Üsküdar University
Faculty of Engineering and Natural Sciences
Department of Software Engineering
2024-2025 Academic Year

YEAR ONE

Code	Course Name (1st Term)	T	P	L	C	ECTS	Prerequisite	Code	Course Name (2nd Term)	T	P	L	C	ECTS	Prerequisite
SE101	Introduction to Software Engineering*	2	2	0	3	4		COME102	Introduction to Algorithms and Programming*	2	0	2	3	4	
MATH101	Calculus I*	3	2	0	4	6		COME104	Discrete Mathematics	3	0	0	3	4	
PHYS101	Physics I*	3	0	2	4	6		MATH102	Calculus II*	3	2	0	4	6	
CHEM101	General Chemistry I*	3	0	2	4	6		PHYS102	Physics II*	3	0	2	4	6	
ENG103	English I	2	0	0	2	2		ENG104	English II	2	0	0	2	2	
RPSC109	Positive Psychology and Communication Skills	3	0	0	3	5		MATH104	Basic Linear Algebra*	2	0	2	3	5	
RCUL103	University Culture I*	0	2	0	1	4		RCUL104	University Culture II*	0	2	0	1	4	
Total Credits		**16**	**6**	**4**	**21**	**33**		**Total Credits**		**15**	**4**	**6**	**20**	**31**	

YEAR TWO

Code	Course Name (3rd Term)	T	P	L	C	ECTS	Prerequisite	Code	Course Name (4th Term)	T	P	L	C	ECTS	Prerequisite
SE201	Software Requirements Analysis	3	0	0	3	6		SE202	Software Design and Architecture	3	0	0	3	6	
COME201	Object Oriented Programming I*	2	0	2	3	4		SE204	Software Construction*	2	0	2	3	5	
COME205	Data Structures*	2	0	2	3	5	COME102	COME202	Object Oriented Programming II*	2	0	2	3	4	
COME207	Computer Architecture	3	0	0	3	4		MATH204	Statistics	3	0	0	3	5	
MATH203	Differential Equations*	2	2	0	3	5		TURK104	Turkish Language II	2	0	0	2	2	
TURK103	Turkish Language I	2	0	0	2	2		ATA104	Principles of Atatürk and History of Turkish Revolution-II	2	0	0	2	2	
ATA103	Principles of Atatürk and History of Turkish Revolution-I	2	0	0	2	2		SE284	Summer Practice I**	0	0	0	0	5	
RPRE104	Entrepreneurship and Project Culture	2	0	0	2	3									
Total Credits		**18**	**2**	**4**	**21**	**31**		**Total Credits**		**14**	**0**	**4**	**16**	**29**	

YEAR THREE

Code	Course Name (5th Term)	T	P	L	C	ECTS	Prerequisite	Code	Course Name (6th Term)	T	P	L	C	ECTS	Prerequisite
SE301	Software Validation and Testing*	2	0	2	3	5		SE302	Software Project Management*	2	0	2	3	5	
COME301	Database Management Systems*	2	0	2	3	5		MATH302	Numerical Analysis	3	0	0	3	6	
COME307	Operating Systems*	2	0	2	3	4		XXXXXX	Social Elective II	3	0	0	3	5	
SEXXX	Departmental Elective I (Project Based)	3	0	0	3	5		SEXXX	Departmental Elective II (Project Based)	3	0	0	3	5	
XXXXXX	Field Elective I	3	0	0	3	5		XXXXXX	Field Elective II	3	0	0	3	5	
XXXXXX	Social Elective I	3	0	0	3	5		SE384	Summer Practice II**	0	0	0	0	5	
Total Credits		**15**	**0**	**6**	**18**	**29**		**Total Credits**		**14**	**0**	**2**	**15**	**31**	

YEAR FOUR

Code	Course Name (7th Term)	T	P	L	C	ECTS	Prerequisite	Code	Course Name (8th Term)	T	P	L	C	ECTS	Prerequisite
SE491	Graduation Project	2	0	0	2	8		SE492	Graduation Thesis*	0	0	4	2	8	SE 491
SEXXX	Departmental Elective III	3	0	0	3	5		SEXXX	Departmental Elective V	3	0	0	3	5	
SEXXX	Departmental Elective IV	3	0	0	3	5		SEXXX	Departmental Elective VI	3	0	0	3	5	
COME413	Computer Networks	3	0	0	3	5		XXXXXX	Field Elective IV	3	0	0	3	5	
XXXXXX	Field Elective III	3	0	0	3	5		XXXXXX	Social Elective III	3	0	0	3	5	
								OHS404	Occupational Health and Safety	4	0	0	4	4	
Total Credits		**14**	**0**	**0**	**14**	**28**		**Total Credits**		**16**	**0**	**4**	**18**	**32**	

2024-2025		
	Total Course Credits for Graduation	143
	Total Theoretical Hours	122
	Total Practice Hours	12
	Total Laboratory Hours	30
	Total Course ECTS for Graduation	244
	Total Elective Courses ECTS	65
	Elective Course Ratio	26,64

* These courses are under the Applied Course status.

** These courses are under the Internship Course status.

Elective Course Pool

Departmental Elective Courses	T	P	L	C	ECTS	Prerequisite	Social Elective Courses (Foreign Languages)	T	P	L	C	ECTS	Prerequisite
SE303 Software Quality Assurance	3	0	0	3	5		ARB123 Arabic I	3	0	0	3	5	
SE305 Algorithms and Optimization Methods (Project Based)	3	0	0	3	5		ARB124 Arabic II	3	0	0	3	5	ARB123
COME309 Web Programming	3	0	0	3	5		CHN123 Chinese I	3	0	0	3	5	
SE304 Software Engineering Ethics	3	0	0	3	5		CHN124 Chinese II	3	0	0	3	5	CHN123
SE306 Large Scale Software Development (Project Based)	3	0	0	3	5		ESP123 Spanish I	3	0	0	3	5	
COME304 Visual Programming	3	0	0	3	5		ESP124 Spanish II	3	0	0	3	5	ESP123
COME308 Mobile Programming	3	0	0	3	5		FRN123 French I	3	0	0	3	5	
SE401 Human-Computer Interaction	3	0	0	3	5		FRN124 French II	3	0	0	3	5	FRN123
SE403 Computer Games and Simulation	3	0	0	3	5		GER123 German I	3	0	0	3	5	
SE405 Rapid Application Development	3	0	0	3	5		GER124 German II	3	0	0	3	5	GER123
COME311 Data Security	3	0	0	3	5		RSN123 Russian I	3	0	0	3	5	
SE407 Knowledge Engineering	3	0	0	3	5		RSN124 Russian II	3	0	0	3	5	RSN123
SE409 System Modeling and Simulation (Project Based)	3	0	0	3	5		JAP123 Japanese I	3	0	0	3	5	
SE402 Formal Methods in Software Engineering	3	0	0	3	5		JAP124 Japanese II	3	0	0	3	5	JAP123
SE404 Agile Methods in Software Development	3	0	0	3	5		ITA123 Italian I	3	0	0	3	5	
SE406 Emerging Technologies (Project Based)	3	0	0	3	5		ITA124 Italian II	3	0	0	3	5	ITA123
SE408 Analysis and Design of User Interfaces	3	0	0	3	5		**Field Elective Courses**						
COME410 Systems Programming	3	0	0	3	5		For Field Elective courses, any departmental elective course having appropriate credits from other departments of Faculty of Engineering and Natural Sciences can be elected.						
COME416 Compiler Design	3	0	0	3	5								
SE412 Software and Systems Security	3	0	0	3	5								
COME408 Network Security	3	0	0	3	5								
COME305 Analysis of Algorithms	3	0	0	3	5		**Social Elective Courses**						
COME306 Digital Signal Processing	3	0	0	3	5		For Social Elective courses, either foreign language course or course having appropriate credits from other faculties can be elected.						
SE413 Data Mining and Applications (Project Based)	3	0	0	3	5								
SE414 Artificial Intelligence and Applications (Project Based)	3	0	0	3	5								
COME407 Image Processing	3	0	0	3	5								
SE307 Programming with Python	3	0	0	3	5								
SE415 Semantic Web Technologies	3	0	0	3	5								
SE308 Metaverse Technologies And Applications (Project Based)	3	0	0	3	5								
SE410 Theoretical and Computational Neuroscience	3	0	0	3	5								
SE411 Cloud Computing	3	0	0	3	5								
SE416 Data Science	3	0	0	3	5								