

FACULTY OF ENGINEERING

SOFTWARE ENGINEERING Program of Courses

Course categories: UC = University Core; FC = Faculty Core; AC = Area Core; AE = Area Elective; FE = Faculty Elective; UE = University Elective

Semester	Course Code	Course Title	Course Category	Lecture	Hours	Lab/Prac.	Total Credit	Pre-requisite	ECTS Credit
1	MATH123	DISCRETE MATHEMATICS	FC	3	1	0	3	-	5
1	PHYS121	PHYSICS-I	FC	3	1	1	4	-	5
1	MATH121	CALCULUS-I	FC	3	2	0	4	-	6
1	ENGR101	INFORMATION TECHNOLOGY AND APPLICATIONS	FC	2	0	1	2	-	2
1	ENGR103	COMPUTER PROGRAMMING-I	FC	2	0	2	3	-	5
1	ENGL121	ENGLISH-I	UC	3	0	0	3	-	4
1	TUOG101 / TURK131	TURKISH LANGUAGE-I / TURKISH AS A FOREIGN LANGUAGE-I	UC	2	0	0	2	_	3
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		Total 7 courses	TOTAL:	18	4	4	21		30
2	MATH122	CALCULUS-II	FC	3	2	0	4	MATH121	6
2	MATH124	LINEAR ALGEBRA	FC	3	1	0	3	-	5
2	PHYS122	PHYSICS-II	FC	3	1	1	4	PHYS121	5
2	ENGR104	COMPUTER PROGRAMMING-II	FC	2	0	2	3	ENGR103	4
2	ENGL122	ENGLISH-II	UC	3	0	0	3	ENGL121	4
								LINGLIZI	
2	TARH101 / HIST111	ATATURK'S PRINCIPLES AND HISTORY OF TURKISH REFORMS-I	UC	2	0	0	2	-	3
2	TUOG102 / TURK132	TURKISH LANGUAGE-II / TURKISH AS A FOREIGN LANGUAGE-II	UC	2	0	0	2	- / TURK131	3
	10001027 101111132	·			4			, , , , , , , , , , , , , , , , , , , ,	
		Total 7 courses	TOTAL:	18	4	3	21		30
3	ELEE211	DIGITAL LOGIC DESIGN	AC	3	0	2	4	-	6
3	ELEE231	CIRCUIT THEORY-I	AC	3	0	2	4	MATH124,	6
3	ELEEZSI	CIRCUIT THEORY-I	AC	3	U	2	7	PHYS122	Ů
3	CMPE215	ALGORITHMS AND DATA STRUCTURES	AC	3	0	1	3	ENGR104	6
3	MATH225	DIFFERENTIAL EQUATIONS	FC	4	0	0	4	MATH121, MATH124	5
								IVIATR124	+
3	TARH102 / HIST112	ATATURK'S PRINCIPLES AND HISTORY OF TURKISH REFORMS-II	UC	2	0	0	2	-	3
3	UNIEXX1	UNIVERSITY ELECTIVE	UE	х	х	х	3	-	4
		Total 6 courses	TOTAL:	15	0	5	20		30
		10 tal 0 coalses	TOTAL.	1.0			20		- 30
4	CMPE216	OBJECT ORIENTED PROGRAMMING	AC	2	0	2	3	ENGR104	6
4	CMPE232	OPERATING SYSTEMS	AC	3	0	0	3	ENGR104	6
4	CMPE252	ANALYSIS OF ALGORITHMS	AC	3	0	2	4	CMPE215	6
4	ENGR215	RESEARCH METHODS FOR ENGINEERING AND ARCHITECTURE	FC	2	0	0	2	-	3
4	STAT226	PROBABILITY AND STATISTICS	FC	3	1	0	3	MATH121	6
4	OHSA206	OCCUPATIONAL HEALTH AND SAFETY	FC	3	0	0	3		3
		Total 6 courses	TOTAL:	16	1	4	18		30
5	CMPE321	MICROPOCESSORS	AC	3	0	2	4	-	6
5	CMPE341	DATABASE SYSTEMS	AC	3	0	2	4	CMPE215	5
5	SFWE343	SOFTWARE ANALYSIS AND DESIGN	AC	2	0	2	3	CMPE216	5
5	SFWE315	VISUAL PROGRAMMING	AC	2	0	2	3	CMPE216	5
5	ENGRXX1	FACULTY ELECTIVE	FE	Х	Х	Х	3	-	5
5	UNIEXX2	UNIVERSITY ELECTIVE	UE	х	х	х	3	-	4
_	•	Total 6 courses	TOTAL:	10	0	8	20		30
					1				+
6	SFWE344	SOFTWARE PROJECT MANAGEMENT	AC	2	0	1	2	SFWE343	4
6	MATH328	NUMERICAL ANALYSIS	FC	3	1	0	3	MATH124, MATH225	6
6	SFWEXX1	AREA ELECTIVE	AE	Х	Х	Х	3	-	6
6	ENGRXX2	FACULTY ELECTIVE	FE	Х	X	X	3	-	5
6	ENGRXX3	FACULTY ELECTIVE	FE	X	X	X	3		5
6	UNIEXX3	UNIVERSITY ELECTIVE	TOTAL:	X 5	X	1	3 17	-	4
		Total 6 courses	TOTAL		. 1				30
7	SFWE403	SUMMER TRAINING	AC	0	0	0	0	-	2
7	ENGR401	ENGINEERING DESIGN-I	FC	1	2	0	2	-	6
7	SFWE415	SOFTWARE ARCHITECTURE	AC	3	0	1	3	SFWE343	6
7	SFWEXX2	AREA ELECTIVE	AE	х	х	Х	3	-	6
7	SFWEXX3	AREA ELECTIVE	AE	Х	Х	Х	3	_	6
7	UNIEXX4	UNIVERSITY ELECTIVE	UE	Х	Х	X	3	-	4
		Total 6 courses	TOTAL:	4	2	1	14		30
8	SFWE411	SOFTWARE VALIDATION AND TESTING	AC	3	0	1	3	SFWE343	6
8	ENGR402	ENGINEERING DESIGN-II	FC	0	4	2	3	ENGR401	10
8	ENGR404	ENGINEERING ATTRIBUTES AND ETHICS	FC	2	0	0	2	-	3
-	1	ADEA ELECTRIE	۸۲	Х	Х	Х	3	_	6
8	SFWEXX4	AREA ELECTIVE	AE	^		^.	- 1		
	SFWEXX4 ENGRXX4	FACULTY ELECTIVE	FE	X	Х	X	3	-	5
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Area and Faculty Elective Courses									
			Course	irse Hours			Total		ECTS
No.	Course Code	Course Title	Category	Lecture	Tutorial	Lab/Prac.	Credit	Pre-requisite	Credit
1	SFWE316	INTERNET AND WEB PROGRAMMING	AE	2	0	2	3	CMPE216	6
2	SFWE434	CRYPTOGRAPHY	AE	3	0	0	3	-	6
3	SFWE412	SOFTWARE QUALITY ASSURANCE	AE	3	0	0	3	-	6
4	SFWE422	MOBILE APPLICATION DEVELOPMENT	AE	3	0	0	3	-	6
5	SFWE431	HUMAN-COMPUTER INTERACTION	AE	3	0	0	3	-	6
6	SFWE441	ADVANCE DATABASE	AE	3	0	0	3	-	6
7	SFWE442	OBJECT-ORIENTED PROGRAMMING LANGUAGE AND SYSTEMS	AE	3	0	0	3	-	6
9	SFWE445	RAPID APPLICATION DEVELOPMENT	AE	3	0	0	3	-	6
10	SFWE451	INFORMATION RETRIEVAL	AE	3	0	0	3	-	6
11	SFWE467	DATA MINING	AE	3	0	0	3	-	6
12	SFWE475	ADVANCED WEB PROGRAMMING	AE	3	0	0	3	CMPE216	6
13	SFWE472	COMPUTER GRAPHICS	AE	3	0	0	3	-	6
14	SFWE474	INTRODUCTION TO PARALLEL COMPUTING	AE	3	0	0	3	-	6
15	CMPE431	ADVANCED COMPUTER NETWORKS	FE	3	0	0	3	-	6
16	CMPE432	WIRELESS COMMUNICATION NETWORKS	FE	3	0	0	3	-	6
17	CMPE433	WIRELESS SENSOR NETWORKS	FE	3	0	0	3	-	6
18	CMPE461	COMPUTING SYSTEMS	FE	3	0	0	3	-	6
20	CMPE463	CLOUD COMPUTING	FE	3	0	0	3	-	6
21	CMPE464	ARTIFICIAL INTELLIGENCE	FE	3	0	0	3	-	6
22	CMPE465	NEURAL NETWORKS	FE	3	0	0	3	-	6
23	CMPE466	EXPERT SYSTEMS	FE	3	0	0	4	-	6
24	CHEM121	CHEMISTRY	FE	2	1	2	3	-	5
25	MATH228	ENGINEERING MATHEMATICS	FE	3	1	0	3		6
26	ELEE341	ELECTRONICS-I	FE	3	0	2	4	-	6
27	ELEE331	SIGNALS AND SYSTEMS	FE	3	2	0	4	-	6
28	ELEE362	COMMUNICATION SYSTEMS	FE	3	0	0	3	-	5
29	ELEE431	DIGITAL SIGNAL PROCESSING	FE	3	0	0	3	-	6
30	CMPE322	DATA COMMUNICATION AND COMPUTER NETWORKS	FE	3	0	2	4	-	6
31	AINE301	BASIC SEARCH METHODS	FE	3	0	0	3	MATH124, AINE 201	5

			Course	Breakdov	/n				
tal number and percentage of corriculum.	urses and c	eredits in di	fferent cate	gories. Dis	tribution of	courses a	nd credits a	among semes	sters in the
			8.	Total					
	Courses:	Number					ECTS		
	All Courses		4	9			145		240
University C	6				14			20	
Faculty C	17				52			85	
Area C	ore Courses	13					73		
Area Elec	4				12			24	
Faculty Elec	4			12			20		
University Elec	4			12			16		
Sumi	1			0			2		
Courses offered by the	25			69			129		
Courses offered by other	department	24			75			111	
		Co	urses Per S	Semester S	atistics				
	1	2	3	4	5	6	7	8	Average
Number of Courses Per Semester	7	7	6	6	6	6	6	5	6
Number of Credits Per Semester	21	21	20	18	20	17	14	14	18
Number of ECTS Per Semester	30	30	30	30	30	30	30	30	30