

## Course Structure Diagram with Course Credits

1 <sup>st</sup> 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
BIOE101		Introduction to Bioengineering	3	0	3	5
CHM104		Chemistry For Biological Sciences	3	2	4	5
ECC107		Biology	3	0	3	3
AIT103		Principles of Ataturk and History of Turkish Revolution I	0	0	2	2
NTE		Non-Technical electives KTK/CHC 100	0	0	2	2
<b>Total</b>						<b>30</b>

1 <sup>st</sup> 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
ENG102	ENG101	English II	0	0	3	3
MTH113	MTH101	Linear Algebra	3	0	3	6
CHM122	BME104	Organic Chemistry	3	0	3	6
YIT101		Turkish for Foreign Students I	0	0	3	3
<b>Total</b>						<b>30</b>

2 <sup>nd</sup> Year Fall Semester						
Course Code	Pre.	Course Name	Theory	Application/Laboratory	Local Credits	ECTS
ECC217	ECC107	Microbiology	3	0	3	6
BME102	BME104	Biochemistry	3	2	4	6
ENG201	ENG102	Communication Skills	3	0	3	4
BIOE205		Principles and Applications of Ecology	3	0	3	6
NTE		Nontechnical Electives	3	0	3	4
YIT102		Turkish for Foreign Students II	0	0	2	2
AIT103		Principle of Ataturk and History of Turkish Revolution I	0	0	2	2
<b>Total</b>						<b>30</b>

2 <sup>nd</sup> Year Spring Semester						
Course Code	Pre.	Course Name	Theory	Application/Laboratory	Local Credits	ECTS
BIOE202	CHM122	Polymer Technologies	3	0	3	5
BME250	MTH101	Biostatistics	3	0	3	4
BIOE200		Internship I	0	0	0	7.5
BIOE204		Thermodynamics	3	0	3	6
BIOE208		Genetics	3	0	3	5
AIT104		Principles of Atatürk and the History of Turkish Revolution II	0	0	2	2
<b>Total</b>						<b>29.5</b>

3 <sup>rd</sup> Year Fall Semester						
Course Code	Pre.	Course Name	Theory	Application/ Laboratory	Local Credits	ECTS
BME202		Biomaterials	3	0	3	6
BME301		Biomedical Sensors	3	2	4	6
ECC106		Introduction to Computers and Programming	3	2	4	6
BME320		Biomechanics	3	0	3	6
BIOE301		Mass and Heat transfer	3	0	3	6
<b>Total</b>						<b>30</b>

3 <sup>rd</sup> Year Spring Semester						
Course Code	Pre.	Course Name	Theory	Application/ Laboratory	Local Credits	ECTS
BIOE302		Bioenergy Resources	3	0	3	4
BIOE304		Nanotechnology	3	0	3	5
BIOE306		System Design on Bioengineering	3	0	3	5
BME300		Internship II	0	0	0	7.5
BME340	BME250	Modeling of Biological Systems	3	0	3	5
BME321		Artificial Organs	3	0	3	4
<b>Total</b>						<b>30.5</b>

4 <sup>th</sup> Year Fall Semester						
Course Code	Pre.	Course Name	Theory	Application/ Laboratory	Local Credits	ECTS
BIOE400		Graduation Project I	3	0	3	10
BME401		Instrumental Analysis	3	0	4	5
TE		Technical Elective	3	0	3	5

TE		Technical Elective	3	0	3	5
TE		Technical Elective	3	0	3	5
<b>Total</b>						<b>30</b>

#### 4<sup>th</sup> Year Spring Semester

Course Code	Pre.	Course Name	Theory	Application/ Laboratory	Local Credits	ECTS
BIOE402		Graduation Project II	3	0	3	10
BME345	BME250	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
<b>Total</b>						<b>30</b>

#### 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		Clinical Engineering	3	0	3	5
BME304		Introduction to Nanotechnology	3	0	3	5
BME437		X-Ray Based Systems	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	5
ECC427		Management for Engineers	3	0	3	5
MAN101		Introduction to Management	3	0	3	5
ECON101		Introduction to Economics	3	0	3	5
FRE101		French I	3	0	3	5
FRE102		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