

**KOCAELI HEALTH AND TECHNOLOGY UNIVERSITY**  
**FACULTY OF ENGINEERING AND NATURAL SCIENCES**  
**SOFTWARE ENGINEERING 2023-2024 COURSE SCHEDULE**

1ST SEMESTER				
C. CODE	COURSE TITLE	T	P	ECTS
MAT110	Mathematics I	3	2	5
FIZ110	Physics I	3	2	5
ATA101	Principles of Atatürk and History of Revolution I	2	0	2
TUR101	Turkish Language I	2	0	2
MAT125	Linear Algebra	3	0	4
YZM111	Introduction to Software Engineering	2	0	3
YZM113	Computer Programming I	3	0	4
YZM115	Computer Programming Lab - I	0	2	3
DIL101	English I	2	0	2
<b>TOTAL</b>		<b>20</b>	<b>6</b>	<b>30</b>

2ND SEMESTER				
C. CODE	COURSE TITLE	T	P	ECTS
MAT120	Mathematics II	3	2	5
FIZ120	Physics II	3	2	5
ATA102	Principles of Atatürk and History of Revolution II	2	0	2
TUR102	Turkish Language II	2	0	2
YZM122	Computer Programming II	3	0	4
YZM124	Computer Programming Lab - II	0	2	3
YZM126	Web Technologies	2	1	4
DIL102	English II	2	0	2
	<b>University Elective Course I</b>	<b>2</b>	<b>0</b>	<b>3</b>
<b>TOTAL</b>		<b>19</b>	<b>7</b>	<b>30</b>

3RD SEMESTER				
C. CODE	COURSE TITLE	T	P	ECTS
MAT213	Discrete Mathematics	3	0	4
YZM211	Object-Oriented Programming	3	1	5
YZM213	Data Structures	3	1	5
YZM215	Software Requirement Analysis	2	1	5
YZM217	Programming Lab - I	0	3	5
	<b>University Elective Course II</b>	<b>2</b>	<b>0</b>	<b>3</b>
	<b>University Elective Course III</b>	<b>2</b>	<b>0</b>	<b>3</b>
<b>TOTAL</b>		<b>15</b>	<b>6</b>	<b>30</b>

4TH SEMESTER				
C. CODE	COURSE TITLE	T	P	ECTS
MAT220	Numerical Methods	3	0	4
MAT222	Probability And Statistics	3	0	4
YZM224	Database Management Systems	3	0	5
YZM226	Software Design	2	1	4
YZM228	Programming Lab - II	0	3	5
	<b>University Elective Course IV</b>	<b>2</b>	<b>0</b>	<b>3</b>
	<b>Internship I</b>			<b>5</b>
<b>TOTAL</b>		<b>13</b>	<b>4</b>	<b>30</b>

5TH SEMESTER				
C. CODE	COURSE TITLE	T	P	ECTS
YZM311	Operating Systems	3	0	5
YZM313	Software Testing and Verification	3	0	4
YZM315	Software Laboratory - I	0	3	5
YZM317	Computer Networks	3	0	5
YZM319	Web Programming	3	0	4
	<b>Field Elective Course I</b>	<b>3</b>	<b>0</b>	<b>4</b>
	<b>University Elective Course V (Interdisciplinary)</b>	<b>2</b>	<b>0</b>	<b>3</b>
<b>TOTAL</b>		<b>17</b>	<b>3</b>	<b>30</b>

6TH SEMESTER				
C. CODE	COURSE TITLE	T	P	ECTS
YZM322	Algorithm Design And Analysis	3	0	5
YZM324	Software Laboratory - II	0	3	5
YZM326	Computer Architecture and Organization	3	0	4
YZM328	Mobile Programming	3	0	4
	<b>Field Elective Course II</b>	<b>3</b>	<b>0</b>	<b>4</b>
	<b>University Elective Course VI (Interdisciplinary)</b>	<b>2</b>	<b>0</b>	<b>3</b>
	<b>Internship II</b>			<b>5</b>
<b>TOTAL</b>		<b>14</b>	<b>3</b>	<b>30</b>

7TH SEMESTER				
C. CODE	COURSE TITLE	T	P	ECTS
YZM411	Software Project Management	3	1	5
YZM413	Occupational Health And Safety - I	2	0	2
YZM415	Information Security	3	0	4
YZM419	Formal Languages And Automata	3	0	5
	<b>Field Elective Course III</b>	<b>3</b>	<b>0</b>	<b>4</b>
	<b>Field Elective Course IV</b>	<b>3</b>	<b>0</b>	<b>4</b>
	<b>University Elective Course VII</b>	<b>2</b>	<b>0</b>	<b>3</b>
	<b>University Elective Course VIII (Interdisciplinary)</b>	<b>2</b>	<b>0</b>	<b>3</b>
<b>TOTAL</b>		<b>21</b>	<b>1</b>	<b>30</b>

8TH SEMESTER				
C. CODE	COURSE TITLE	T	P	ECTS
YZM422	Final Project (Thesis)	0	3	7
YZM424	Quality Assurance in Software	3	0	4
YZM426	Occupational Health And Safety - II	2	0	2
YZM428	Ethics in Software Engineering	2	0	3
	<b>Field Elective Course V</b>	<b>3</b>	<b>0</b>	<b>4</b>
	<b>Field Elective Course VI</b>	<b>3</b>	<b>0</b>	<b>4</b>
	<b>University Elective Course IX</b>	<b>2</b>	<b>0</b>	<b>3</b>
	<b>University Elective Course X (Interdisciplinary)</b>	<b>2</b>	<b>0</b>	<b>3</b>
<b>TOTAL</b>		<b>17</b>	<b>3</b>	<b>30</b>

**TECHNICAL ELECTIVE COURSES**

V. SEMESTER (Elective I)				
C. CODE	COURSE TITLE	T	P	ECTS
SMUH301	Visual Programming	3	0	4
SMUH303	Java Programming	3	0	4
SMUH305	Python Programming	3	0	4
SMUH307	Human-Computer Interaction	3	0	4
SMUH309	Parallel Programming	3	0	4
SMUH311	Information Ethics and Law	3	0	4
SMUH317	Data Mining	3	0	4

VI. SEMESTER (Elective II)				
C. CODE	COURSE TITLE	T	P	ECTS
SMUH302	Internet Programming	3	0	4
SMUH306	Robot Programming	3	0	4
SMUH308	User Experience Design	3	0	4
SMUH310	Business Organization	3	0	4
SMUH312	Game Development	3	0	4

**VII. SEMESTER (Elective III, IV, V, VI)**

**VIII. SEMESTER (Elective VII, VIII, IX, X)**

C. CODE	COURSE TITLE	T	P	ECTS		C. CODE	COURSE TITLE	T	P	ECTS
SMUH401	Agile Software Development	3	0	4		SMUH402	Embedded Systems Programming	3	0	4
SMUH403	System Programming	3	0	4		SMUH404	Web Application Security	3	0	4
SMUH405	Introduction to Cryptology	3	0	4		SMUH406	Big Data Analysis	3	0	4
SMUH407	Introduction to Computer Networks and Cybersecurity	3	0	4		SMUH408	IoT and OT Systems	3	0	4
SMUH409	Fundamentals of Image Processing	3	0	4		SMUH410	Virtual Reality	3	0	4
SMUH411	Compiler Design	3	0	4		SMUH412	Bioinformatics	3	0	4
SMUH413	Introduction to Cybersecurity	3	0	4		SMUH414	Digital Forensics	3	0	4

**UNIVERSITY ELECTIVE COURSES (BLMUSD)**

C. CODE	COURSE TITLE	T	P	ECTS				T	P	ECTS
UNI001	Research Methods	2	0	3						
UNI002	Ethics and Human Relations	2	0	3						
UNI003	Project Preparation and Management	2	0	3						
UNI004	Digital Transformation Management	2	0	3						
UNI005	Digital Literacy	2	0	3						
UNI006	Communication Skills	2	0	3						
UNI007	Teamwork	2	0	3						
USD101	Internet and Security	2	0	3						
UNI009	Technical Communication	2	0	3						
UNI010	Photography	2	0	3						
UNI011	Strategic Management	2	0	3						
<b>TOTAL</b>								136	33	240