

**Department of Metallurgical and Materials Engineering
Undergraduate Curriculum**

ATACS Curriculum Name: “MATE-CUR-2020-2021 Güz Dönemi-1”

(valid for students who started the program between Fall 2020 and Spring 2023 (incl.) semesters)

1. Semester				
Course Code	Course Name	Theory	Application	ECTS
HIST111	Principles of Atatürk and History of Turkish Revolution I (in English)	2	0	2
PHYS101	General Physics I	3	2	6
ENG101	English For Academic Purposes I	4	0	3,5
MATE103	Introduction to Metallurgical and Materials Engineering and Materials Industry	2	0	2
MATH151	Calculus I	4	2	7
CHE103	General Chemistry	3	2	5
ME108	Computer Aided Solid Modeling	1	3	4,5
KRY111	Career Planning	1	0	1
Toplam		20	9	31

2. Semester				
Course Code	Course Name	Theory	Application	ECTS
HIST112	Principles of Atatürk and History of Turkish Revolution II (in English)	2	0	2
PHYS102	General Physics II	3	2	6
HIST221	History of Civilization	3	0	3
ENG102	English for Academic Purposes II	4	0	3,5
MATH152	Calculus II	4	2	7
CHE104	General Chemistry	3	2	4,5
CMPE102	Computer Programming	2	2	4
Toplam		21	8	30

3. Semester				
Course Code	Course Name	Theory	Application	ECTS
MATH275	Linear Algebra	4	0	6
ENG201	English for Academic Purposes III	3	0	3
MATE201	Fundamentals of Materials Engineering	3	0	5
MATE203	Thermodynamics of Materials I	3	0	5
ME211	Statics and Strength of Materials	3	1	6
	Area Elective	0	0	5
Toplam		16	1	30

4. Semester				
Course Code	Course Name	Theory	Application	ECTS
MATH276	Differential Equations	4	0	6
ENG202	English for Academic Purposes IV	3	0	3
MATE202	Mechanical Behavior and Testing of Materials	3	2	6,5
MATE204	Thermodynamics of Materials II	3	0	5,5
	Area Elective	3	0	5
	General Elective	3	0	4
Toplam		19	2	30

5. Semester				
Course Code	Course Name	Theory	Application	ECTS
MATE311	Ceramics and Refractory Materials	3	0	5
MATE313	Phase Transformations and Kinetic Processes in Materials	3	0	5,5
MATE301	Fundamentals and Applications of Mechanical Shaping	4	0	6
MATE303	Chemical Principles in Production of Metals	3	0	5,5
MATE399	Summer Practice I	0	0	6
ENG301	English for Occupational Purposes I	3	0	3
	General Elective	3	0	5
Toplam		19	0	30

6. Semester				
Course Code	Course Name	Theory	Application	ECTS
MATE312	Iron and Steel Production Technologies	3	0	5
MATE314	Microstructure and Phase Relations	2	2	6
MATE316	Solidification Processes	2	2	5,5
MATE318	Materials Characterization	2	2	5,5
MATE310	Polymeric Materials	3	0	5
ENG302	English for Occupational Purposes II	3	0	3
Toplam		15	6	30

7. Semester				
Course Code	Course Name	Theory	Application	ECTS
TURK401	Turkish Language I	2	0	2
MATE499	Summer Practice II	0	0	6
MATE409	Undergraduate Research	1	2	3
	Area Elective	3	0	5
	Area Elective	3	0	5
	Area Elective	3	0	5
	Area Elective	3	0	5
	General Elective	0	0	5
Toplam		15	2	30

8. Semester				
Course Code	Course Name	Theory	Application	ECTS
TURK402	Turkish Language II	2	0	2
MATE410	Material Selection in Design	2	2	9
MATE420	Graduation Project	1	4	9
MATE404	Metallic Materials	3	0	5
	Area Elective (Multidisciplinary Courses)	0	0	5
Toplam		8	6	30