

Mühendislik Fakültesi
Metalurji ve Malzeme Mühendisliği (İngilizce)

Genel Toplam Ders Adedi :51 T : 125 U : 34 Kredi : 142 ECTS : 240 T+U : 159

YABANCI DİL HAZIRLIK						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	YDI001	Yabancı Dil Yeterlik (İngilizce)	0	0	0	0

1. YARIYIL						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	ATA121	Atatürk İlkeleri ve İnkılap Tarihi I	2	0	2	2
2	CHEM101	General Chemistry I	3	2	4	6
3	CSE123	Introduction to Computing	3	2	4	6
4	MATH101	Calculus I	4	0	4	6
5	NTE-1	Non-Technical Elective - 1 (Ders 1) <small>[Bu ders NTE-1 ders grubundan alınacaktır, a a iya bakınız]</small>	2	0	2	3
6	PHYS101	Physics I	4	0	4	5
7	TRD121	Türk Dili I	2	0	2	2
Toplam			20	4	22	30

2. YARIYIL						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	ATA122	Atatürk İlkeleri ve İnkılap Tarihi II	2	0	2	2
2	CHEM102	General Chemistry II	3	2	4	6
3	MATH102	Calculus II	4	0	4	6
4	MSE100	Introduction to Materials Engineering	0	2	1	5
5	NTE-2	Non-Technical Elective - 2 (Ders 1) <small>[Bu ders NTE-2 ders grubundan alınacaktır, a a iya bakınız]</small>	2	0	2	3
6	PHYS102	Physics II	4	0	4	6
7	TRD122	Türk Dili II	2	0	2	2
Toplam			17	4	19	30

3. YARIYIL						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	BSE-1	Basic Science Elective - 1 (Ders 1) <small>[Bu ders BSE-1 ders grubundan alınacaktır, a a iya bakınız]</small>	3	0	3	4
2	MATH255	Differential Equations	3	0	3	5
3	ME161	Engineering Drawing	2	2	3	5
4	ME275	Statics and Strength of Materials	3	0	3	5
5	MSE201	Materials Science I	3	0	3	6
6	MSE203	Metallurgical Thermodynamics	3	0	3	5
Toplam			17	2	18	30

4. YARIYIL						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	BSE-2	Basic Science Elective - 2 (Ders 1) <small>[Bu ders BSE-2 ders grubundan alınacaktır, a a iya bakınız]</small>	3	0	3	4
2	EE233	Fundamentals of Electrical & Electronics Engineering	3	0	3	5
3	MSE202	Materials Science II	3	0	3	6
4	MSE204	Solution Thermodynamics	3	0	3	5
5	MSE206	Materials Laboratory	1	4	3	5
6	MSE208	Phase Equilibria	3	0	3	5
Toplam			16	4	18	30

5. YARIYIL						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	ECON203	Introduction to Economics	3	0	3	4
2	MSE300	Summer Practice I	0	0	0	3
3	MSE301	Mechanical Behavior of Materials	3	0	3	4
4	MSE303	Transport Phenomena	2	2	3	5
5	MSE313	Metallography	2	2	3	5
6	MSE321	Ceramic Materials	3	0	3	4
7	MSE331	Chemical Metallurgy	2	2	3	5
Toplam			15	6	18	30

6. YARIYIL						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	ECON204	Engineering Economy	2	0	2	3
2	LAW203	Business Law and Ethics	3	0	3	4
3	MSE302	Deformation Processes	3	0	3	6
4	MSE311	Physical Metallurgy	3	0	3	5
5	MSE314	Materials Characterization	2	2	3	6
6	MSE322	Ceramic Processing Techniques	2	2	3	6
Toplam			15	4	17	30

7. YARIYIL						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	MSE400	Summer Practice II	0	0	0	3
2	MSE401	Degradation of Materials	2	2	3	5
3	MSE411	Solidification Processes	3	0	3	5
4	MSE497	Engineering Project I	0	4	2	4
5	NTE-3	Non-Technical Elective - 3 (Ders 1) <small>[Bu ders NTE-3 ders grubundan alınacaktır, a a iya bakınız]</small>	2	0	2	3
6	TE-1	Technical Elective - 1 (Ders 1) <small>[Bu ders TE-1 ders grubundan alınacaktır, a a iya bakınız]</small>	3	0	3	5
7	TE-2	Technical Elective - 2 (Ders 1) <small>[Bu ders TE-2 ders grubundan alınacaktır, a a iya bakınız]</small>	3	0	3	5
Toplam			13	6	16	30

8. YARIYIL						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	MSE412	Electrical, Optical and Magnetic Properties of Materials	3	0	3	6
2	MSE498	Engineering Project II	0	4	2	9
3	TE-3	Technical Elective - 3 (Ders 1) <small>[Bu ders TE-3 ders grubundan alınacaktır, a a iya bakınız]</small>	3	0	3	5
4	TE-4	Technical Elective - 4 (Ders 1) <small>[Bu ders TE-4 ders grubundan alınacaktır, a a iya bakınız]</small>	3	0	3	5
5	TE-5	Technical Elective - 5 (Ders 1) <small>[Bu ders TE-5 ders grubundan alınacaktır, a a iya bakınız]</small>	3	0	3	5
Toplam			12	4	14	30

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NTE-1						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	BUS205	International Business	2	0	2	3
2	CAS101	Self Management	2	0	2	3
3	CAS110	Our Biosphere	2	0	2	3
4	CAS161	Geometric Origami	2	0	2	3
5	CAS201	Energy for Physical Activity	2	0	2	3
6	CAS202	Human Performance and Nutrition	2	0	2	3
7	CAS203	Cardiopulmonary Resuscitation and First Aid Basics	2	0	2	3
8	CAS204	Interpersonal Relations and Communication	2	0	2	3
9	CAS205	Trekking and Orienteering	2	0	2	3
10	CAS301	Earthquake and Rescue Principles	2	0	2	3
11	CAS344	Positive Thinking	2	0	2	3
12	COMM260	Communication Models and Techniques	2	0	2	3
13	FNCE303	Investment Planning	2	0	2	3
14	HR113	Career Development	2	0	2	3
15	HR401	Career Orientation	2	0	2	3
16	HSS302	Ethics in Engineering and Science	2	0	2	3
17	OB240	Industrial Psychology	2	0	2	3
18	OB241	Behavioral Sciences for Engineers	2	0	2	3
19	OB343	Organizational Behaviour	2	0	2	3
20	YDA101	German for Beginners	2	0	2	3
21	YDA102	German	1	2	2	3
22	YDA103	German Communication	1	2	2	3
23	YDA201	Seminars in German	1	2	2	3
24	YDF101	French for Beginners	2	0	2	3
25	YDI103	Technical English	2	0	2	3
26	YDI104	Report Writing in English	2	0	2	3
27	YDIS101	Spanish for Beginners	2	0	2	3
28	YDIT101	Italian for Beginners	2	0	2	3
29	YDJ101	Basic Japanese	2	0	2	3

NTE-2						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	BUS205	International Business	2	0	2	3
2	CAS101	Self Management	2	0	2	3
3	CAS110	Our Biosphere	2	0	2	3
4	CAS161	Geometric Origami	2	0	2	3
5	CAS201	Energy for Physical Activity	2	0	2	3
6	CAS202	Human Performance and Nutrition	2	0	2	3
7	CAS203	Cardiopulmonary Resuscitation and First Aid Basics	2	0	2	3
8	CAS204	Interpersonal Relations and Communication	2	0	2	3
9	CAS205	Trekking and Orienteering	2	0	2	3
10	CAS301	Earthquake and Rescue Principles	2	0	2	3
11	CAS344	Positive Thinking	2	0	2	3
12	COMM260	Communication Models and Techniques	2	0	2	3
13	FNCE303	Investment Planning	2	0	2	3
14	HR113	Career Development	2	0	2	3
15	HR401	Career Orientation	2	0	2	3
16	HSS302	Ethics in Engineering and Science	2	0	2	3
17	OB240	Industrial Psychology	2	0	2	3
18	OB241	Behavioral Sciences for Engineers	2	0	2	3
19	OB343	Organizational Behaviour	2	0	2	3
20	YDA101	German for Beginners	2	0	2	3
21	YDA102	German	1	2	2	3
22	YDA103	German Communication	1	2	2	3
23	YDA201	Seminars in German	1	2	2	3
24	YDF101	French for Beginners	2	0	2	3
25	YDI103	Technical English	2	0	2	3
26	YDI104	Report Writing in English	2	0	2	3
27	YDIS101	Spanish for Beginners	2	0	2	3
28	YDIT101	Italian for Beginners	2	0	2	3
29	YDJ101	Basic Japanese	2	0	2	3

BSE-1						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	CHEM201	Physical Chemistry	2	2	3	4
2	CHEM203	Organic Chemistry	2	2	3	4
3	CHEM205	Inorganic Chemistry	2	2	3	4
4	CHEM209	Analytical Chemistry	2	2	3	4
5	CHEM211	Electrochemistry	2	2	3	4
6	MATH256	Linear Algebra	3	0	3	4
7	MATH258	Partial Differential Equations	3	0	3	4
8	MATH259	Numerical Methods	3	0	3	4
9	STAT254	Statistics for Engineers	3	0	3	4

BSE-2						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	CHEM201	Physical Chemistry	2	2	3	4
2	CHEM203	Organic Chemistry	2	2	3	4
3	CHEM205	Inorganic Chemistry	2	2	3	4
4	CHEM209	Analytical Chemistry	2	2	3	4
5	CHEM211	Electrochemistry	2	2	3	4
6	MATH256	Linear Algebra	3	0	3	4
7	MATH258	Partial Differential Equations	3	0	3	4
8	MATH259	Numerical Methods	3	0	3	4
9	STAT254	Statistics for Engineers	3	0	3	4

NTE-3						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	BUS205	International Business	2	0	2	3
2	CAS101	Self Management	2	0	2	3
3	CAS110	Our Biosphere	2	0	2	3
4	CAS161	Geometric Origami	2	0	2	3
5	CAS201	Energy for Physical Activity	2	0	2	3
6	CAS202	Human Performance and Nutrition	2	0	2	3
7	CAS203	Cardiopulmonary Resuscitation and First Aid Basics	2	0	2	3
8	CAS204	Interpersonal Relations and Communication	2	0	2	3

TE-1						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	MSE402	Surface Treatment of Metals and Alloys	3	0	3	5
2	MSE404	Biomaterials	3	0	3	5
3	MSE413	Thermal Processes of Materials	3	0	3	5
4	MSE414	Materials Selection and Design	3	0	3	5
5	MSE415	Physical Modeling in Electron Microscopy	3	0	3	5
6	MSE416	Structure and Properties of Engineering Alloys	3	0	3	5
7	MSE417	Polymeric Materials	3	0	3	5

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9	CAS205	Trekking and Orienteering	2	0	2	3
10	CAS301	Earthquake and Rescue Principles	2	0	2	3
11	CAS344	Positive Thinking	2	0	2	3
12	COMM260	Communication Models and Techniques	2	0	2	3
13	FNCE303	Investment Planning	2	0	2	3
14	HR113	Career Development	2	0	2	3
15	HR401	Career Orientation	2	0	2	3
16	HSS302	Ethics in Engineering and Science	2	0	2	3
17	OB240	Industrial Psychology	2	0	2	3
18	OB241	Behavioral Sciences for Engineers	2	0	2	3
19	OB343	Organizational Behaviour	2	0	2	3
20	YDA101	German for Beginners	2	0	2	3
21	YDA102	German	1	2	2	3
22	YDA103	German Communication	1	2	2	3
23	YDA201	Seminars in German	1	2	2	3
24	YDF101	French for Beginners	2	0	2	3
25	YDI103	Technical English	2	0	2	3
26	YDI104	Report Writing in English	2	0	2	3
27	YDIS101	Spanish for Beginners	2	0	2	3
28	YDIT101	Italian for Beginners	2	0	2	3
29	YDJ101	Basic Japanese	2	0	2	3

8	MSE418	Nondestructive Evaluation of Materials	3	0	3	5
9	MSE420	Polymer Processing	3	0	3	5
10	MSE421	Glass Science and Technology	3	0	3	5
11	MSE422	Cement and Concrete Technology	3	0	3	5
12	MSE431	Welding Technology	3	0	3	5
13	MSE432	Foundry Technolgy	3	0	3	5
14	MSE433	Non-Ferrous Metallurgy	3	0	3	5
15	MSE435	Iron and Steel Production	3	0	3	5
16	MSE437	Powder Technology	3	0	3	5
17	MSE439	Composite Materials	3	0	3	5
18	MSE444	Semiconductors	3	0	3	5
19	MSE471	Special Topics in Materials Engineering I	3	0	3	5
20	MSE472	Special Topics in Materials Engineering II	3	0	3	5
21	MSE473	Materials Engineering Economics and Plant Design	3	0	3	5
22	MSE474	Total Quality Management in Materials Engineering	3	0	3	5

TE-2						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	MSE402	Surface Treatment of Metals and Alloys	3	0	3	5
2	MSE404	Biomaterials	3	0	3	5
3	MSE413	Thermal Processes of Materials	3	0	3	5
4	MSE414	Materials Selection and Design	3	0	3	5
5	MSE415	Physical Modeling in Electron Microscopy	3	0	3	5
6	MSE416	Structure and Properties of Engineering Alloys	3	0	3	5
7	MSE417	Polymeric Materials	3	0	3	5
8	MSE418	Nondestructive Evaluation of Materials	3	0	3	5
9	MSE420	Polymer Processing	3	0	3	5
10	MSE421	Glass Science and Technology	3	0	3	5
11	MSE422	Cement and Concrete Technology	3	0	3	5
12	MSE431	Welding Technology	3	0	3	5
13	MSE432	Foundry Technolgy	3	0	3	5
14	MSE433	Non-Ferrous Metallurgy	3	0	3	5
15	MSE435	Iron and Steel Production	3	0	3	5
16	MSE437	Powder Technology	3	0	3	5
17	MSE439	Composite Materials	3	0	3	5
18	MSE444	Semiconductors	3	0	3	5
19	MSE471	Special Topics in Materials Engineering I	3	0	3	5
20	MSE472	Special Topics in Materials Engineering II	3	0	3	5
21	MSE473	Materials Engineering Economics and Plant Design	3	0	3	5
22	MSE474	Total Quality Management in Materials Engineering	3	0	3	5

TE-3						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	MSE402	Surface Treatment of Metals and Alloys	3	0	3	5
2	MSE404	Biomaterials	3	0	3	5
3	MSE413	Thermal Processes of Materials	3	0	3	5
4	MSE414	Materials Selection and Design	3	0	3	5
5	MSE415	Physical Modeling in Electron Microscopy	3	0	3	5
6	MSE416	Structure and Properties of Engineering Alloys	3	0	3	5
7	MSE417	Polymeric Materials	3	0	3	5
8	MSE418	Nondestructive Evaluation of Materials	3	0	3	5
9	MSE420	Polymer Processing	3	0	3	5
10	MSE421	Glass Science and Technology	3	0	3	5
11	MSE422	Cement and Concrete Technology	3	0	3	5
12	MSE431	Welding Technology	3	0	3	5
13	MSE432	Foundry Technolgy	3	0	3	5
14	MSE433	Non-Ferrous Metallurgy	3	0	3	5
15	MSE435	Iron and Steel Production	3	0	3	5
16	MSE437	Powder Technology	3	0	3	5
17	MSE439	Composite Materials	3	0	3	5
18	MSE444	Semiconductors	3	0	3	5
19	MSE471	Special Topics in Materials Engineering I	3	0	3	5
20	MSE472	Special Topics in Materials Engineering II	3	0	3	5
21	MSE473	Materials Engineering Economics and Plant Design	3	0	3	5
22	MSE474	Total Quality Management in Materials Engineering	3	0	3	5

TE-4						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	MSE402	Surface Treatment of Metals and Alloys	3	0	3	5
2	MSE404	Biomaterials	3	0	3	5
3	MSE413	Thermal Processes of Materials	3	0	3	5
4	MSE414	Materials Selection and Design	3	0	3	5

TE-5						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	MSE402	Surface Treatment of Metals and Alloys	3	0	3	5
2	MSE404	Biomaterials	3	0	3	5
3	MSE413	Thermal Processes of Materials	3	0	3	5
4	MSE414	Materials Selection and Design	3	0	3	5
5	MSE415	Physical Modeling in Electron Microscopy	3	0	3	5
6	MSE416	Structure and Properties of Engineering Alloys	3	0	3	5
7	MSE417	Polymeric Materials	3	0	3	5

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5	MSE415	Physical Modeling in Electron Microscopy	3	0	3	5
6	MSE416	Structure and Properties of Engineering Alloys	3	0	3	5
7	MSE417	Polymeric Materials	3	0	3	5
8	MSE418	Nondestructive Evaluation of Materials	3	0	3	5
9	MSE420	Polymer Processing	3	0	3	5
10	MSE421	Glass Science and Technology	3	0	3	5
11	MSE422	Cement and Concrete Technology	3	0	3	5
12	MSE431	Welding Technology	3	0	3	5
13	MSE432	Foundry Technolgy	3	0	3	5
14	MSE433	Non-Ferrous Metallurgy	3	0	3	5
15	MSE435	Iron and Steel Production	3	0	3	5
16	MSE437	Powder Technology	3	0	3	5
17	MSE439	Composite Materials	3	0	3	5
18	MSE444	Semiconductors	3	0	3	5
19	MSE471	Special Topics in Materials Engineering I	3	0	3	5
20	MSE472	Special Topics in Materials Engineering II	3	0	3	5
21	MSE473	Materials Engineering Economics and Plant Design	3	0	3	5
22	MSE474	Total Quality Management in Materials Engineering	3	0	3	5

8	MSE418	Nondestructive Evaluation of Materials	3	0	3	5
9	MSE420	Polymer Processing	3	0	3	5
10	MSE421	Glass Science and Technology	3	0	3	5
11	MSE422	Cement and Concrete Technology	3	0	3	5
12	MSE431	Welding Technology	3	0	3	5
13	MSE432	Foundry Technolgy	3	0	3	5
14	MSE433	Non-Ferrous Metallurgy	3	0	3	5
15	MSE435	Iron and Steel Production	3	0	3	5
16	MSE437	Powder Technology	3	0	3	5
17	MSE439	Composite Materials	3	0	3	5
18	MSE444	Semiconductors	3	0	3	5
19	MSE471	Special Topics in Materials Engineering I	3	0	3	5
20	MSE472	Special Topics in Materials Engineering II	3	0	3	5
21	MSE473	Materials Engineering Economics and Plant Design	3	0	3	5
22	MSE474	Total Quality Management in Materials Engineering	3	0	3	5