

 — ISTANBUL — OKAN UNIVERSITY	FACULTY OF ENGINEERING AND NATURAL SCIENCES DEPARTMENT OF SOFTWARE ENGINEERING SOFTWARE ENGINEERING PROGRAMME (IN ENGLISH) UNDERGRADUATE CURRICULUM			Document Code: FR.OGR.200
				Revision Number: 02
				Publish Date: 25.06.1999
				Revision Date: 25.07.2023
				Page Number: 1

Semester 1						
Code	Course Title	T	A	C	ECTS	Status Prerequisite
PHYS113	Physics-I	2	2	3	5	Compulsory
MATH113	Mathematics I	3	2	4	6	Compulsory
SWE103	Introduction to Software Engineering	3	0	3	7	Compulsory
CENG101	Introduction to Algorithms and Programming	2	2	3	8	Compulsory
	Elective Foreign Language	2	2	3	4	Elective
		Total Credit		16	30	

Semester 3						
Code	Course Title	T	A	C	ECTS	Status Prerequisite
MATH265	Probability & Statistics I	3	0	3	5	Compulsory MATH113
MATH215	Mathematics III	2	2	3	6	Compulsory MATH113
CENG213	Object Oriented Programming -II	2	2	3	5	Compulsory CENG106
CENG203	Data Structures	3	0	3	5	Compulsory CENG106
SWE209	Web Programming and Design	2	2	3	4	Compulsory CENG106
IE367	Occupational Health and Safety	3	0	3	5	Compulsory
		Total Credit		18	30	

Semester 5						
Code	Course Title	T	A	C	ECTS	Status Prerequisite
TRD111	Turkish-I	2	0	2	2	Compulsory
SWE311	Software Architecture	3	0	3	6	Compulsory SWE210
CENG313	Automata Theory	3	0	3	5	Compulsory CENG110
CENG319	Algorithm Analysis	3	0	3	5	Compulsory
CENG391	Database Management Systems	3	0	3	7	Compulsory
	Faculty Elective Course	3	0	3	5	Elective
		Total Credit		17	30	

Semester 7						
Code	Course Title	T	A	C	ECTS	Status Prerequisite
SWE497	Software Engineering Design	0	2	1	4	Compulsory
BBA222	Entrepreneurship Applications	2	0	2	3	Compulsory
ATA111	Atatürk Principles and The History of Turkish Revolution I	2	0	2	2	Compulsory
CENG413	Software Quality Standards	3	0	3	9	Compulsory
INT001	Internship I	0	0	0	4	Compulsory
	Program Elective Course	3	0	3	7	Elective
		Total Credit		11	29	

TOTAL CREDIT	127
TOTAL ECTS	240

Semester 2						
Code	Course Title	T	A	C	ECTS	Status Prerequisite
PHYS114	Physics-II	2	2	3	5	Compulsory PHYS113
MATH114	Mathematics II	3	2	4	6	Compulsory MATH113
CENG106	Object Oriented Programming-I	2	2	3	7	Compulsory CENG101
CENG110	Discrete Structures	3	0	3	5	Compulsory
CLP001	Career and Life Planning	0	2	1	3	Compulsory
	Elective Foreign Language	2	2	3	4	Elective
		Total Credit		17	30	

Semester 4						
Code	Course Title	T	A	C	ECTS	Status Prerequisite
MATH216	Mathematics IV	2	2	3	6	Compulsory MATH114
MATH220	Numerical Methods	2	2	3	4	Compulsory MATH113
SWE210	Software Requirements and Analysis	3	0	3	5	Compulsory CENG106
SWE218	Mobile Programming	2	2	3	5	Compulsory
CENG214	Operating Systems	3	0	3	5	Compulsory
CENG216	Computer Networks - I	3	0	3	5	Compulsory
		Total Credit		18	30	

Semester 6						
Code	Course Title	T	A	C	ECTS	Status Prerequisite
TRD112	Turkish-II	2	0	2	2	Compulsory
SWE312	Design Patterns	2	2	3	4	Compulsory SWE210
SWE314	Software Validation and Testing	3	0	3	7	Compulsory
CENG394	Data Mining	3	0	3	7	Compulsory
SWE316	Human Computer Interaction	3	0	3	5	Compulsory
ECO102	Macroeconomics	3	0	3	7	Compulsory
		Total Credit		17	32	

Semester 8						
Code	Course Title	T	A	C	ECTS	Status Prerequisite
SWE498	Software Engineering Graduation Project	0	4	2	4	Compulsory
ATA112	Atatürk Principles and The History of Turkish Revolution II	2	0	2	2	Compulsory
INT002	Internship 2	0	0	0	4	Compulsory
	Faculty Elective Course	3	0	3	5	Elective
	Program Elective Course	3	0	3	7	Elective
	Program Elective Course	3	0	3	7	Elective
		Total Credit		13	29	

Abbreviations: T=Weekly hours: theoretical; A=Weekly hours: application; C=Credits in Turkish System; ECTS= European Credit Transfer System

ELECTIVE COURSES

Semester 1

Code	Course Title	T	A	C	ECTS	Status	Prerequisite
	SECOND FOREIGN LANGUAGE						
	DEPARTMENTAL ELECTIVE						
	FACULTY ELECTIVE						
	UNIVERSITY ELECTIVE						

Semester 3

Code	Course Title	T	A	C	ECTS	Status	Prerequisite
	SECOND FOREIGN LANGUAGE						
	DEPARTMENTAL ELECTIVE						
	FACULTY ELECTIVE						
	UNIVERSITY ELECTIVE						

Semester 5

Code	Course Title	T	A	C	ECTS	Status	Prerequisite
	SECOND FOREIGN LANGUAGE						
	DEPARTMENTAL ELECTIVE						
	FACULTY ELECTIVE						
ENG301	Management for Engineers	3	0	3	5	Elective	
ENG303	Project Management	3	0	3	5	Elective	
ENG307	Biotechnology:Combining Engineering with the Biological Science	3	0	3	5	Elective	
ENG316	Introduction to Traffic Engineering	3	0	3	5	Elective	
ENG318	Introduction to Environmental Engineering	3	0	3	5	Elective	
ENG320	Agile Product Development	3	0	3	5	Elective	
ENG353	Electric Drives	3	0	3	5	Elective	
ENG341	Introduction to Epigenetic Health	3	0	3	5	Elective	
ENG343	Introduction to Forensic Science	3	0	3	5	Elective	
ENG347	Technical Writing and Literature Search	3	0	3	5	Elective	
ENG349	Introduction to Bioinformatics and Biological Data Analysis	3	0	3	5	Elective	
	UNIVERSITY ELECTIVE						

Semester 7

Code	Course Title	T	A	C	ECTS	Status	Prerequisite
	SECOND FOREIGN LANGUAGE						
	DEPARTMENTAL ELECTIVE						
CENG371	File Organization and Management	3	0	3	7	Elective	
CENG379	Graphical Interface Design	3	0	3	7	Elective	
CENG389	Operating Systems Applications	3	0	3	7	Elective	
CENG393	Computer Networks II	3	0	3	7	Elective	
CENG372	Object Oriented Design	3	0	3	7	Elective	
CENG374	Internet Programming	3	0	3	7	Elective	
CENG376	Image Processing	3	0	3	7	Elective	
CENG396	Artificial Intelligence	3	0	3	7	Elective	
CENG382	Computer Graphics	3	0	3	7	Elective	
CENG471	Game Software Development	3	0	3	7	Elective	
CENG473	Quantum Computer Engineering	3	0	3	7	Elective	
CENG475	Application Development Frameworks	3	0	3	7	Elective	
CENG485	Business Process Management	3	0	3	7	Elective	
CENG487	Advanced Computational Methods	3	0	3	7	Elective	
CENG489	Pattern Recognition	3	0	3	7	Elective	
CENG491	Computer Security	3	0	3	7	Elective	
CENG477	Analysis and Design of Computer Systems	3	0	3	7	Elective	
CENG474	Engineering and Informatics Ethics	3	0	3	7	Elective	
CENG482	Embedded Systems	3	0	3	7	Elective	
CENG476	Project Management	3	0	3	7	Elective	
CENG486	Compiler Design	3	0	3	7	Elective	
CENG488	Advanced Topics in Computer Engineering	3	0	3	7	Elective	
CENG478	Medical Informatics	3	0	3	7	Elective	
CENG484	Parallel Programming	3	0	3	7	Elective	
SWE473	Embedded Software Development	3	0	3	7	Elective	
SWE488	Advanced Topics in Software Engineering	3	0	3	7	Elective	
SWE486	Software Product Line Management	3	0	3	7	Elective	
	FACULTY ELECTIVE						
	UNIVERSITY ELECTIVE						

Semester 2

Code	Course Title	T	A	C	ECTS	Status	Prerequisite
	SECOND FOREIGN LANGUAGE						
	DEPARTMENTAL ELECTIVE						
	FACULTY ELECTIVE						
	UNIVERSITY ELECTIVE						

Semester 4

Code	Course Title	T	A	C	ECTS	Status	Prerequisite
	SECOND FOREIGN LANGUAGE						
	DEPARTMENTAL ELECTIVE						
	FACULTY ELECTIVE						
	UNIVERSITY ELECTIVE						

Semester 6

Code	Course Title	T	A	C	ECTS	Status	Prerequisite
	SECOND FOREIGN LANGUAGE						
	DEPARTMENTAL ELECTIVE						
	FACULTY ELECTIVE						
	UNIVERSITY ELECTIVE						

Semester 8

Code	Course Title	T	A	C	ECTS	Status	Prerequisite
	SECOND FOREIGN LANGUAGE						
	DEPARTMENTAL ELECTIVE						
CENG371	File Organization and Management	3	0	3	7	Elective	
CENG379	Graphical Interface Design	3	0	3	7	Elective	
CENG389	Operating Systems Applications	3	0	3	7	Elective	
CENG393	Computer Networks II	3	0	3	7	Elective	
CENG372	Object Oriented Design	3	0	3	7	Elective	
CENG374	Internet Programming	3	0	3	7	Elective	
CENG376	Image Processing	3	0	3	7	Elective	
CENG396	Artificial Intelligence	3	0	3	7	Elective	
CENG382	Computer Graphics	3	0	3	7	Elective	
CENG471	Game Software Development	3	0	3	7	Elective	
CENG473	Quantum Computer Engineering	3	0	3	7	Elective	
CENG475	Application Development Frameworks	3	0	3	7	Elective	
CENG485	Business Process Management	3	0	3	7	Elective	
CENG487	Advanced Computational Methods	3	0	3	7	Elective	
CENG489	Pattern Recognition	3	0	3	7	Elective	
CENG491	Computer Security	3	0	3	7	Elective	
CENG477	Analysis and Design of Computer Systems	3	0	3	7	Elective	
CENG474	Engineering and Informatics Ethics	3	0	3	7	Elective	
CENG482	Embedded Systems	3	0	3	7	Elective	
CENG476	Project Management	3	0	3	7	Elective	
CENG486	Compiler Design	3	0	3	7	Elective	
CENG488	Advanced Topics in Computer Engineering	3	0	3	7	Elective	
CENG478	Medical Informatics	3	0	3	7	Elective	
CENG484	Parallel Programming	3	0	3	7	Elective	
SWE473	Embedded Software Development	3	0	3	7	Elective	
SWE488	Advanced Topics in Software Engineering	3	0	3	7	Elective	
SWE486	Software Product Line Management	3	0	3	7	Elective	
SWE490	OCOOP-I	3	0	3	7	Elective	
SWE492	OCOOP-II	3	0	3	7	Elective	
SWE494	OCOOP-III	3	0	3	7	Elective	
	FACULTY ELECTIVE						
ENG302	Fuzzy Logic and Its Applications	3	0	3	5	Elective	
ENG304	Technology Manangement	3	0	3	5	Elective	
ENG308	Energy Policy	3	0	3	5	Elective	
ENG316	Introduction to Traffic Engineering	3	0	3	5	Elective	
ENG318	Introduction to Environmental Engineering	3	0	3	5	Elective	
ENG320	Agile Product Development	3	0	3	5	Elective	
ENG368	Wireless Network	3	0	3	5	Elective	
ENG310	Sustainable Energy & Environment	3	0	3	5	Elective	
ENG370	Principles of Machine Learning	3	0	3	5	Elective	
SWE490	OCOOP-I	3	0	3	7	Elective	
SWE492	OCOOP-II	3	0	3	7	Elective	
SWE494	OCOOP-III	3	0	3	7	Elective	
	UNIVERSITY ELECTIVE						