

**Mühendislik Fakültesi**  
**Biyomühendislik (İngilizce) - 2015**

Genel Toplam | Ortalama Yarıyıl Ders =  $[54 / 8 = 6,75] + 3 = 10$  | T = 126 | U = 38 | Toplam Saat = 164 | Kredi = 260 | ECTS = 260

1. YARIYIL						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	ATA121	Atatürk İlkeleri ve İnkılap Tarihi I	2	0	2	2
2	BIOE1000	Introduction to Bioengineering	2	0	3	3
3	CHEM1007	Basic Chemistry	4	0	6	6
4	CSE1121	Scientific Programming	3	2	5	5
5	MATH1001	Calculus I	4	0	6	6
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
<b>TOPLAM</b>			<b>20</b>	<b>4</b>	<b>30</b>	<b>30</b>

2. YARIYIL						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	ATA122	Atatürk İlkeleri ve İnkılap Tarihi II	2	0	2	2
2	BIOE1011	General Biology for Engineers	2	2	6	6
3	BIOE1110	Introduction to Biomedical Engineering and Instrumentation	3	0	5	5
4	MATH1002	Calculus II	4	0	6	6
5	NTExxx	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
<b>TOPLAM</b>			<b>18</b>	<b>4</b>	<b>30</b>	<b>30</b>

3. YARIYIL						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	BIOE2001	Microbiology for Bioengineers	2	2	6	6
2	BIOE2011	Bioengineering Principles	3	0	6	6
3	BIOE2113	Biochemistry for Bioengineers I	3	2	7	7
4	ECON2003	Introduction to Economics	3	0	4	4
5	MATH2055	Differential Equations	3	0	4	4
6	NTExxx	Non-Technical Elective - 2	2	0	3	3
<b>TOPLAM</b>			<b>16</b>	<b>4</b>	<b>30</b>	<b>30</b>

4. YARIYIL						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	BIOE2062	Mathematical Applications in Bioengineering Systems	2	2	6	6
2	BIOE2102	Molecular Biology and Genetics	3	2	7	7
3	BIOE2114	Biochemistry for Bioengineers II	3	2	7	7
4	NTExxx	Non-Technical Elective - 3	2	0	3	3
5	NTExxx	Non-Technical Elective - 4	2	0	3	3
6	STAT2052	Biostatistics	3	0	4	4
<b>TOPLAM</b>			<b>15</b>	<b>6</b>	<b>30</b>	<b>30</b>

5. YARIYIL						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	BIOE3000	Summer Practice I	0	0	10	10
2	BIOE3011	Bioengineering Lab I	0	4	5	5
3	BIOE3015	Biotransport Phenomena I	3	0	5	5

6. YARIYIL						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	BIOE3012	Bioengineering Lab II	0	4	5	5
2	BIOE3016	Biotransport Phenomena II	3	0	5	5
3	BIOE3036	Integrated Downstream Processing	3	0	5	5

4	BIOE3041	Bioreaction Engineering	3	0	6	6
5	BIOE3081	Bioengineering Thermodynamics	3	0	6	6
6	TExxx	Technical Elective - 1	3	0	5	5
7	UExxx	University Elective	2	0	3	3
TOPLAM			14	4	40	40

4	BIOE3056	Bioprocess Dynamics and Control	3	0	5	5
5	TExxx	Technical Elective - 2	3	0	5	5
6	TExxx	Technical Elective - 3	3	0	5	5
TOPLAM			15	4	30	30

7. YARIYIL						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	BIOE4000	Summer Practice II	0	0	10	10
2	BIOE4067	Biochemical Technology	3	0	5	5
3	BIOE4191	Bioprocess Design I	3	2	7	7
4	BIOE4197	Bioengineering Project I	0	4	6	6
5	ISG121	İş Sağlığı ve Güvenliği I	2	0	2	2
6	TExxx	Technical Elective - 4	3	0	5	5
7	TExxx	Technical Elective - 5	3	0	5	5
TOPLAM			14	6	40	40

8. YARIYIL						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	BIOE4192	Bioprocess Design II	3	2	7	7
2	BIOE4198	Bioengineering Project II	0	4	6	6
3	ISG122	İş Sağlığı ve Güvenliği II	2	0	2	2
4	TExxx	Technical Elective - 6	3	0	5	5
5	TExxx	Technical Elective - 7	3	0	5	5
6	TExxx	Technical Elective - 8	3	0	5	5
TOPLAM			14	6	30	30

TE1..8: 5-6-7-8. YARIYIL						
No	Ders Kodu	Ders Adı	T	U	Kredi	ECTS
1	BIOE3001	Biomaterials in Bioengineering Applications	3	0	5	5
2	BIOE3002	Industrial Microbiology	3	0	5	5
3	BIOE3003	Modern Techniques in Biochemical Engineering	3	0	5	5
4	BIOE3004	Protein Interactions	3	0	5	5
5	BIOE3014	Molecular Biophysics	3	0	5	5
6	BIOE3022	Protein/Peptide Transport	3	0	5	5
7	BIOE3023	Biosystems Unit Operations	3	0	5	5
8	BIOE3026	Biomaterials and Drug Delivery	3	0	5	5
9	BIOE3031	Biochemical Regulation and Signal Transduction	3	0	5	5
10	BIOE3032	Introduction to Systems Biology	3	0	5	5
11	BIOE3033	Protein Folding	3	0	5	5
12	BIOE3034	Structural Biology	3	0	5	5

13	BIOE3050	Bioprocess Optimization	3	0	5	5
14	BIOE3051	Computer Aided Bioengineering	3	0	5	5
15	BIOE3052	Introduction to Bioinformatics	3	0	5	5
16	BIOE3053	Cellular and Metabolic Engineering	3	0	5	5
17	BIOE3054	Metabolic Control Analysis	3	0	5	5
18	BIOE3055	Biological Control Systems	3	0	5	5
19	BIOE3060	Bioprocess Validation and Quality Control	3	0	5	5
20	BIOE3061	Industrial and Environmental Biotechnology	3	0	5	5
21	BIOE3062	Proteomics and Mass Spectrometry	3	0	5	5
22	BIOE3065	Computational Bioengineering	3	0	5	5
23	BIOE4001	Recombinant DNA Technology	3	0	5	5
24	BIOE4012	Introduction to Protein Structure and Function	3	0	5	5
25	BIOE4013	Biomolecular Interactions	3	0	5	5
26	BIOE4014	Microbial Proteomics	3	0	5	5
27	BIOE4021	Tissue Engineering	3	0	5	5
28	BIOE4022	Downstream Processing	3	0	5	5
29	BIOE4023	Protein Engineering	3	0	5	5
30	BIOE4030	Bioconversion of Lignocellulosics	3	0	5	5
31	BIOE4031	Biosensors and Bioprocess Instrumentation	3	0	5	5
32	BIOE4032	Introduction to Biodegradable Polymers	3	0	5	5
33	BIOE4035	Reconstruction of Biological Networks	3	0	5	5
34	BIOE4040	Dynamics of Biomolecules	3	0	5	5
35	BIOE4041	Mass Spectrometry Data Analysis in Proteomics	3	0	5	5
36	BIOE4042	Enzymes in Industrial Applications	3	0	5	5
37	BIOE4052	Introduction to Computational Structural Biology	3	0	5	5
38	BIOE4053	Statistics for Bioinformatics Data Mining	3	0	5	5

39	BIOE4054	Design and Simulation of Proteins as Macromolecules	3	0	5	5
40	BIOE4055	Introduction to Machine Learning	3	0	5	5
41	BIOE4056	Plant-wide Process Control	3	0	5	5
42	BIOE4058	Nanotechnology	3	0	5	5
43	BIOE4060	Molecular Modeling	3	0	5	5
44	BIOE4061	Computational Methods in Biology	3	0	5	5
45	BIOE4062	Environmental Bioengineering	3	0	5	5
46	BIOE4063	Biomass and Biorefineries	3	0	5	5
47	BIOE4065	Biomedical Imaging and Diagnostics	3	0	5	5
48	BIOE4070	Protein Biotechnology	3	0	5	5
49	BIOE4071	Management of Bioprocess Development	3	0	5	5
50	BIOE4072	Planning and Management of Research	3	0	5	5
51	BIOE4073	Business in a Competitive Environment in Bioengineering	3	0	5	5
52	BIOE4074	Bioremediation: Principles and Practices	3	0	5	5
53	BIOE4080	Stoichiometric Modeling of Metabolic Networks	3	0	5	5
54	BIOE4081	Thermodynamics and Statistical Mechanics	3	0	5	5
55	BIOE4083	Medical Imaging	3	0	5	5
56	BIOE4093	Special Topics in Bioengineering I	3	0	5	5
57	BIOE4094	Special Topics in Bioengineering II	3	0	5	5
58	BIOE4095	Special Topics in Bioengineering III	3	0	5	5
59	BIOE4096	Special Topics in Bioengineering IV	3	0	5	5
TOPLAM			177	0	295	295