

**Üsküdar University**  
**Faculty of Engineering and Natural Sciences**  
**Department of Software Engineering**  
**2022-2023 Academic Year**  
**(100% English)**

**YEAR ONE**

1st Term							
Code	Course Name	T	P	L	C	ECTS	Prerequisite
SE101	Introduction to Software Engineering*	2	2	0	3	4	
MATH101	Calculus I*	3	2	0	4	6	
PHYS101	Physics I*	3	0	2	4	6	
CHEM101	General Chemistry I*	3	0	2	4	6	
ENG101	English I	3	0	0	3	3	
RPSC109	Positive Psychology and Communication Skills	3	0	0	3	5	
RCUL101	University Culture I*	0	2	0	1	1	
<b>Total Credits</b>		<b>17</b>	<b>6</b>	<b>4</b>	<b>22</b>	<b>31</b>	

2nd Term								
Code	Course Name	T	P	L	C	ECTS		
COME102	Introduction to Algorithms and Programming*	2	0	2	3	4		
COME104	Discrete Mathematics	3	0	3	4	4		
MATH102	Calculus II*	3	2	0	4	6		
PHYS102	Physics II*	3	0	2	4	6		
ENG102	English II	3	0	0	3	3		
MATH104	Basic Linear Algebra*	2	0	2	3	5		
RCUL102	University Culture II*	0	2	0	1	1		
<b>Total Credits</b>		<b>16</b>	<b>4</b>	<b>6</b>	<b>21</b>	<b>29</b>		

**YEAR TWO**

3rd Term							
Code	Course Name	T	P	L	C	ECTS	Prerequisite
SE201	Software Requirements Analysis	3	0	0	3	6	
COME201	Object Oriented Programming I*	2	0	2	3	4	
COME205	Data Structures*	2	0	2	3	5	COME102
COME207	Computer Architecture	3	0	0	3	4	
MATH203	Differential Equations*	2	2	0	3	5	
TURK101	Turkish Language I	2	0	0	2	3	
ATA101	Principles of Atatürk and History of Turkish Revolution-I	2	0	0	2	3	
RPRE104	Entrepreneurship and Project Culture	2	0	0	2	3	
<b>Total Credits</b>		<b>18</b>	<b>2</b>	<b>4</b>	<b>21</b>	<b>33</b>	

4th Term								
Code	Course Name	T	P	L	C	ECTS		
SE202	Software Design and Architecture	3	0	0	3	6		
SE204	Software Construction*	2	0	2	3	5		
COME202	Object Oriented Programming II*	2	0	2	3	4		
MATH204	Statistics	3	0	3	5	5		
TURK102	Turkish Language II	2	0	0	2	3		
ATA102	Principles of Atatürk and History of Turkish Revolution-II	2	0	0	2	3		
SE284	Summer Practice I**	0	0	0	0	5		
<b>Total Credits</b>		<b>14</b>	<b>0</b>	<b>4</b>	<b>16</b>	<b>31</b>		

**YEAR THREE**

5th Term							
Code	Course Name	T	P	L	C	ECTS	Prerequisite
SE301	Software Validation and Testing*	2	0	2	3	5	
COME301	Database Management Systems*	2	0	2	3	5	
COME307	Operating Systems*	2	0	2	3	4	
SEXXX	Departmental Elective I (Project Based)	3	0	0	3	5	
XXXXXX	Field Elective I	3	0	0	3	5	
XXXXXX	Social Elective I	3	0	0	3	5	
<b>Total Credits</b>		<b>15</b>	<b>0</b>	<b>6</b>	<b>18</b>	<b>29</b>	

6th Term								
Code	Course Name	T	P	L	C	ECTS		
SE302	Software Project Management*	2	0	2	3	5		
MATH302	Numerical Analysis	3	0	3	6	6		
XXXXXX	Social Elective II	3	0	3	5	5		
SEXXX	Departmental Elective II (Project Based)	3	0	0	3	5		
XXXXXX	Field Elective II	3	0	0	3	5		
SE384	Summer Practice II**	0	0	0	0	5		
<b>Total Credits</b>		<b>14</b>	<b>0</b>	<b>2</b>	<b>15</b>	<b>31</b>		

**YEAR FOUR**

7th Term							
Code	Course Name	T	P	L	C	ECTS	Prerequisite
SE491	Graduation Project	2	0	0	2	8	
SEXXX	Departmental Elective III	3	0	0	3	5	
SEXXX	Departmental Elective IV	3	0	0	3	5	
COME413	Computer Networks	3	0	0	3	5	
XXXXXX	Field Elective III	3	0	0	3	5	
OHS401	Occupational Health and Safety I	2	0	0	2	2	
<b>Total Credits</b>		<b>16</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>30</b>	

8th Term								
Code	Course Name	T	P	L	C	ECTS		
SE492	Graduation Thesis*	0	0	4	2	8		
SEXXX	Departmental Elective V	3	0	0	3	5		
SEXXX	Departmental Elective VI	3	0	0	3	5		
XXXXXX	Field Elective IV	3	0	0	3	5		
XXXXXX	Social Elective III	3	0	0	3	5		
OHS402	Occupational Health and Safety II	2	0	0	2	2		
<b>Total Credits</b>		<b>14</b>	<b>0</b>	<b>4</b>	<b>16</b>	<b>30</b>		

<b>2022-2023</b>	<b>Total Course Credits for Graduation</b>	145
	<b>Total Theoretical Hours</b>	124
	<b>Total Practice Hours</b>	12
	<b>Total Laboratory Hours</b>	30
	<b>Total Course ECTS for Graduation</b>	244
	<b>Total Elective Courses ECTS</b>	65
	<b>Elective Course Ratio</b>	27%

\* These courses are under the Applied Course status.  
 \*\* These courses are under the Internship Course status.

**Elective Course Pool**

Departmental Elective Courses							
Code	Course Name	T	P	L	C	ECTS	Prerequisite
SE303	Software Quality Assurance	3	0	0	3	5	
SE305	Algorithms and Optimization Methods (Project Based)	3	0	0	3	5	
COME309	Web Programming	3	0	0	3	5	
SE304	Software Engineering Ethics	3	0	0	3	5	
SE306	Large Scale Software Development (Project Based)	3	0	0	3	5	
COME304	Visual Programming	3	0	0	3	5	
COME308	Mobile Programming	3	0	0	3	5	
SE401	Human-Computer Interaction	3	0	0	3	5	
SE403	Computer Games and Simulation	3	0	0	3	5	
SE405	Rapid Application Development	3	0	0	3	5	
COME311	Data Security	3	0	0	3	5	
SE407	Knowledge Engineering	3	0	0	3	5	
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	

Social Elective Courses (Foreign Languages)								
Code	Course Name	T	P	L	C	ECTS		
ARB123	Arabic I	3	0	0	3	5		
ARB124	Arabic II	3	0	0	3	5		
CHN123	Chinese I	3	0	0	3	5		
CHN124	Chinese II	3	0	0	3	5		
ESP123	Spanish I	3	0	0	3	5		
ESP124	Spanish II	3	0	0	3	5		
FRN123	French I	3	0	0	3	5		
FRN124	French II	3	0	0	3	5		
GER123	German I	3	0	0	3	5		
GER124	German II	3	0	0	3	5		
RSN123	Russian I	3	0	0	3	5		
RSN124	Russian II	3	0	0	3	5		

**Field Elective Courses**  
 For Field Elective courses, any departmental elective course having appropriate credits for departments of Faculty of Engineering and Natural Sciences can be elected.

**Social Elective Courses**  
 For Social Elective courses, either foreign language course or course having appropriate credit faculties can be elected.

