ENGINEERING AND NATURAL SCIENCES FACULTY
SOFTWARE ENGINEERING DEPARTMENT
2023/2024 Syllabus

First Semester						
Course Code	**Course Name**	**T**	**A**	**NC**	**ECTS**	**Prerequisite***
PHYS101	PHYSICS I	3	0	0	4	
PHYS103	PHYSICS LABORATORY I	0	2	0	2	
TDL101	TÜRK DİLİ I	2	0	0	2	
TİT101	TÜRK İNKILAP TARİHİ I	2	0	0	2	
MATH101	CALCULUS I	4	0	0	6	
CHEM101	GENERAL CHEMISTRY	3	0	0	5	
ENG101	ACADEMIC ENGLISH I	3	0	0	2	
SENG113	COMPUTER PROGRAMMING I	3	2	0	5	
SENG101	INTRODUCTION TO SOFTWARE ENGINEERING	2	0	0	2	
Total					**30**	

Second Semester						
Course Code	**Course Name**	**T**	**A**	**NC**	**ECTS**	**Prerequisite***
ENG102	ACADEMIC ENGLISH II	3	0	0	2	
PHYS102	PHYSICS II	3	0	0	4	
PHYS104	PHYSICS LABORATORY II	0	2	0	2	
MATH104	APPLIED LINEAR ALGEBRA	3	0	0	6	
MATH102	CALCULUS II	4	0	0	6	MATH101
TİT102	TÜRK İNKILAP TARİHİ II	2	0	0	2	
TDL102	TÜRK DİLİ II	2	0	0	2	
SENG114	COMPUTER PROGRAMMING II	3	2	0	6	SENG113
Total					**30**	

Third Semester

Course Code	Course Name	T	A	NC	ECTS	Prerequisite*
SENG207	PROBABILITY AND STATISTICS	3	0	0	6	
SENG201	OBJECT ORIENTED PROGRAMMING	3	2	0	6	SENG114
ENGR201	DIFFERENTIAL EQUATIONS	4	0	0	6	
SENG209	SOFTWARE REQUIREMENTS ENGINEERING	3	0	0	6	
ENGR265	PRINCIPLES OF OCCUPATIONAL HEALTH AND SAFETY I	2	0	0	3	
SENG211	SOFTWARE PROJECT MANAGEMENT	3	0	0	6	
Total					**33**	

Fourth Semester

Course Code	Course Name	T	A	NC	ECTS	Prerequisite*
ENGR202	DISCRETE MATHEMATICS	4	0	0	6	
SENG206	CONCEPTS OF PROGRAMMING LANGUAGES	3	0	0	6	SENG114
ENGR266	PRINCIPLES OF OCCUPATIONAL HEALTH AND SAFETY II	2	0	0	3	
SENG214	SOFTWARE TESTING AND QUALITY ASSURANCE	3	0	0	6	
ENGRXXX veya UEXXX	FACULTY ELECTIVE veya UNIVERSITY ELECTIVE	2	0	0	3	
SENG204	DATA STRUCTURES	3	2	0	6	SENG201
Total					**30**	

Fifth Semester

Course Code	Course Name	T	A	NC	ECTS	Prerequisite*
SENG303	DESIGN AND ANALYSIS OF ALGORITHMS	3	0	0	5	SENG204
SENG301	DATABASE MANAGEMENT SYSTEMS	3	0	0	5	SENG201
SENG307	SOFTWARE ARCHITECTURE	3	0	0	5	
SENG305	OPERATING SYSTEMS	3	0	0	6	SENG204
SENGXXX	DEPARTMENT ELECTIVE	3	0	0	5	
SENG300	INDUSTRIAL PRACTICE I	0	2	0	4	
Total					**30**	

Sixth Semester						
Course Code	**Course Name**	**T**	**A**	**NC**	**ECTS**	**Prerequisite***
SENG304	COMPUTER NETWORKS	3	0	0	6	
SENG322	SOFTWARE DESIGN PATTERNS	3	0	0	6	
SENG302	SECURE SOFTWARE DEVELOPMENT	3	0	0	6	
SENGXXX	DEPARTMENT ELECTIVE	3	0	0	5	
SENG306	SCIENTIFIC COMPUTING	3	0	0	7	SENG113
Total					**30**	

Seventh Semester						
Course Code	**Course Name**	**T**	**A**	**NC**	**ECTS**	**Prerequisite***
SENG401	GRADUATION PROJECT I	3	3	0	6	SENG204
SENG400	INDUSTRIAL PRACTICE II	0	2	0	4	
SENGXXX	DEPARTMENT ELECTIVE	3	0	0	5	
SENGXXX	DEPARTMENT ELECTIVE	3	0	0	5	
SENGXXX	DEPARTMENT ELECTIVE	3	0	0	5	
SENGXXX	DEPARTMENT ELECTIVE	3	0	0	5	
Total					**30**	

Eighth Semester						
Course Code	**Course Name**	**T**	**A**	**NC**	**ECTS**	**Prerequisite***
SENG402	GRADUATION PROJECT II	3	3	0	7	SENG204
ENGRXXX or UEXXX	FACULTY ELECTIVE or UNIVERSITY ELECTIVE	2	0	0	3	
SENGXXX	DEPARTMENT ELECTIVE	3	0	0	5	
SENGXXX	DEPARTMENT ELECTIVE	3	0	0	5	
SENGXXX	DEPARTMENT ELECTIVE	3	0	0	5	
SENGXXX	DEPARTMENT ELECTIVE	3	0	0	5	
Total					**30**	

T: Theory   **A:** Application   **NC:** National Credit   **ECTS:** Europe Credit Transfer System

*Courses in the prerequisite column must be succeeded with at least DD grade.