

## COURSE CATALOGUE 2013-2017

Field: **Molecular Biology and Genetics**

Programme: **Bachelor's Degree in Molecular Biology and Genetics**

Length of studies: **4 years (8 semesters)**

Number of ECTS Credits: **240 for the Bachelor's Degree**

Languages of teaching: **Turkish**

Form of education: **Full-time**

### Programme description:

The programme covers the following educational route:

#### 1<sup>st</sup> year, 1<sup>st</sup> semester (14 weeks)

Code	Courses	Type of course, tuition hours/semester	Credits
KİM1101	GENERAL BIOLOGY I	Compulsory, 56	5
KİM1103	GENERAL CHEMISTRY LAB. I	Compulsory, 28	4
MAT1101	GENERAL MATH	Compulsory, 42	6
MBG1101	GENERAL BIOLOGY I	Compulsory, 56	7
MBG1103	GENERAL BIOLOGY LAB I	Compulsory, 28	4
TRD1101	TÜRKISH LANGUAGE	Compulsory, 56	4

#### 1<sup>st</sup> year, 2<sup>nd</sup> semester (14 weeks)

Code	Courses	Type of course, tuition hours/semester	Credits
BİL1102	UTILIZATION OF BASIC COMPUTER TECHNOLOGY	Compulsory, 42	4
FİZ1102	GENERAL PHYSICS	Compulsory, 70	5
KİM1102	GENERAL CHEMISTRY II	Compulsory, 56	6
KİM1104	GENERAL CHEMISTRY II	Compulsory, 42	4
MBG1102	GENERAL BIOLOGY II	Compulsory, 56	7
MBG1104	GENERAL BIOLOG LAB II	Compulsory, 56	4

#### 2<sup>nd</sup> year, 1<sup>st</sup> semester (14 weeks)

Code	Courses	Type of course, tuition hours/semester	Credits
KİM2201	ORGANIC CHEMISTRY	Compulsory, 56	6
MBG2201	MOLECULAR CELL BIOLOGY I	Compulsory, 98	6
MBG2203	BASIC GENETICS	Compulsory, 84	6
YDİ2201	FOREIGN LANGUAGE	Compulsory, 56	4
MBG2221	MEMBRANE BIOLOGY	Elective, 42	4
MBG2223	RESEARCH and PUBLICATION METHODS in MOLUCULAR BIOLOGY	Elective (1 out of 6), 42	4
MBG2225	PLANT CHEMISTRY		

**2<sup>nd</sup> year, 2<sup>nd</sup> semester (14 weeks)**

Code	Courses	Type of course, tuition hours/semester	Credits
MBG2202	MICROBIOLOGY	Compulsory, 84	8
MBG2204	MOLECULAR CELL BIOLOGY	Compulsory, 98	7
MBG2206	PRESENTATION PREPARATION TECHNIQUES	Compulsory, 14	3
MBG2222	HUMAN EMBRIOLOGY	Elective (1 out of 2), 42	4
MBG2228	BIOTECHNOLOGY		
MBG2224	OCCUPATIONAL ENGLISH	Elective, 42	4
MBG2226	TISSUE CULTURES	Elective (1 out of 2), 42	4
MBG2230	CHROMOSOMES		

**3<sup>rd</sup> year, 1<sup>st</sup> semester (14 weeks)**

Code	Courses	Type of course, tuition hours/semester	Credits
AİT3301	PRINCIPLES OF ATATURK and HISTORY of TURKISH REPUBLIC	Compulsory, 56	4
MBG3301	BIOCHEMISTRY I	Compulsory, 84	5
MBG3303	TECNIQUES IN MOLECULAR BIOLOGY I	Compulsory, 70	6
MBG3305	MOLECULAR GENETICS I	Compulsory, 84	7
MBG3321	PLANT MOLECULAR BIOLOGY	Elective (1 out of 2), 42	4
MBG3323	IMMUNOGENETICS		
MBG3325	VIROLOGY	Elective (1 out of 2), 42	4
MBG3327	BIOLOGY OF CANCER		

**3<sup>rd</sup> year, 2<sup>nd</sup> semester (14 weeks)**

Code	Courses	Type of course, tuition hours/semester	Credits
MBG3302	BIOCHEMISTRY II	Compulsory, 98	8
MBG3304	TECHNIQUES in MOLECULAR BIOLOGY II	Compulsory, 70	8
MBG3306	MOLECULAR GENETICS II	Compulsory, 84	8
MBG3322	HUMAN GENETICS	Elective (1 out of 2), 42	3
MBG3324	POPULATION GENETICS		
MBG3326	ENZYMOMOLOGY	Elective (1 out of 2), 42	3
MBG3328	TRAINING PERIOD		

**4<sup>th</sup> year, 1<sup>st</sup> semester (14 weeks)**

Code	Courses	Type of course, tuition hours/semester	Credits
MBG4401	GENETIC ENGINEERING	Compulsory, 84	7
MBG4403	PHYSIOLOGY	Compulsory, 70	5
MBG4405	FINAL PROJECT I	Compulsory, 28	3

OSD4401	UNIVERSITY SHARING COURSES	Elective, 28	3
MBG4421	BIOINFORMATICS	Elective, 42	4
MBG4423	MOLECULAR EVOLUTION	Elective (1 out of 2), 42	4
MBG4425	FERMENTATION TECHNOLOGY		
MBG4427	PRIMER AND SECONDER METHABOLITES	Elective (1 out of 2), 42	4
MBG4429	BACTERIA BIOLOGY		

**4<sup>th</sup> year, 2<sup>nd</sup> semester (14 weeks)**

<b>Code</b>	<b>Courses</b>	<b>Type of course, tuition hours/semester</b>	<b>Credits</b>
MAT4402	BIOSTATISTICS	Compulsory, 56	8
MBG4402	FINAL PROJECT II	Compulsory, 28	5
MBG4404	SEMINAR	Compulsory, 28	6
OSD4402	UNIVERSITY SHARING COURSES	Elective, 28	3
MBG4422	GENETIC SOURCES AND PROTECTION	Elective (1 out of 2), 56	4
MBG4424	CLINIC BIOCHEMISTRY		
MBG4426	MOLECULAR BIOTECHNOLOGY	Elective (1 out of 2), 56	4
MBG4428	PROTEOMICS AND METABOLOMICS		
MBG4430	YEAST BIOTECHNOLOGY		