

# Metalurji ve Malzeme Mühendisliği (İngilizce) - 2020 MÜFREDAT

Genel Toplam | Ders Sayısı:58 | T = 136 | U = 39 | Toplam Saat = 175 | Kredi = 260 | ECTS = 260

1. YARIYIL						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	CHEM1001	General Chemistry I	3	2	6	6
2	CSE1123	Introduction to Computing	3	2	5	5
3	ISG121	İş Sağlığı ve Güvenliği I	2	0	2	2
4	MATH1001	Calculus I	4	0	6	6
5	MSE1101	Introduction to Metallurgical and Materials Engineering	2	0	3	3
6	PHYS1101	Physics I	3	0	4	4
7	PHYS1103	Physics Lab I	0	2	2	2
8	TRD121	Türk Dili I	2	0	2	2
TOPLAM			19	6	30	30

2. YARIYIL						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	CHEM1002	General Chemistry II	3	2	6	6
2	ISG122	İş Sağlığı ve Güvenliği II	2	0	2	2
3	MATH1002	Calculus II	4	0	6	6
4	ME1161	Engineering Drawing	1	2	5	5
5	NTE_1	Non-Technical Elective - 1	2	0	3	3
6	PHYS1102	Physics II	3	0	4	4
7	PHYS1104	Physics Lab II	0	2	2	2
8	TRD122	Türk Dili II	2	0	2	2
TOPLAM			17	6	30	30

3. YARIYIL						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	STAT2054	Statistics for Engineers	3	0	4	4
2	ECON2003	Introduction to Economics	3	0	4	4
3	MATH2055	Differential Equations	3	0	4	4
4	ME2075	Statics and Strength of Materials	3	0	4	4
5	MSE2101	Materials Science I	3	0	5	5
6	MSE2003	Metallurgical Thermodynamics	3	0	5	5
7	CHEM2009	Analytical Chemistry	3	0	4	4
8						
TOPLAM			21	0	30	30

4. YARIYIL						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	MATH2056	Linear Algebra	3	0	4	4
2	MATH2059	Numerical Methods	3	0	4	4
3	MSE2102	Materials Science II	3	0	5	5
4	MSE2004	Solution Thermodynamics	3	0	5	5
5	MSE2106	Materials Laboratory	1	2	4	4
6	MSE2008	Phase Equilibria	3	0	6	6
7	MSE3104	Problem Solving and Presentation Techniques	2	0	2	2
8						
TOPLAM			18	2	30	30

5. YARIYIL						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	CHEM2003	Organic Chemistry	3	0	4	4
2	MSE3000	Summer Practice I	0	0	10	10
3	MSE3001	Mechanical Behavior of Materials	3	0	5	5
4	MSE3003	Transport Phenomena	2	2	6	6
5	MSE3013	Metallography	2	2	5	5
6	MSE3021	Ceramic Materials	3	2	5	5
7	MSE3031	Chemical Metallurgy I	2	2	5	5
8						
TOPLAM			15	8	40	40

6. YARIYIL						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	MSE3011	Physical Metallurgy	3	0	5	5
2	MSE3014	Materials Characterization	2	2	5	5
3	MSE3032	Chemical Metallurgy II	2	2	5	5
4	MSE3102	Deformation Processes	3	0	5	5
5	MSE3116	Principals of Solidification and Casting	2	2	5	5
6	MSE4035	Iron and Steel Production	3	0	5	5
TOPLAM			15	6	30	30

7. YARIYIL						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	TE_1	Technical Elective - 1	3	0	5	5
2	MSE4000	Summer Practice II	0	0	10	10
3	MSE4001	Corrosion and Protection of Materials	2	2	5	5
4	MSE4016	Structure and Properties of Engineering Alloys	3	0	5	5
5	MSE4117	Polymeric Materials	3	0	5	5
6	MSE4197	Engineering Project I	0	4	3	3
7	TE_2	Technical Elective - 2	3	0	5	5
8	ATA121	Atatürk İlkeleri ve İnkılap Tarihi I	2	0	2	2
TOPLAM			16	6	40	40

8. YARIYIL						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	MSE4103	Materials Selection and Design	2	1	5	5
2	MSE4198	Engineering Project II	0	4	5	5
3	UE	University Elective	2	0	3	3
4	TE_3	Technical Elective - 3	3	0	5	5
5	FTE	Technical Elective - 4	3	0	5	5
6	MSE4039	Composite Materials	3	0	5	5
7	ATA122	Atatürk İlkeleri ve İnkılap Tarihi II	2	0	2	2
8						
TOPLAM			15	5	30	30

**NTE1-2 (Non-Technical Elective) & UE (University Elective)**

No	BUS1003	Entrepreneurship and Innovation	T	U	Kredi	ECTS
1	BUS1004	Strategic Entrepreneurship	2	0	3	3
2	BUS2005	International Business	2	0	3	3
3	CAS1001	Self Management	2	0	3	3
4	CAS1010	Our Biosphere	2	0	3	3
5	CAS1061	Geometric Origami	2	0	3	3
6	CAS2001	Energy for Physical Activity	2	0	3	3
7	CAS2002	Human Performance and Nutrition	2	0	3	3
8	CAS2003	Cardiopulmonary Resuscitation and First Aid Basics	2	0	3	3
9	CAS2004	Interpersonal Relations and Communication	2	0	3	3
10	CAS2005	Trekking and Orienteering	2	0	3	3
11	CAS3001	Earthquake and Rescue Principles	2	0	3	3
12	CAS3044	Positive Thinking	2	0	3	3
13	COMM2060	Communication Models and Techniques	2	0	3	3
14	FNCE3003	Investment Planning	2	0	3	3
15	HR1013	Career Development	2	0	3	3
16	HR4001	Career Orientation	2	0	3	3
17	HSS3002	Ethics in Engineering and Science	2	0	3	3
18	IKT1054	Industrial and Economic Sociology	2	0	3	3
19	INF1001	Information Literacy in Engineering	2	0	3	3
20	LAW2004	Labor Law	2	0	3	3
21	MAN1001	Principles of Managerial Economics & Financial Management	2	0	3	3
22	MGT1021	Design, Innovation and Entrepreneurship	2	0	3	3
23	MGT3082	Creativity And Innovation Management	2	0	3	3
24	MRK3082	Integrated Marketing Communication	2	0	3	3
25	MRK3084	Brand Creation/Branding	2	0	3	3
26	NTE1002	Effects of Human Behaviour on Environment	2	0	3	3
27	NTE1003	The Culture of Radiation Safety	2	0	3	3
28	NTE1004	World Cultures	2	0	3	3
29	NTE1006	Basic Principles of Accessibility in Informatics and Technology	2	0	3	3
30	NTE1008	Cinema	2	0	3	3
31	NTE1010	Introduction to Finance for Engineers	2	0	3	3
32	NTE1011	Business Communication	2	0	3	3
33	NTE1012	Introduction to Corporate Governance for Engineers	2	0	3	3
34	NTE1013	Business Intelligence for Managers	2	0	3	3
35	NTE1014	Introduction to Strategic Human Resources Management	2	0	3	3
36	NTE1015	Introduction to Leadership & Management for Engineers	2	0	3	3
37	NTE1016	Introduction to Strategy for Engineers	2	0	3	3

**TE1..5: 7-8. YARIYIL**

No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	MSE4002	Surface Treatment of Metals and Alloys	3	0	5	5
2	MSE4004	Biomaterials	3	0	5	5
3	MSE4012	Electrical, Optical and Magnetic Properties of Materials	3	0	5	5
4	MSE4013	Thermal Processes of Materials	3	0	5	5
5	MSE4015	Advanced Electron Microscopy and Crystallography	3	0	5	5
6	MSE4018	Nondestructive Evaluation of Materials	3	0	5	5
7	MSE4021	Glass Science and Technology	3	0	5	5
8	MSE4022	Cement and Concrete Technology	3	0	5	5
9	MSE4023	Ceramic Processing Techniques	3	0	5	5
10	MSE4031	Welding Technology	3	0	5	5
11	MSE4032	Foundry Technology	3	0	5	5
12	MSE4033	Non-Ferrous Metallurgy	3	0	5	5
13	MSE4037	Powder Technology	3	0	5	5
14	MSE4044	Semiconductors	3	0	5	5
15	MSE4071	Special Topics in Materials Engineering I	3	0	5	5
16	MSE4072	Special Topics in Materials Engineering II	3	0	5	5
17	MSE4073	Materials Engineering Economics and Plant Design	3	0	5	5
18	MSE4074	Total Quality Management in Materials Engineering	3	0	5	5

**FTE (Faculty Technical Elective)**

No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	MGT4082	Advanced innovative Design Management for Entrepreneurship	3	0	5	5
2	BIO4072	Planning and Management of Research	3	0	5	5
3	CHE4060	Cost Management in Chemical Industries	3	0	5	5
4	CSE4044	Software Project Management	3	0	5	5
5	EE4056	Information System Management	3	0	5	5
6	EE4057	Introduction to System Security	3	0	5	5
7	CSE4062	Intro. to Data Science and Analytics	3	0	5	5
8	EE4062	Introduction to Image Processing	3	0	5	5
9	ENVE4062	Energy and the Environment	3	0	5	5
10	ENVE4062	Energy and the Environment	3	0	5	5
11	ENVE4061	Modeling and Computer Applications in Env. Engg.	3	0	5	5
12	IE4055	Design of Experiments	3	0	5	5
13	IE4087	Introduction to Total Quality Management	3	0	5	5
14	ME3004	Mathematical Modeling in Mechanical Engineering	3	0	5	5
15	ME4018	Introduction to Robotics	3	0	5	5
16	ME3022	Mechatronics	3	0	5	5

38	OB2040	Industrial Psychology	2	0	3	3
39	OB2041	Behavioral Sciences for Engineers	2	0	3	3
40	OB3043	Organizational Behaviour	2	0	3	3
41	SOC3082	Environmental Sociology	2	0	3	3
42	YDA1001	German for Beginners	2	0	3	3
43	YDA1002	German	2	0	3	3
44	YDA1003	German Communication	2	0	3	3
45	YDA2001	Seminars in German	2	0	3	3
46	YDF1001	French for Beginners	2	0	3	3
47	YDF1002	French	2	0	3	3
48	YDI1004	Report Writing in English	2	0	3	3
49	YDIS1001	Spanish for Beginners	2	0	3	3
50	YDIS1002	Spanish	2	0	3	3

17	MSE4073	Materials Engineering Economics and Plant Design	3	0	5	5
18	MSE4074	Total Quality Management in Materials Engineering	3	0	5	5