

OSTIM TECHNICAL UNIVERSITY										
FACULTY OF ENGINEERING										
MATERIALS SCIENCE AND ENGINEERING										
Class	Semester	Course Type	Course Code	Course Name	Theory	Practice	Lab	Credits	ECTS	Prerequisite
1	1	Compulsory	ENG 101	Academic English I	3	0	0	3	3	
1	1	Compulsory	EHS 101	Occupational Health and Safety	2	0	0	2	2	
1	1	Compulsory	EPR 121	Fundamentals of Entrepreneurship	0	2	0	1	2	
1	1	Compulsory	IUL 151	Introduction to University Life	2	0	0	2	2	
1	1	Compulsory	SENG 113	Computer Programming (Python) I	3	0	0	3	4	
1	1	Compulsory	SENG 115	Computer Programming (Python) Laboratory I	0	2	0	1	2	
1	1	Compulsory	MATH 101	Engineering Mathematics I	4	1	0	4	5	
1	1	Compulsory	PHYS 103	Engineering Physics I	3	0	0	3	4	
1	1	Compulsory	PHYS 105	Engineering Physics Laboratory I	0	2	0	1	2	
1	1	Compulsory	CHEM 111	Engineering Chemistry	2	0	0	2	3	
1	1	Compulsory	CHEM 113	Engineering Chemistry Laboratory	0	0	2	1	1	
					19	7	2	23	30	
Class	Semester	Course Type	Course Code	Course Name	Theory	Practice	Lab	Credits	ECTS	Prerequisite
1	2	Compulsory	ENG 102	Academic English II	3	0	0	3	3	
1	2	Compulsory	EPR 122	Entrepreneurship Project	0	2	0	1	1	
1	2	Compulsory	IUL 152	Building the Future	1	0	0	1	1	
1	2	Compulsory	WED 126	Workplace Education	0	6	0	3	3	
1	2	Compulsory	MATH 102	Engineering Mathematics II	4	1	0	4	5	MATH 101
1	2	Compulsory	PHYS 104	Engineering Physics II	3	0	0	3	4	
1	2	Compulsory	PHYS 106	Engineering Physics Laboratory II	0	2	0	1	2	
1	2	Compulsory	CHEM 112	Engineering Chemistry II	3	0	0	4	4	CHEM 111,CHEM 113
1	2	Compulsory	MEC 104	Computer Aided Technical Drawing	1	2	0	2	2	
1	2	Compulsory	MSE 102	Introduction to Materials Science & Engineering	3	0	0	3	5	
					18	13	0	25	30	
Class	Semester	Course Type	Course Code	Course Name	Theory	Practice	Lab	Credits	ECTS	Prerequisite
2	3	Compulsory	ATA 101	Principles of Atatürk and History of Turkish Revolu	2	0	0	2	2	
2	3	Compulsory	TUR 101	Turkish I	2	0	0	2	2	
2	3	Compulsory	WAP 227	Workplace Application I	0	6	0	3	3	
2	3	Compulsory	MSE 201	Materials Science & Engineering I	4	0	0	4	6	
2	3	Compulsory	MSE 203	Metallurgical Thermodynamics I	3	0	0	3	6	MATH 102, CHEM 112
2	3	Compulsory	MATH 202	Differential Equations	4	0	0	3	5	MATH 102
2	3	Compulsory	MSE 205	Materials Processing Laboratory	3	0	2	4	6	
					18	6	2	21	30	
Class	Semester	Course Type	Course Code	Course Name	Theory	Practice	Lab	Credits	ECTS	Prerequisite
2	4	Compulsory	ATA 102	Principles of Atatürk and History of Turkish Revolu	2	0	0	2	2	
2	4	Compulsory	TUR 102	Turkish II	2	0	0	2	2	
2	4	Compulsory	WAP 228	Workplace Application II	0	6	0	3	3	
2	4	Compulsory	MSE 206	Metallurgical Thermodynamics II	3	0	0	3	5	MSE 203
2	4	Compulsory	MATH 204	Statistics & Probability	3	0	0	3	4	
2	4	Compulsory	MATH 201	Linear Algebra	3	0	0	3	4	
2	4	Compulsory	MSE 212	Materials Science & Engineering II	3	0	0	4	5	
2	4	Compulsory	MSE 208	Mechanical Behavior of Materials	3	0	0	3	5	
					19	6	0	23	30	
Class	Semester	Course Type	Course Code	Course Name	Theory	Practice	Lab	Credits	ECTS	Prerequisite
3	5	Compulsory	WAP 327	Workplace Application III	0	6	0	3	3	
3	5	Compulsory	MSE 300	Phase Equilibria & Diagrams	3	0	0	4	6	
3	5	Compulsory	LCE 301	Law Concepts for Engineers	1	0	0	0	0	
3	5	Compulsory	MSE 301	Advanced Material Characterization Techniques	3	0	2	4	6	
3	5	Compulsory	MSE 303	Polymer & Ceramic Materials	3	0	0	3	5	
3	5	Compulsory	MSE 305	Chemical Metallurgy & Processes	3	0	0	3	6	
3	5	Compulsory	MSE 307	Introduction to Nanotechnology & Nanobiotechn	3	0	0	3	4	
					16	6	2	20	30	
Class	Semester	Course Type	Course Code	Course Name	Theory	Practice	Lab	Credits	ECTS	Prerequisite
3	6	Compulsory	WEX 328	Workplace Experience I	0	6	0	3	3	
3	6	Compulsory	MSE 304	Fundamentals of Solidification & Casting	3	0	0	4	6	
3	6	Compulsory	MSE 302	Design for Materials Engineers I	3	0	0	4	5	
3	6	Compulsory	MSE 306	Introduction to Micro- & Nano- Production Techni	3	0	0	3	4	
3	6	Compulsory	MSE 308	Electrical, Optical & Magnetic Properties of Mater	3	0	0	3	4	
3	6	Compulsory	MSE310	Composite & Nanocomposite Materials	3	0	0	3	5	
3	6	Elective	NTE 1	Non-Technical Elective	3	0	0	3	3	
					18	6	0	23	30	
Class	Semester	Course Type	Course Code	Course Name	Theory	Practice	Lab	Credits	ECTS	Prerequisite
4	7	Compulsory	WEX 427	Workplace Experience II	0	6	0	3	3	
4	7	Compulsory	MSE 421	Design for Materials Engineers II	3	0	0	4	7	
4	7	Elective	ELEC 1	Technical Elective Course I	3	0	0	3	5	
4	7	Elective	ELEC 2	Technical Elective Course II	3	0	0	3	5	
4	7	Elective	ELEC 3	Technical Elective Course III	3	0	0	3	5	
4	7	Compulsory	MSE403	Modern Materials for Renewable & Sustainable En	3	0	0	3	5	
					15	6	0	19	30	
Class	Semester	Course Type	Course Code	Course Name	Theory	Practice	Lab	Credits	ECTS	Prerequisite
4	8	Compulsory	WEX 428	Workplace Experience III	0	30	0	15	22	
4	8	Compulsory	MSE 422	Senior Project	0	10	0	5	8	
					0	40	0	20	30	