

FACULTY OF ARTS AND SCIENCE
DEPARTMENT OF MOLECULAR BIOLOGY AND GENETICS BACHELOR OF SCIENCE
PROGRAM IN ENGLISH
(Then current 2024-2025 Fall Term)

First Term (Fall)		T	P	C	ECTS
MBGE103	General Biology	3	4	5	7
MBGE105	General Chemistry I	3	0	3	4
MBGE113	Calculus I	3	0	3	4
MBGE119	General Physics I	2	2	3	4
MBGE123	General Chemistry I Laboratory	0	2	1	2
ATA101	Principles of Atatürk and History of Turkish Revolution I	2	0	2	2
TURK101	Turkish I	2	0	2	2
ENGL101	English For Academic Purposes I	4	0	4	5
TOTAL		19	8	23	30
Second Term (Spring)		T	P	C	ECTS
MBGE104	Cell Biology I	3	4	5	7
MBGE106	General Chemistry II	3	0	3	4
MBGE114	Calculus II	3	0	3	4
MBGE120	General Physics II	2	2	3	4
MBGE124	General Chemistry II Laboratory	0	2	1	2
ATA102	Principles of Atatürk and History of Turkish Revolution II	2	0	2	2
TURK102	Turkish II	2	0	2	2
ENGL102	English For Academic Purposes II (PRE: ENGL101)	4	0	4	5
TOTAL		19	8	23	30
Third Term (Fall)		T	P	C	ECTS
MBGE203	Genetics	3	0	3	3
MBGE209	Cell Biology II	3	4	5	7
MBGE213	Molecular Biology	3	0	3	4
MBGE215	Informatics Technologies for Biological Sciences	0	2	1	2
MBGE218	History of Science and Ethics	2	0	2	2
MBGE222	Organic Chemistry	3	0	3	3
MBGE223	Molecular Biology Laboratory	0	4	2	4
ENGL201	English for Academic Purposes III (PRE: ENGL102)	4	0	4	5
TOTAL		18	10	23	30
Fourth Term (Spring)		T	P	C	ECTS
MBGE202	Molecular Genetics	3	0	3	5
MBGE208	Physiology	3	2	4	4
MBGE210	Microbiology	3	0	3	4
MBGE220	Microbiology Laboratory	0	4	2	4
MBGE230	Biochemistry I	3	0	3	4
MBGEXXX	Departmental Elective I	3	0	3	4
ENGL202	English for Academic Purposes IV (PRE: ENGL201)	4	0	4	5
TOTAL		19	6	22	30
Fifth Term (Fall)		T	P	C	ECTS

MBGE303	Research Techniques for Molecular Biology and Genetics	1	4	3	8
MBGE305	Recombinant DNA Technology	3	0	3	4
MBGE307	Entrepreneurship and Project Designing	2	0	2	2
MBGE331	Biochemistry II	3	0	3	4
MBGEXXX	Departmental Elective II	3	0	3	4
XXX	Nondepartmental Elective*	3	0	3	4
XXX	Technical Elective**	3	0	3	4
TOTAL		18	4	20	30
Sixth Term (Spring)		T	P	C	ECTS
MBGE309	Plant Biology	3	2	4	4
MBGE310	Genetic Engineering	3	0	3	4
MBGE316	Biostatistics	3	2	4	5
MBGE332	Biochemistry II Laboratory	0	4	2	4
MBGE409	Tissue Culture	2	2	3	5
MBGEXXX	Departmental Elective III	3	0	3	4
XXX	Technical Elective**	3	0	3	4
TOTAL		17	10	22	30
Seventh Term (Fall)		T	P	C	ECTS
MBGE403	Bioinformatics	2	2	3	5
MBGE413	Summer Practice	0	2	1	5
MBGE453	Graduation Project	1	2	2	4
MBGEXXX	Departmental Elective IV	3	0	3	4
MBGEXXX	Departmental Elective V	3	0	3	4
MBGEXXX	Departmental Elective VI	3	0	3	4
XXX	Technical Elective**	3	0	3	4
TOTAL		15	6	18	30
Eighth Term (Spring)		T	P	C	ECTS
MBGE402	Biotechnology	3	0	3	5
MBGE406	Seminars in Molecular Biology and Genetics	1	0	1	3
MBGE46X	Elective Project and Laboratory Studies***	1	4	3	10
MBGEXXX	Departmental Elective VII	3	0	3	4
MBGEXXX	Departmental Elective VIII	3	0	3	4
MBGEXXX	Departmental Elective IX	3	0	3	4
TOTAL		14	4	16	30

T: Theoretical course weekly hours, **P:** Practical course weekly hours, **C:** Credits,
ECTS: European Credit Transfer System

* **Nondepartmental Elective:** Courses offered by other departments having at least 4 ECTS.

** **Technical Elective:** Courses offered by Department of Molecular Biology (MBGEXXX) and Genetics or Department of Academic English (ENGLXXX) and having at least 4 ECTS, which are presented in the lists of departmental and technical elective courses.

*** **Elective Project and Laboratory Studies:** Elective courses offered by Department of Molecular Biology and Genetics with MBGE46X and having at least 10 ECTS, which are presented in the 'Elective Project and Laboratory Studies' list.

University Compulsory Courses		T	P	C	ECTS
ICT100	Computer Literacy	2	0	2	2
GSB/HSB	Fine Arts Elective/First Aid	0	2	1	1

ORY100	Introduction to University Life	1	0	1	1
KRY100	Career Planning	1	0	1	2

TOTAL (Minimum Graduation Requirements)	Credits	ECTS
	172	246

Departmental Elective Courses		T	P	C	ECTS
MBGE312	Plant Physiology	3	0	3	4
MBGE313	Ecology	3	0	3	4
MBGE315	Immunology	3	0	3	4
MBGE318	Introduction to Data Science	2	2	3	4
MBGE321	Applied Microbiology	2	2	3	4
MBGE323	Signal Transduction	3	0	3	4
MBGE327	Neuroscience	3	0	3	4
MBGE328	Behavioral Genetics	3	0	3	4
MBGE333	Genetic Diseases	3	0	3	4
MBGE340	Biophysics	3	0	3	4
MBGE345	Introduction to Omics Technologies	3	0	3	4
MBGE346	Biodiversity	3	0	3	4
MBGE411	Plant Molecular Biology	3	0	3	4
MBGE414	Bioinformatics II	2	2	3	4
MBGE416	Embryology	3	0	3	4
MBGE417	Stem Cell Biology	3	0	3	4
MBGE418	Cancer Molecular Biology	3	0	3	4
MBGE419	Functional Genomics	3	0	3	4
MBGE420	Plant Genetics and Biotechnology	3	0	3	4
MBGE422	Enzymology	3	0	3	4
MBGE424	Epigenetics	3	0	3	4
MBGE426	Free Radicals and Antioxidants	3	0	3	4
MBGE429	Animal Behaviors	3	0	3	4
MBGE430	Pharmacology	3	0	3	4
MBGE431	Pharmacogenetic	3	0	3	4
MBGE432	Biomolecules	3	0	3	4
MBGE434	Special Topics in Molecular Biology	3	0	3	4
MBGE435	Cell Cycle and Death	3	0	3	4
MBGE436	Nanotechnology	3	0	3	4
MBGE437	Tissue Engineering	3	0	3	4
MBGE438	Biomaterials	3	0	3	4
MBGE439	Evolutionary Biology	3	0	3	4
MBGE442	Biology and Law	3	0	3	4
MBGE443	Bioanalytical Techniques	3	0	3	4
Non-departmental Elective Courses Offered for Other Departments		T	P	C	ECTS
MBGE100	Introduction to Biological Sciences	3	0	3	5
MBGE200	Basic Biotechnology	3	0	3	5
Technical Elective Courses Offered by the Department of Academic English		T	P	C	ECTS
ENGL301	Developing English Language Skills I (PRE: ENGL202)	4	0	4	5
ENGL302	Developing English Language Skills II (PRE: ENGL202)	4	0	4	5
ENGL401	Developing English Language Skills III (PRE: ENGL202)	4	0	4	5

ENGL402	Developing English Language Skills IV (PRE: ENGL202)	4	0	4	5
Elective Project and Laboratory Studies		T	P	C	ECTS
MBGE461	Cell Biology and Cancer Studies	1	4	3	10
MBGE462	Plant Molecular Biology Studies	1	4	3	10
MBGE463	Evolutionary Biology and Ecology Studies	1	4	3	10
MBGE464	Biomaterials and Tissue Engineering Studies	1	4	3	10
MBGE465	Molecular Diagnostic Studies	1	4	3	10
MBGE466	Applied Microbiology and Biotechnology Studies	1	4	3	10
MBGE467	Computational Biology and Bioinformatics Studies	1	4	3	10
MBGE468	Biological Molecules and Biochemistry Studies	1	4	3	10
MBGE469	Research Methodology and Project Management	5	0	5	10