Principles of Atatürk and History of Turkish Revolution I	2
Total credit		30			

FRESHMAN 2nd Term

Course Code	Course Name	ECTS	Equal Course	Course Name	ECTS
CMPE 134	**Fundamentals of Electronic Components**	**3.5**			
CMPE 114	**Computer Programming II**	**5**			
MATH 152	Calculus II	7	MATH 152	Calculus II	7
PHYS 102	General Physics II	6	PHYS 102	General Physics II	6
ENG 102	English for Academic Purposes II	3.5	ENG 102	English for Academic Purposes II	3.5
HIST 112	Principles of Atatürk and History of Turkish Revolution II	2	HIST 112	Principles of Atatürk and History of Turkish Revolution II	2
HIST 221	History of Civilization	3	HIST 221	History of Civilization	3
Total credit		30			

COMPUTER ENGINEERING PROGRAM	ELECTRICAL & ELECTRONICS ENGINEERING PROGRAM

SOPHOMORE 3rd Term

Course Code	Course Name	ECTS	Equal Course	Course Name	ECTS
EE 203	Digital Circuits and Systems	6	EE 203	Digital Circuits and Systems	6
CMPE 225	**Object-Oriented Programming**	**8**			
CMPE 251	**Discrete Computational Structures**	**7**			
MATH 275	Linear Algebra	6	MATH 275	Linear Algebra	6
ENG 201	English for Academic Purposes III	3	ENG 201	English for Academic Purposes III	3
	Total credit	30			

SOPHOMORE 4th Term

Course Code	Course Name	ECTS	Equal Course	Course Name	ECTS
CMPE 226	**Data Structures**	**8**			
CMPE 236	Introduction to Microprocessors and Microcontrollers	8	MECE 228	Microcontrollers	5
MATH 276	Differential Equations	6	MATH 276	Differential Equations	6
IE 220	Probability and Statistics	5	IE 220	Probability and Statistics	5
ENG 202	English for Academic Purposes IV	3	ENG 202	English for Academic Purposes IV	3
	Total credit	30			

COMPUTER ENGINEERING PROGRAM	ELECTRICAL & ELECTRONICS ENGINEERING PROGRAM

JUNIOR 5th Term

Course Code	Course Name	ECTS	Equal Course	Course Name	ECTS
CMPE 331	**Computer Architecture and Organization**	**7**			
CMPE 325	**Study of Programming Languages**	**6**			
CMPE 341	**Database Design and Management**	**7**			
CMPE 399	Summer Practice I	6	MECE 399	Summer Practice I	6
ENG 301	English For Occupational Purposes I	3	ENG 301	English For Occupational Purposes I	3
CMPE 323	**Algorithms**	**7**			
	Total credit	30			

JUNIOR 6th Term

Course Code	Course Name	ECTS	Equal Course	Course Name	ECTS
MATH 380	Numerical Methods for Engineers	**5**	MATH 380	Numerical Methods for Engineers	5
CMPE 326	**Formal Languages and Automata**	**6**			
CMPE 334	**Computer Networks**	**6**			
SE 346	**Software Engineering**	**6**			
GE-1	General Elective	4	GE-1	General Elective	4
ENG 302	English For Occupational Purposes II	3	ENG 302	English For Occupational Purposes II	3
	Total credit	30			

COMPUTER ENGINEERING PROGRAM	ELECTRICAL & ELECTRONICS ENGINEERING PROGRAM

SENIOR 7th Term

Course Code	Course Name	ECTS	Equal Course	Course Name	ECTS
CMPE 493	**Project Orientation**	**5**			
AE-1	Area Elective	5	AE-1	Area Elective	5
AE-2	Area Elective	5	AE-2	Area Elective	5
AE-3	Area Elective	5	AE-3	Area Elective	5
GE-2	General Elective	4	GE-2	General Elective	4
GE-3	General Elective	4	GE-3	General Elective	4
TURK 401	Turkish Language I	2	TURK 401	Turkish Language I	2
CMPE 499	Summer Practice II	10	MECE 499	Summer Practice II	10
	Total credit	40			

SENIOR 8th Term

Course Code	Course Name	ECTS	Equal Course	Course Name	ECTS
CMPE 431	**Operating Systems**	**5**			
CMPE 494	**Senior Project**	**8**			
AE-4	**Area Elective**	**5**			
AE-5	**Area Elective**	**5**			
AE-6	**Area Elective**	**5**			
TURK 402	Turkish Language II	2	TURK 402	Turkish Language II	2
	Total credit	30			

Important Notes:

* Double major department is "*Computer Engineering*"; Main major department is "*Mechatronics Engineering*"

* The courses written in **bold must be taken from double major department.**

* **Only** the courses *on the same row* are assumed to be equivalent and can be transferred **from main major program to double major program**.

* **Area Electives (AE):** In total, a double-major student must take **9 different AE**s such that **6 AEs** must be taken from *main major program* and 3 **AEs** must be taken from *double major program*.

* **General Electives (GE):** All the GEs must be taken from the main major department.

* **Summer Practice**: Both summer practice must be taken from the main major department.

* **Senior Project and Project Orientation**: Both courses must be taken **separately** from the main major and double major department.