**BACHELOR’S IN FOOD ENGINEERING**

**1ST SEMESTER**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| COURSE CODE | NAME OF SUBJECT | Т | A | C | ECTS |
| GID-101 | Introduction to Food Engineering | 1 | 0 | 1 | 2 |
| MAT-111 | Mathematics I | 3 | 2 | 4 | 4 |
| FEN-111 | General Physics I | 3 | 2 | 4 | 4 |
| KMÜ-111 | Chemistry I | 2 | 2 | 3 | 4 |
| MÜH-101  | Engineering Graphics | 1 | 2 | 2 | 3 |
| BİL-111 | Informatics | 1 | 2 | 2 | 4 |
| ING-101 | English Language I | 2 | 0 | 2 | 2 |
| MYD-101 |  Specialized English Language I | 1 | 2 | 2 | 5 |
| KGZ/RSÇ-101 | Kyrgyz Language I / Russian Language I | 2 | 0 | 2 | 2 |
| BES-105 | Physical Culture and Sports I | 0 | 2 | 0 | 0 |
| **TOTAL** | **16** | **14** | **22** | **30** |

 \*T: Theoretical, A: Applied, C: Credits

**2ND SEMESTER**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| COURSE CODE | NAME OF SUBJECT | Т | A | C | ECTS |
| MAT-112 | Mathematics II | 3 | 2 | 4 | 4 |
| FEN-112 | General Physics II | 3 | 2 | 4 | 4 |
| KMÜ-112 | Chemistry II (Organic Chemistry) | 2 | 2 | 3 | 4 |
| BIL-124 | Introduction to Programming | 1 | 2 | 2 | 4 |
| MUH-102 | Computer Graphics | 1 | 2 | 2 | 3 |
| ÇEV-152 | Ecology | 2 | 0 | 2 | 4 |
| ING-102 | English Language II | 2 | 0 | 2 | 2 |
| MYD-102 | Specialized English Language II | 1 | 2 | 2 | 3 |
| KGZ/RSÇ-102 | Kyrgyz Language II / Russian Language II | 2 | 0 | 2 | 2 |
| BES-106 | Physical Culture and Sport II | 0 | 2 | 0 | 0 |
| **TOTAL** | **17** | **14** | **23** | **30** |

 \*T: Theoretical, A: Applied, C: Credits

**3RD SEMESTER**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| COURSE CODE | NAME OF SUBJECT | Т | A | C | ECTS |
| MAT-211 | Differential Equations | 1 | 2 | 2 | 4 |
| KMÜ-211 | Physical Chemistry | 2 | 0 | 2 | 4 |
| FEN-201 | Applied Thermodynamics | 1 | 2 | 2 | 4 |
| MÜH-203 | Electrical Engineering | 2 | 0 | 2 | 3 |
| GID-201 | Material and Energy Balances | 2 | 2 | 3 | 4 |
| MÜH-205 | Applied Mechanics | 2 | 2 | 3 | 5 |
| FLS-251 | Philosophy | 2 | 0 | 0 | 2 |
| TAR-251 | History of the Kyrgyz Republic | 2 | 0 | 0 | 2 |
| MYD-201/203 | Specialized English III / Specialized Russian I | 1 | 2 | 2 | 2 |
| **TOTAL** | **15** | **10** | **16** | **30** |

 \*T: Theoretical, A: Applied, C: Credits

**4TH SEMESTER**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| COURSE CODE | NAME OF SUBJECT | Т | A | C | ECTS |
| GID-222 | Basic Food Processes I | 3 | 0 | 3 | 4 |
| KMÜ-212 | Analytical Chemistry | 2 | 2 | 3 | 4 |
| GID-204 | General Microbiology | 2 | 2 | 3 | 4 |
| GID-232 | Biochemistry | 3 | 0 | 3 | 4 |
| TUR-226 | The Epic of Manas | 2 | 0 | 0 | 2 |
| EDF-202 | World and Turkic Civilization | 2 | 0 | 0 | 2 |
| TAR-252 | History of the Republic of Turkey | 2 | 0 | 0 | 2 |
| MYD-202/MYD 204 | Specialized English Language IV / Specialized Russian Language II | 1 | 2 | 2 | 2 |
| STJ-202 | Internship I | 0 | 0 | 0 | 3 |
|  | Elective Courses in Student’s Specialty  | 3 | 0 | 3 | 3 |
| **TOTAL** | **20** | **6** | **17** | **30** |

 \*T: Theoretical, A: Applied, C: Credits

**5TH SEMESTER**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| COURSE CODE | NAME OF SUBJECT | Т | A | C | ECTS |
| GID-311 | Food Chemistry  | 2 | 2 | 3 | 4 |
| GID-321 | Applied Kinetics | 1 | 2 | 2 | 4 |
| GID-323 | Basic Food Processes II | 2 | 2 | 3 | 4 |
| GID-327 | Food Microbiology | 3 | 2 | 4 | 4 |
| GID-333 | Colloid and Surface Chemistry | 2 | 0 | 2 | 2 |
|  | Elective Courses in Student’s Specialty I | 2 | 2 | 3 | 4 |
|  | Elective Courses in Student’s Specialty II | 2 | 0 | 2 | 4 |
|  | Elective Courses in Student’s Specialty III | 2 | 0 | 2 | 4 |
| **TOTAL** | **16** | **10** | **21** | **30** |

 \*T: Theoretical, A: Applied, C: Credits

**ELECTIVE COURSES**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| COURSE CODE | NAME OF SUBJECT | Т | A | C | ECTS |
| GID-315 | Physical Properties of Food Products | 2 | 2 | 3 | 4 |
| GID-317 | Engineering Properties of Food Products | 2 | 2 | 3 | 4 |
| GID-329 | Food Physiology | 2 | 0 | 2 | 4 |
| GID-331 | Food Additives and Toxicology | 2 | 0 | 2 | 4 |
| GID-343 | Food Hygiene and Sanitation | 2 | 0 | 2 | 4 |

 \*T: Theoretical, A: Applied, C: Credits

**6TH SEMESTER**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| COURSE CODE | NAME OF SUBJECT | Т | A | C | ECTS |
| GID-312 | Analyzing Food Products | 3 | 2 | 4 | 5 |
| GID-316 | Managing Food Processes  | 1 | 2 | 2 | 4 |
| GID-318 | Food Technology I | 2 | 0 | 2 | 3 |
| GID-324 | Basics of Food Processes III | 2 | 2 | 3 | 4 |
| STJ-302 | Internship II | 0 | 0 | 0 | 8 |
|  | Elective Courses in Student’s Specialty IV | 3 | 0 | 3 | 3 |
|  | Elective Courses in Student’s Specialty V | 3 | 0 | 3 | 3 |
| **TOTAL** | **14** | **6** | **17** | **30** |

 \*T: Theoretical, A: Applied, C: Credits

**ELECTIVE COURSES**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| COURSE CODE | NAME OF SUBJECT | Т | A | C | ECTS |
| GID-326 | Food Biotechnology | 3 | 0 | 3 | 3 |
| GID-328 | Technology of Food Production | 3 | 0 | 3 | 3 |
| GID-344 | Mechanical Division Processes | 3 | 0 | 3 | 3 |
| GID-380 | Special Topics in Food Engineering | 3 | 0 | 3 | 3 |

\*T: Theoretical, A: Applied, C: Credits

**7TH SEMESTER**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| COURSE CODE | NAME OF SUBJECT | Т | A | C | ECTS |
| GID-413 | Food Technology II | 3 | 0 | 3 | 5 |
| GID-425 | Economics of Engineering | 1 | 2 | 2 | 4 |
| GID-431 | Laboratory Practice in Food Engineering  | 0 | 4 | 2 | 2 |
| GID-447 | Manufacturing Safety | 2 | 0 | 2 | 4 |
| GID-449 | Ensuring Quality in Food Products | 2 | 0 | 2 | 4 |
| BTZ-451 | Undergraduate Thesis I | 1 | 4 | 3 | 5 |
|  | Elective Courses in Student’s Specialty VI | 3 | 0 | 3 | 3 |
|  | Elective Courses in Student’s Specialty VII | 3 | 0 | 3 | 3 |
| **TOTAL** | **15** | **10** | **20** | **30** |

**ELECTIVE COURSES**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| COURSE CODE | NAME OF SUBJECT | Т | A | C | ECTS |
| GID-433 | Technology of Membrane Methods of Separation | 3 | 0 | 3 | 3 |
| GID-441 | Applied Mathematics in Food Engineering | 3 | 0 | 3 | 3 |
| GID-481  | Special Topics in Food Engineering: Basic Processes  | 3 | 0 | 3 | 3 |
| GID-483  | Special Topics in Food Engineering: Microbiology | 3 | 0 | 3 | 3 |
| GID-485  | Special Topics in Food Engineering: Technology | 3 | 0 | 3 | 3 |

 \*T: Theoretical, A: Applied, C: Credits

**8TH SEMESTER**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| COURSE CODE | NAME OF SUBJECT | Т | A | C | ECTS |
| GID-422 | Modeling in Food Engineering | 2 | 4 | 4 | 6 |
| GID-472 | Safety of Life Systems | 2 | 0 | 2 | 4 |
| BTZ-452 | Undergraduate Thesis II | 1 | 4 | 3 | 5 |
| STJ-402 | Internship III | 0 | 0 | 0 | 4 |
| DES-400 | Elective Courses in Student’s Specialty VIII | 0 | 0 | 0 | 3 |
| DES-402 | Elective Courses in Student’s Specialty IX | 0 | 0 | 0 | 1 |
| DES-404 | Cumulative Exam in Specialty | 0 | 0 | 0 | 1 |
|  | State Exam on Kyrgyz History | 3 | 0 | 3 | 3 |
|  | Defense of Thesis | 3 | 0 | 3 | 3 |
| **TOTAL** | 11 | 8 | 15 | 30 |
| **OVERALL TOTAL** | **124** | **78** | **151** | **240** |

**ELECTIVE COURSES**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| COURSE CODE | NAME OF SUBJECT | Т | A | C | ECTS |
| GID-442 | Technology of Drying | 3 | 0 | 3 | 3 |
| GID-446 | Sensor Analysis | 3 | 0 | 3 | 3 |
| GID-448 | Packaging Materials and Ways of Packing Food Products | 3 | 0 | 3 | 3 |
| GID-482  | Special Topics in Food Engineering: Bioengineering | 3 | 0 | 3 | 3 |
| GID-484  | Special Topics in Food Engineering: Food Chemistry  | 3 | 0 | 3 | 3 |
| GID-486  | Special Topics in Food Engineering: Manufacturing Food Products  | 3 | 0 | 3 | 3 |

 \*T: Theoretical, A: Applied, C: Credits

Study is carried out by credits, measured in the last column (ECTS stands for the European Credit Transfer System). These credits can be transferred to the European credit system.