



# Adiyaman Üniversitesi

## FACULTY OF ENGINEERING

### FOOD ENGINEERING

#### Gıda Mühendisliği

| 1.Semester Course Plan |   |       |                     |      |
|------------------------|---|-------|---------------------|------|
| Course Code            | Course Name                                   | T+A+L | Compulsory/Elective | ECTS |
| AllT101                | Ataturk's Principles and Turkish Revolution I | 2+0+0 | Compulsory          | 2    |
| FIZ101                 | Physics I                                     | 2+0+2 | Compulsory          | 4    |
| GDM105                 | Biology                                       | 2+0+0 | Compulsory          | 4    |
| GDM109                 | Introduction of Food Engineering              | 2+0+0 | Compulsory          | 6    |
| KIM101                 | Chemistry                                     | 2+0+2 | Compulsory          | 4    |
| MAT101                 | Calculus I                                    | 3+1+0 | Compulsory          | 5    |
| TD101                  | Turkish I                                     | 2+0+0 | Compulsory          | 2    |
| YD101                  | Foreign Language I                            | 2+0+0 | Compulsory          | 3    |
| Total ECTS             |   |       |                     | 30   |

| 2.Semester Course Plan |  |       |                     |      |
|------------------------|--|-------|---------------------|------|
| Course Code            | Course Name                                    | T+A+L | Compulsory/Elective | ECTS |
| AllT102                | Ataturk's Principles and Turkish Revolution II | 2+0+0 | Compulsory          | 2    |
| ENF102                 | Basic Information Technologies                 | 2+0+0 | Compulsory          | 5    |
| FIZ102                 | Physics II                                     | 2+0+2 | Compulsory          | 4    |
| GDM108                 | Engineering Drawing with Computer              | 1+2+0 | Compulsory          | 4    |
| KIM102                 | Organic Chemistry                              | 3+0+0 | Compulsory          | 5    |
| MAT102                 | Calculus II                                    | 3+1+0 | Compulsory          | 5    |
| TD102                  | Turkish II                                     | 2+0+0 | Compulsory          | 2    |
| YD102                  | Foreign Language II                            | 2+0+0 | Compulsory          | 3    |
| Total ECTS             |  |       |                     | 30   |

| 3.Semester Course Plan |                                 |       |                     |      |
|------------------------|---------------------------------|-------|---------------------|------|
| Course Code            | Course Name                     | T+A+L | Compulsory/Elective | ECTS |
| GDM203                 | Engineering Mathematics         | 3+0+0 | Compulsory          | 4    |
| GDM205                 | Mass and Rnergy Balances        | 3+0+0 | Compulsory          | 4    |
| GDM207                 | General Microbiology            | 2+0+2 | Compulsory          | 5    |
| GDM209                 | Food Chemistry and Biochemistry | 4+0+0 | Compulsory          | 5    |
| GDM211                 | Engineering Thermodynamics      | 2+0+0 | Compulsory          | 3    |
| KIM201                 | Analytical Chemistry            | 2+2+0 | Compulsory          | 4    |
| MUH201                 | Statistic for Engineering       | 2+0+0 | Compulsory          | 3    |
| SOSSEC1                | Social Elective Course 1        | 2+0+0 | Elective            | 2    |
| Total ECTS             |                                 |       |                     | 30   |

|        |                                 |       |          |   |
|--------|---------------------------------|-------|----------|---|
| SOS201 | Communication                   | 2+0+0 | Elective | 2 |
| SOS203 | Enviromental Management Systems | 2+0+0 | Elective | 2 |
| SOS205 | Engineering Economy             | 2+0+0 | Elective | 2 |
| SOS207 | Critical Analytic Thinking      | 2+0+0 | Elective | 2 |
| SOS209 | History of Science              | 2+0+0 | Elective | 2 |

| 4.Semester Course Plan |                                |       |                     |      |
|------------------------|--------------------------------|-------|---------------------|------|
| Course Code            | Course Name                    | T+A+L | Compulsory/Elective | ECTS |
| GDM200                 | Internship 1                   | 0+0+0 | Compulsory          | 0    |
| GDM202                 | Fluid Mechanics                | 3+0+0 | Compulsory          | 4    |
| GDM204                 | Heat and Mass Transfer         | 3+0+0 | Compulsory          | 4    |
| GDM206                 | FOOD MICROBIOLOGY I            | 2+0+2 | Compulsory          | 5    |
| GDM208                 | Reaction Kinetics              | 2+0+0 | Compulsory          | 3    |
| GDM212                 | Instrumental Food Analysis     | 2+0+2 | Compulsory          | 5    |
| GDM218                 | Laboratory Techniques          | 2+0+2 | Compulsory          | 4    |
| MUH204                 | Occupational Health and Safety | 2+0+0 | Compulsory          | 3    |
| SOSSEC2                | Social Elective Course 2       | 2+0+0 | Compulsory          | 2    |
| Total ECTS             |                                |       |                     | 30   |

|        |                                       |       |          |   |
|--------|---------------------------------------|-------|----------|---|
| SOS202 | Public Relations                      | 2+0+0 | Elective | 2 |
| SOS204 | First Aid                             | 2+0+0 | Elective | 2 |
| SOS206 | Enviromental Pollution and Control    | 2+0+0 | Elective | 2 |
| SOS208 | Artificial Intelligence Methods       | 2+0+0 | Elective | 2 |
| SOS210 | Research and Investigation Techniques | 2+0+0 | Elective | 2 |

| 5.Semester Course Plan |                                  |       |                     |      |
|------------------------|----------------------------------|-------|---------------------|------|
| Course Code            | Course Name                      | T+A+L | Compulsory/Elective | ECTS |
| GDM301                 | Food Engineering Unit Operations | 4+0+0 | Compulsory          | 5    |
| GDM303                 | Food Biotechnology               | 3+0+0 | Compulsory          | 5    |
| GDM305                 | Food Microbiology II             | 2+0+0 | Compulsory          | 4    |
| GDM311                 | Nurtition                        | 2+0+0 | Compulsory          | 4    |
| GDM313                 | Food Packaging                   | 2+0+0 | Compulsory          | 4    |
| GDM315                 | Fermentation Technology          | 2+0+0 | Compulsory          | 4    |
| GDMSEC1                | Professional Elective Courses 1  | 2+0+0 | Elective            | 2    |
| SOSSEC3                | Social Elective Courses 3        | 2+0+0 | Elective            | 2    |

**Total ECTS** **30**

|        |                                      |       |          |   |
|--------|--------------------------------------|-------|----------|---|
| GDM317 | Cold Technique and Storage           | 2+0+0 | Elective | 2 |
| GDM319 | Food and Business Ethics             | 2+0+0 | Elective | 2 |
| GDM321 | Quality Control and Legislation      | 2+0+0 | Elective | 2 |
| GDM323 | Material Science                     | 2+0+0 | Elective | 2 |
| GDM325 | Food Preservation Techniques         | 2+0+0 | Elective | 2 |
| SOS301 | Patents and Industrial Designs       | 2+0+0 | Elective | 2 |
| SOS303 | Environment and Ecology              | 2+0+0 | Elective | 2 |
| SOS305 | History of Art                       | 2+0+0 | Elective | 2 |
| SOS307 | Sign Language                        | 2+0+0 | Elective | 2 |
| SOS309 | Operational Research                 | 2+0+0 | Elective | 2 |
| SOS311 | Technology and Innovation Management | 2+0+0 | Elective | 2 |

| 6.Semester Course Plan |   |       |                     |      |
|------------------------|---|-------|---------------------|------|
| Course Code            | Course Name                               | T+A+L | Compulsory/Elective | ECTS |
| GDM300                 | Internship 2                              | 0+0+0 | Compulsory          | 0    |
| GDM302                 | Fruit and Vegetable Processing Technology | 2+0+2 | Compulsory          | 5    |
| GDM304                 | Cereal Processing Technology              | 2+0+2 | Compulsory          | 5    |
| GDM306                 | Oil Technology                            | 3+0+0 | Compulsory          | 4    |
| GDM310                 | Food Additives and Toxicology             | 2+0+0 | Compulsory          | 4    |
| GDM324                 | Hygiene and Sanitation in Food Industry   | 2+0+0 | Compulsory          | 4    |
| GDMSEC2                | Professional Elective Courses 2           | 2+0+0 | Elective            | 6    |
| SOSSEC4                | Social Elective Courses 4                 | 2+0+0 | Elective            | 2    |

**Total ECTS** **30**

|        |   |       |          |   |
|--------|---|-------|----------|---|
| GDM308 | Research Methods and Techniques           | 2+0+0 | Elective | 2 |
| GDM312 | Food Quality and Safety Systems           | 2+0+0 | Elective | 2 |
| GDM314 | Special Food Technology                   | 2+0+0 | Elective | 2 |
| GDM316 | Industrial Microbiology                   | 2+0+0 | Elective | 2 |
| GDM318 | Food Machinery and Equipment              | 2+0+0 | Elective | 2 |
| GDM320 | Food Reology                              | 2+0+0 | Elective | 2 |
| GDM322 | Sensory Analysis Techniques               | 2+0+0 | Elective | 2 |
| SOS302 | Entrepreneurship                          | 2+0+0 | Elective | 2 |
| SOS304 | Ahi Community and Professional Ethics     | 2+0+0 | Elective | 2 |
| SOS306 | Production Planning                       | 2+0+0 | Elective | 2 |
| SOS308 | Ergonomy                                  | 2+0+0 | Elective | 2 |
| SOS310 | Climate Change and Sustainable Management | 2+0+0 | Elective | 2 |
| SOS312 | Career Planning and Development           | 2+0+0 | Elective | 2 |
| SOS314 | International Relations                   | 2+0+0 | Elective | 2 |

| 7.Semester Course Plan |                                 |       |                     |      |
|------------------------|---------------------------------|-------|---------------------|------|
| Course Code            | Course Name                     | T+A+L | Compulsory/Elective | ECTS |
| GDM403                 | Meat Science and Technology     | 2+0+2 | Compulsory          | 5    |
| GDM405                 | Dairy Science and Technology    | 2+0+2 | Compulsory          | 5    |
| GDM411                 | Cheese Technology               | 2+0+0 | Compulsory          | 4    |
| GDM413                 | Catering Technology             | 2+0+0 | Compulsory          | 4    |
| GDM423                 | Enzyme Science and Technology   | 2+0+0 | Compulsory          | 4    |
| GDM433                 | Senior Design Project           | 0+2+0 | Compulsory          | 4    |
| GDMSEC3                | Professional Elective Courses 3 | 2+0+0 | Elective            | 2    |
| SOSSEC5                | Social Elective Courses 5       | 2+0+0 | Elective            | 2    |

**Total ECTS** **30**

|        |                                     |       |          |   |
|--------|-------------------------------------|-------|----------|---|
| GDM407 | Design in Food Engineering          | 2+0+0 | Elective | 2 |
| GDM409 | Aquaculture Processing Technology   | 2+0+0 | Elective | 2 |
| GDM417 | Poultry Meat Technology             | 2+0+0 | Elective | 2 |
| GDM419 | Food Economics and Management       | 2+0+0 | Elective | 2 |
| GDM421 | Sugar and Sugar Products Technology | 2+0+0 | Elective | 2 |
| GDM425 | Functional Food Technology          | 2+0+0 | Elective | 2 |

|        |  |       |          |   |
|--------|--|-------|----------|---|
| GDM429 | Emulsion Technology in Food Production     | 2+0+0 | Elective | 2 |
| SOS401 | Business Law                               | 2+0+0 | Elective | 2 |
| SOS403 | Intellectual and Industrial Property       | 2+0+0 | Elective | 2 |
| SOS405 | Energy Conservation in Industry            | 2+0+0 | Elective | 2 |
| SOS407 | Business Administration and Management     | 2+0+0 | Elective | 2 |
| SOS409 | Factory Organization and Facility Planning | 2+0+0 | Elective | 2 |
| SOS411 | Productivity Measurement and Analysis      | 2+0+0 | Elective | 2 |
| SOS413 | Project Management                         | 2+0+0 | Elective | 2 |
| SOS415 | Energy and Environment                     | 2+0+0 | Elective | 2 |

| <b>8.Semester Course Plan</b> |  |              |                            |             |
|-------------------------------|--|--------------|----------------------------|-------------|
| <b>Course Code</b>            | <b>Course Name</b>                             | <b>T+A+L</b> | <b>Compulsory/Elective</b> | <b>ECTS</b> |
| GDM404                        | Engineering Adaptation                         | 0+2+0        | Compulsory                 | 15          |
| GDM406                        | Product Development                            | 2+0+0        | Compulsory                 | 5           |
| GDM408                        | Food Projects Preparation Technique            | 2+0+0        | Compulsory                 | 5           |
| GDM410                        | Problems and Evaluation of Local Food Business | 2+0+0        | Compulsory                 | 5           |
|                               |  |              | <b>Total ECTS</b>          | <b>30</b>   |