

Course Structure Diagram with Course Credits

1 st Year Fall Semester						
Course Code	Pre.	Course Name	Theory	Application/ Laboratory	Local Credits	ECTS
PHY101		General Physics I	3	2	4	5
MTH101		Calculus I	4	0	4	5
ENG101		English I	0	0	3	3
BME101		Introduction to Biomedical Engineering	3	0	3	5
CHEM104		Chemistry for Biological Sciences	3	2	4	5
YIT101		Turkish for Foreign Students I	0	0	3	3
AIT103		Principle of Ataturk and History of Turkish Revolution I	0	0	2	2
NTE			0	0	2	2
Total						30

1 st Year Spring Semester						
Course Code	Pre.	Course Name	Theory	Application/ Laboratory	Local Credits	ECTS
PHY102	PHY101	General Physics II	3	2	4	6
MTH102	MTH101	Calculus II	4	0	4	6
BEM102	BME104	Biochemistry	3	2	4	4
BME110	ENG101	Medical English	3	0	3	3
ENG102	ENG101	English II	0	0	3	3
MTH113	MTH101	Linear Algebra	2	2	3	4
YIT102	YIT101	Turkish for Foreign Students II	0	0	2	2
AIT104	AIT103	Principles of Atatürk and the History of Turkish Revolution II	0	0	2	2
Total						30

2 nd Year Fall Semester						
Course Code	Pre.	Course Name	Theory	Application/ Laboratory	Local Credits	ECTS
MTH201	MTH192	Differential Equations	4	0	4	6
ENG201	ENG102	Communication Skills	3	0	3	3

ECC106		Introduction to Computers and Programming	3	2	3	5
ECC204	PHY102	Electric Circuits	3	2	3	6
BME202		Biomaterials	4	0	4	4
NTE		Nontechnical Electives	3	0	3	3
NTE		Nontechnical Electives	3	0	3	3
Total						30

2 nd Year Spring Semester						
Course Code	Pre.	Course Name	Theory	Application/ Laboratory	Local Credits	ECTS
BME210		Anatomy and Physiology	3	0	3	3
ECC205	ECC204	Basic Electronics	3	2	4	5
BME200		Internship I	0	0	0	7.5
BME260	PHY102	Electromagnetic Theories	3	0	3	5
BME250	MTH101	Biostatistics	3	0	3	4
ECC001	ECC106	Digital Logic	3	2	4	5
Total						29.5

3 rd Year Fall Semester						
Course Code	Pre.	Course Name	Theory	Application/ Laboratory	Local Credits	ECTS
BME301		Biomedical Sensors	3	2	4	5
ECC301	ECC001	Microprocessors	3	2	4	5
ECC008		Signals and Systems	3	2	4	6
BME310	ECC205	Biomedical Electronics	3	2	4	5
BME311		Biomedical Instrumentation I	3	2	4	5
BME320		Biomechanics	3	0	3	4
Total						30

3 rd Year Spring Semester						
Course Code	Pre.	Course Name	Theory	Application/ Laboratory	Local Credits	ECTS
BME340	BME250	Modeling of Biological Systems	3	0	3	4

BME350	PHY101	Radiology Physics	3	0	3	5
BME303		Biomedical Imaging	2	2	3	5
BME312	BME311	Biomedical Instrumentation II	3	2	4	5
BME321		Artificial Organs	3	0	3	4
BME300		Internship II	0	0	0	7.5
Total						30.5

4 th Year Fall Semester						
Course Code	Pre.	Course Name	Theory	Application/ Laboratory	Local Credits	ECTS
BME400		Graduation Project I	3	0	3	10
BME401		Instrumental Analysis	4	0	4	5
BME452		Biomedical Signal Processing	0	0	3	5
TE		Technical Elective	4	0	4	5
TE		Technical Elective	3	0	3	5
Total						30

4 th Year Spring Semester						
Course Code	Pre.	Course Name	Theory	Application/ Laboratory	Local Credits	ECTS
BME402		Graduation Project II	3	0	3	10
BME345		Bioinformatics	3	0	3	5
TE		Technical Elective	3	0	3	5
TE		Technical Elective	3	0	3	5
TE		Technical Elective	3	0	3	5
Total						30

Elective Courses						
Code	Pre.	Course Name	Theory	Application/ Laboratory	Local Credits	ECTS
BME432		Fundamental Applications of Computed Tomography	3	0	3	5
BME443		Introduction to Tissue Engineering	3	0	3	5
BME333		Biomedical Computer Applications	3	0	3	5

BME405		Nuclear Medicine	3	0	3	5
BME409		X-ray Based Systems	3	0	3	5
BME304		Introduction to Nanotechnology	3	0	3	5
BME497		Introduction to Clinical Engineering	3	0	3	5
BME453		Medical Ethics	3	0	3	5
BME458		Biomedical Equipment Design	3	0	3	5
BME482		Maintenance and Operation of Medical Devices	3	0	3	5
BME431		Cardiac Biomechanics and ECG Systems	3	0	3	5
BME407		Ultrasound Imaging	3	0	3	5
ECC413		Introduction to Artificial Intelligence	3	0	3	5
ECC419		Digital Image Processing	3	0	3	5
ECC426		Economics for Engineers	3	0	3	6
ECC427		Management for Engineers	3	0	3	6

Non-Technical (Non Field-Related) Elective Courses

Code	Pre.	Course Name	Theory	Application/Laboratory	Local Credits	ECTS
MAN101		Introduction to Management	3	0	3	5
ECON101		Introduction to Economics	3	0	3	5
FRE101		French I	3	0	3	5
FRE101		French II	3	0	3	5
GER101		German I	3	0	3	5
GER102		German II	3	0	3	5
ARB101		Arabic	3	0	3	5
GRE101		Greek	3	0	3	5
RUS101		Russian	3	0	3	5

DBT301		Debate Club	3	0	3	5
PHIL101		Introduction to Philosophy	3	0	3	5
HIST103		History of Civilization	3	0	3	5
POL101		Political Science I	3	0	3	5
SOC101		Sociology	3	0	3	5