

Firat University
Faculty of Science
Department of Molecular Biology and Genetics Curriculum

1st Semester						
C. Code	Course Name	C/E	T	P	C	ECTS
BİO1101	General Biology I	C	3	0	3	6
BİO1103	General Biology Laboratory I	C	0	2	1	3
MBG1101	Occupational Health and Safety	C	2	0	2	3
KİM1111	Basic Chemistry	C	3	0	3	4
KİM1113	Basic Chemistry Laboratory	C	0	2	1	3
FİZ1113	Physics	C	2	0	2	4
FİZ1105	Physics Laboratory	C	0	2	1	3
TRD109	Turkish Language I	C	2	0	2	2
YDİ107	English I	C	2	0	2	2
Semester Total			14	6	17	30
2nd Semester						
C. Code	Course Name	C/E	T	P	C	ECTS
BİO1102	General Biology II	C	3	0	3	6
BİO1104	General Biology Laboratory II	C	0	2	1	3
BİO1108	Biophysics	C	2	0	2	3
BİO1114	Ecology	C	2	0	2	4
KİM1128	Organic Chemistry	C	3	0	3	4
KİM1130	Organic Chemistry Laboratory	C	0	2	1	3
MAT1124	Basic Mathematics	C	2	0	2	3
TRD110	Turkish Language II	C	2	0	2	2
YDİ108	English II	C	2	0	2	2
Semester Total			16	4	18	30
3rd Semester						
C. Code	Course Name	C/E	T	P	C	ECTS
BİO2109	Microbiology	C	3	0	3	4
BİO2111	Microbiology Laboratory	C	0	2	1	2
MBG2101	Molecular Biology I	C	3	0	3	6
MBG2103	Molecular Cell Biology I	C	3	0	3	4
MBG2105	Molecular Cell Biology Laboratory	C	0	2	1	2
MBG2107	Biostatistics	C	2	0	2	2
MBG2109	Cell Culture Techniques	C	2	0	2	3
MBG2111	Academic English I	C	2	0	2	2
AİT209	Atatürk's Principles and History of Revolution I	C	2	0	2	2
SSD2101	<i>Social Elective Course I</i>	E	2	0	2	3
Semester Total			19	4	21	30
4th Semester						
C. Code	Course Name	C/E	T	P	C	ECTS
MBG2102	Molecular Biology II	C	3	0	3	5
MBG2104	Molecular Biology Laboratory	C	0	2	1	3
MBG2106	Molecular Cell Biology II	C	3	1	3	5
MBG2108	Histology	C	3	0	3	4
MBG2110	Histology Laboratory	C	0	2	1	2
MBG2112	Molecular Microbiology	C	2	0	2	4
MBG2114	Academic English II	C	2	0	2	2
AİT210	Atatürk's Principles and History of Revolution II	C	2	0	2	2
SSD2102	<i>Social Elective Course II</i>	E	2	0	2	3
Semester Total			17	5	19	30

5th Semester						
C. Code	Course Name	C/E	T	P	C	ECTS
BIO3111	Biochemistry I	C	3	0	3	4
BIO3113	Biochemistry Laboratory I	C	0	2	1	2
MBG3101	Molecular Biotechnology	C	3	0	3	2
MBG3103	Basic Genetics and Applications	C	3	1	3	4
MBG3105	Animal Physiology	C	3	0	3	3
	<i>Departmental Elective Course I</i>	E	2	0	2	4
	<i>Departmental Elective Course II</i>	E	2	0	2	4
	<i>Departmental Elective Course III</i>	E	2	0	2	4
SSD3101	<i>Social Elective Course III</i>	E	2	0	2	3
Departmental Elective Course List (3 Elective Courses Must Be Selected)						
MBG3107	Molecular Endocrinology	E	2	0	2	4
MBG3109	Bacteriology	E	2	0	2	4
MBG3111	Academic Writing and Project Development	E	2	0	2	4
MBG3113	Bioimaging Techniques	E	2	0	2	4
MBG3115	Recombinant DNA Technologies	E	2	0	2	4
MBG3117	Developmental Biology	E	2	0	2	4
SSD3101	<i>Social Elective Course III</i>	E	2	0	2	3
	Semester Total		18	3	19	30
6th Semester						
C. Code	Course Name	C/E	T	P	C	ECTS
BIO3104	Biochemistry II	C	3	0	3	4
BIO3106	Biochemistry Laboratory II	C	0	2	1	2
BIO3134	Bioinformatics	C	2	1	2	3
MBG3102	Animal Anatomy	C	3	0	3	2
MBG3104	Molecular Genetics	C	3	0	3	4
	<i>Departmental Elective Course IV</i>	E	2	0	2	4
	<i>Departmental Elective Course V</i>	E	2	0	2	4
	<i>Departmental Elective Course VI</i>	E	2	0	2	4
SSD3102	<i>Social Elective Course IV</i>	E	2	0	2	3
Departmental Elective Course List (3 Elective Courses Must Be Selected)						
BIO3136	Virology	E	2	0	2	4
MBG3106	Stem Cell Biology	E	2	0	2	4
MBG3108	Molecular Biology Applications in Forensic Sciences	E	2	0	2	4
MBG3110	Plant Biology	E	2	0	2	4
MBG3112	Principles of Systematics	E	2	0	2	4
MBG3114	Cytogenetics	E	2	0	2	4
SSD3102	<i>Social Elective Course IV</i>	E	2	0	2	3
	Semester Total		17	3	18	30

7th Semester						
C. Code	Course Name	C/E	T	P	C	ECTS
MBG4101	Omics Technologies	C	2	0	2	3
MBG4103	Molecular Evolution	C	3	0	3	4
MBG4105	Professional Practice	C	1	0	1	4
MBG4107	Molecular Immunology	C	2	0	2	3
MBG4109	Experimental Animals	C	2	0	2	4
	<i>Departmental Elective Course VII</i>	E	2	0	2	4
	<i>Departmental Elective Course VIII</i>	E	2	0	2	4
	<i>Departmental Elective Course IX</i>	E	2	0	2	4
Departmental Elective Course List (3 Elective Courses Must Be Selected)						
MBG4111	Biosafety and Bioethics	E	2	0	2	4
MBG4113	Epigenetics	E	2	0	2	4
MBG4115	Medicinal and Economic Plants	E	2	0	2	4
MBG4117	Genetic Toxicology	E	2	0	2	4
MBG4119	Algal Biotechnology	E	2	0	2	4
MBG4121	Systems Biology	E	2	0	2	4
MBG4123	Human Anatomy	E	2	0	2	4
MBG4125	Biodiversity	E	2	0	2	4
	Semester Total		16	0	16	30
8th Semester						
C. Code	Course Name	C/E	T	P	C	ECTS
MBG4102	Genetic Engineering	C	2	0	2	5
MBG4104	Genetic Diseases and Diagnosis	C	2	0	2	4
MBG4106	Cancer Biology	C	2	0	2	5
MBG4108	Enzymology	C	2	0	2	4
	<i>Departmental Elective Course X</i>	E	2	0	2	4
	<i>Departmental Elective Course XI</i>	E	2	0	2	4
	<i>Departmental Elective Course XII</i>	E	2	0	2	4
Departmental Elective Course List (3 Elective Courses Must Be Selected)						
MBG4110	Nutrigenomics and Nutrigenetics	E	2	0	2	4
MBG4112	Plant Chemistry and Biological Activity	E	2	0	2	4
MBG4114	Population Genetics	E	2	0	2	4
MBG4116	Nanobiotechnology	E	2	0	2	4
MBG4118	Protein Chemistry	E	2	0	2	4
MBG4120	Pharmacogenetics	E	2	0	2	4
MBG4122	Neurogenetics	E	2	0	2	4
MBG4124	Human Physiology	E	2	0	2	4
	Semester Total		14	0	14	30

C: Compulsory

E: Elective

T: Theoretical Course Hours

P: Practical Course Hours

C: Course Credit

ECTS: European Credit Transfer System