

**INFORMATION SYSTEMS ENGINEERING
DOUBLE MAJOR PROGRAM
FOR
COMPUTER ENGINEERING STUDENTS**

INFORMATION SYSTEMS ENGINEERING PROGRAM	COMPUTER ENGINEERING PROGRAM
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FRESHMAN 1st Term

Course Code	Course Name	ECTS	Equal Course	Course Name	ECTS
CMPE 109	Fundamentals of Computing	2.5	CMPE 109	Fundamentals of Computing	2.5
CMPE 113	Computer Programming I	4	CMPE 113	Computer Programming I	4
MATH 151	Calculus I	7	MATH 151	Calculus 1	7
PHYS 101	General Physics I	6	PHYS 101	General Physics I	6
CEAC 105	General Chemistry	5	CEAC 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
KRY111	Career Planning	1	KRY111	Career Planning	1
Total credit		31			

FRESHMAN 2nd Term

Course Code	Course Name	ECTS	Equal Course	Course Name	ECTS
ISE 102	Introduction to MIS	3.5			
CMPE 114	Computer Programming II	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
			CMPE 134	Fundamentals of Electronic Components	3.5
Total credit		30			

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SOPHOMORE 3rd Term

Course Code	Course Name	ECTS	Equal Course	Course Name	ECTS
ISE 261	Business and e-Commerce	6			
CMPE 225	Object-Oriented Programming	8	CMPE 225	Object-Oriented Programming	8
CMPE 251	Discrete Computational Structures	7	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
			EE 203	Digital Circuits and Systems	6
Total credit		30			

SOPHOMORE 4th Term

Course Code	Course Name	ECTS	Equal Course	Course Name	ECTS
CMPE 226	Data Structures	8	CMPE 226	Data Structures	8
SE 212	Human Computer Interaction	8			
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
			CMPE 236	Introduction to Microprocessors and Microcontrollers	8
Total credit		30			

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JUNIOR 5th Term

Course Code	Course Name	ECTS	Equal Course	Course Name	ECTS
ISE 353	Information Systems Development	10			
ISE 311	Internet Programming	5			
AE-1	Area Elective	5			
CMPE 341	Database Design and Management	7	CMPE 341	Database Design and Management	7
ISE 399	Summer Practice I	6	CMPE 399	Summer Practice I	6
ENG 301	English For Occupational Purposes I	3	ENG 301	English For Occupational Purposes I	3
			CMPE 331	Computer Architecture and Organization	7
			CMPE 325	Study of Programming Languages	6
Total credit		30			

JUNIOR 6th Term

Course Code	Course Name	ECTS	Equal Course	Course Name	ECTS
ISE 314	Data Warehousing and Mining	5			
ISE 332	IT Infrastructure and Architecture	5			
CMPE 338	Computer Networks and Operating Systems	6	CMPE 334	Computer Networks	6
SE 346	Software Engineering	6	SE 346	Software Engineering	6
SE 328	Algorithms and Optimization Methods	5	CMPE 323	Algorithms	7
ENG 302	English For Occupational Purposes II	3	ENG 302	English For Occupational Purposes II	3
			CMPE 326	Formal Languages and Automata	6
			MATH 380	Numerical Methods for Engineers	5
Total credit		30			

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SENIOR 7th Term

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

SENIOR 8th Term

Course Code	Course Name	ECTS	Equal Course	Course Name	ECTS
ISE 426	Computer Security	5			
ISE 494	Senior Project	9	CMPE 494	Senior Project	8
AE-5	Area Elective	5			
AE-6	Area Elective	5			
GE-3	General Elective	4	GE-3	General Elective	4
TURK 402	Turkish Language II	2	TURK 402	Turkish Language II	2
			AE-4	Area Elective	5
			AE-5	Area Elective	5
			AE-6	Area Elective	5
			CMPE 431	Operating Systems	5
Total credit		30			

Notes:

- * Double major department is "*Information Systems Engineering*"; Main major department is "*Computer 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 must be taken from main program and be transferred to **double major program.**
- * **Area Electives: 5 area elective courses** need to be taken from Information Systems Engineering curriculum. None of these five area elective courses can be considered to be equivalent in the Computer Engineering curriculum. Only one area elective course can be considered to be equivalent in both departments.
- * **General Electives:** All the General Electives 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** courses must be taken from the main major department.