

| International University of Sarajevo (IUS) | | | | | | | | | | | |
|---|--|--------------|---|---|------------|---|---------------------|--------------|---|----|------------|
| Faculty of Engineering and Natural Sciences (FENS) | | | | | | | | | | | |
| Master of Science (M.Sc.) in Genetics and Bioengineering (120 ECTS) | | | | | | | | | | | |
| Academic Year 2025-2026 | | | | | | | | | | | |
| Semester I | | | | | | Semester II | | | | | |
| Code | Title | Prerequisite | T | P | ECTS | Code | Title | Prerequisite | T | P | ECTS |
| ENS500 | Research Methodologies for Engineers and Scien | | 0 | 0 | 12 | BIO500 | Research Activity | | 3 | 0 | 12 |
| xxx | Elective Course | | | | 6 | xxx | Elective Course | | | | 6 |
| xxx | Elective Course | | | | 6 | xxx | Elective Course | | | | 6 |
| xxx | Elective Course | | | | 6 | xxx | Elective Course | | | | 6 |
| Semester Total = 30 | | | | | | Semester Total = 30 | | | | | |
| Semester III | | | | | | Semester IV | | | | | |
| Code | Title | Prerequisite | T | P | ECTS | Code | Title | Prerequisite | T | P | ECTS |
| BIO550 | Seminar | | 3 | 0 | 12 | BIO552 | Scientific Activity | | | | 6 |
| BIO551 | Scientific Activity | | | | 6 | BIO590 | Master Thesis | | 0 | 12 | 24 |
| xxx | Elective Course | | | | 6 | | | | | | |
| xxx | Elective Course | | | | 6 | | | | | | |
| Semester Total = 30 | | | | | | Semester Total = 30 | | | | | |
| Notes: | | | | | | | | | | | |
| 8 Program elective courses are taken from the list of available 500-level GBE program elective courses (up to 2 courses of 400-level can be taken). | | | | | | | | | | | |
| During the first week, new graduate students must take the Laboratory Safety Training (non-credit) before working in the laboratory. | | | | | | | | | | | |
| New graduate students need to complete the following safety trainings: | | | | | | | | | | | |
| 1. General safety and Emergency | | | | | | | | | | | |
| 2. Chemical Safety for Laboratories and | | | | | | | | | | | |
| 3. Bio safety. | | | | | | | | | | | |
| Abbreviations: T (Theory), P (Practice) | | | | | | | | | | | |
| Total Credits Required for Graduation | | | | | 120 | Average Credit Load Per Semester | | | | | 30 |
| Total Credits of Electives | | | | | 48 | Elective Ratio | | | | | 40% |

| Program Elective Courses | | | | | | | | | | |
|--------------------------|---|---------------|---|---|------|--|--|--|--|--|
| Code | Title | Prerequisites | T | P | ECTS | | | | | |
| BIO501 | Advanced Molecular Biology | | 3 | 0 | 6 | | | | | |
| BIO502 | Recent Advances in Biosciences | | 3 | 0 | 6 | | | | | |
| BIO504 | Personalized Medicine | | 3 | 0 | 6 | | | | | |
| BIO507 | Advanced Protein Engineering | | 3 | 0 | 6 | | | | | |
| BIO508 | Advanced Genetic Engineering | | 3 | 0 | 6 | | | | | |
| BIO509 | Scientific Research methods | | 3 | 0 | 6 | | | | | |
| BIO510 | Bioprocess engineering | | 3 | 0 | 6 | | | | | |
| BIO511 | Biomaterials | | 3 | 0 | 6 | | | | | |
| BIO512 | Biostatistics | | 3 | 0 | 6 | | | | | |
| BIO513 | Advanced Cell Biology | | 3 | 0 | 6 | | | | | |
| BIO514 | O-mics technology | | 3 | 0 | 6 | | | | | |
| BIO515 | Bio-Imaging systems | | 3 | 0 | 6 | | | | | |
| BIO516 | Advanced Bio-Chemical engineering | | 3 | 0 | 6 | | | | | |
| BIO517 | Biosensors instrumentation and technology | | 3 | 0 | 6 | | | | | |
| BIO518 | Special Topics in Life Sciences I | | 3 | 0 | 6 | | | | | |

Ver. 0/25-26

Last update: June 11, 2025

SENATE DECISION: IUS-SENAT-11-1579/2025; June 11, 2025