Üsküdar University
Faculty of Engineering and Natural Sciences
Department of Software Engineering
2023-2024 Academic Year

YEAR ONE

	1st Term							2nd Term						
Code	Course Name	T	P	L	C	ECTS	Prerequisite	Code	Course Name	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	
ENG101	English I	3	0	0	3	3		ENG102	English II	3	0	0	3	3	
RPSC109	Positive Psychology and Communication Skills	3	0	0	3	5		MATH104	Basic Linear Algebra*	2	0	2	3	5	
RCUL101	University Culture I*	0	2	0	1	1		RCUL102	University Culture II*	0	2	0	1	1	
Total Credits		**17**	**6**	**4**	**22**	**31**		**Total Credits**		**16**	**4**	**6**	**21**	**29**	

YEAR TWO

	3rd Term							4th Term						
Code	Course Name	T	P	L	C	ECTS	Prerequisite	Code	Course Name	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		TURK102	Turkish Language II	2	0	0	2	3	
TURK101	Turkish Language I	2	0	0	2	3		ATA102	Principles of Atatürk and History of Turkish Revolution-II	2	0	0	2	3	
ATA101	Principles of Atatürk and History of Turkish Revolution-I	2	0	0	2	3		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**	**33**		**Total Credits**		**14**	**0**	**4**	**16**	**31**	

YEAR THREE

	5th Term							6th Term						
Code	Course Name	T	P	L	C	ECTS	Prerequisite	Code	Course Name	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

	7th Term							8th Term						
Code	Course Name	T	P	L	C	ECTS	Prerequisite	Code	Course Name	T	P	L	C	ECTS	Prerequisite
SE491	Graduation Project	2	0	0	2	8		SE492	Graduation Thesis*	0	0	4	2	8	COME 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	
OHS401	Occupational Health and Safety I	2	0	0	2	2		OHS402	Occupational Health and Safety II	2	0	0	2	2	
Total Credits		**16**	**0**	**0**	**16**	**30**		**Total Credits**		**14**	**0**	**4**	**16**	**30**	

	Total Course Credits for Graduation	145
	Total Theoretical Hours	124
	Total Practice Hours	12
2023-2024	Total Laboratory Hours	30
	Total Course ECTS for Graduation	244
	Total Elective Courses ECTS	65
	Elective Course Ratio	26,64

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								
SE402 Formal Methods in Software Engineering	3	0	0	3	5								
SE404 Agile Methods in Software Development	3	0	0	3	5								
SE406 Emerging Technologies (Project Based)	3	0	0	3	5								
SE408 Analysis and Design of User Interfaces	3	0	0	3	5								
COME410 Systems Programming	3	0	0	3	5								
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								
COME306 Digital Signal Processing	3	0	0	3	5								
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		For Field Elective courses, any departmental elective course having appropriate credits from other departments of Faculty of Engineering and Natural Sciences can be elected.						
SE410 Theoretical and Computational Neuroscience	3	0	0	3	5								

For Social Elective courses, either foreign language course or course having appropriate credits from other faculties can be elected.