**FACULTY OF SCIENCE AND LETTERS**

**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](http://angora.baskent.edu.tr/bilgipaketi/?dil=TR&menu=akademik&inner=katalog&birim=302&ders=993100) | Computer Literacy | 2 | 0 | 2 | 2 |
| GSB/HSH | 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 |