

2019 CURRICULUM

First Semester			Credit	Prerequisite/corequisite	ECTS
MATH	141	Fundamental Analysis I	(3+2)4		5
PHYS	121	General Physics I	(3+2)4		7
CHEM	121	General Chemistry I	(3+0)3		5
CHEM	141	General Chemistry Lab. I	(0-2)1		2
ENG	101	English Reading and Writing Skills I	(3+0)3		3
MBG	101	Biology	(3+0)3		5
BE	101	Introduction to Bioengineering	(2+0)2		3
				Total: 20 Credits	30

Second Semester				Prerequisite/corequisite	
MATH	142	Fundamental Analysis II	(3-2)4		7
PHYS	122	General Physics II	(3-2)4		7
CHEM	122	General Chemistry II	(3-0)3		6
CHEM	142	General Chemistry Lab II	(0-2)1		2
CS	102	Introduction to Programming	(2-2)3		5
ENG	102	English Reading and Writing Skills II	(3-0)3		3
				Total: 18 Credits	30

Third Semester				Prerequisite/corequisite	
MATH	255	Differential Equations	(4-0)4		5
BE	201	Matter and Energy Equations in Engineering	(3-0)3		5
BE	203	Molecular Biology	(3-0)3		5
CHEM	221	Organic Chemistry	(4-0)4		5
BE	205	Fundamentals of Electrics and Electronic Circuits	(3-0)3		3
ECON	205	Principles of Economics	(3-0)3		3
HIST	201	Atatürk's Principles I	(2-0)Non-Credit		2
TURK	201	Turkish Language I	(2-0)Non-Credit		2
				Total: 20 Credits	30

Fourth Semester				Prerequisite/corequisite	
BE	202	Numeric Methods in Engineering	(3-0)3		5
BE	204	Thermodynamics	(3-0)3		5
BE	206	Fluid Mechanics	(3-0)3		5
BE	208	Biochemistry	(3-0)3		5
ME	231	Material Science and Engineering	(3-0)3		3
		Non-Technical Elective Course	(3-0)3		3
HIST	202	Ataturk's Principles II	(2-0)Non-Credit		2
TURK	202	Turkish Language II	(2-0)Non-Credit		2
				Total: 18 Credits	30

Fifth Semester				Prerequisite/corequisite	
BE	301	Transport Phenomena in Biological Systems	(3-0)3		4
BE	303	Biomedical Instrumentation I	(3-0)3		4
ENG	301	Technical Writing and Communication	(3-0)3		2
BE	305	Statistical Tools for Bioengineers	(3-0)3		3
BE	307	Cell Biology	(3-0)3		4
BE		Non-Technical Elective Course	(3-0)3		3
BE	309	Biomaterials	(3-0)3		3
BE	300	Summer Internship I	Non-Credit		7
				Total: 21 Credits	30

Sixth Semester				Prerequisite/corequisite	
BE	302	Bioprocess Engineering	(3-0)3		5
BE	304	Physiology	(3-0)3		4
BE	306	Biomedical Instrumentation II	(3-0)3		5
BE	308	Medical Sensors	(3-0)3		4
BE	310	Bioengineering Lab I	(0-4)2		6
		Technical Elective Course	(3-0)3		3
		Non-Technical Elective Course	(3-0)3		3
				Total: 20 Credits	30

Seventh Semester				Prerequisite/corequisite	
BE	401	Design in Bioengineering I	(3-0)3		7
BE	403	Bioengineering Lab II	(2-4)3		7
		Technical Elective Course	(0-4)2		3
		Technical Elective Course	(3-0)3		3
		Technical Elective Course	(3-0)3		3
BE	400	Summer Internship II	(3-0)3		7
				Total: 14 Credits	30

Eight Semester				Prerequisite/corequisite	
BE	402	Design in Bioengineering II	(2-4)4		10
BE	404	Bioengineering Lab II	(0-4)2		10
BE	406	Ethics in Bioengineering	(2-0)2		4
		Technical Elective Course	(3-0)3		3
		Technical Elective Course	(3-0)3		3
				Total: 14 Credits	30
				Total Credits: 145	240