

Uskudar University
Faculty of Engineering and Natural Sciences
Department of Industrial Engineering
2024-2025 Academic Year
(100% English)

| YEAR ONE | | | | | | | | | | | | | | | | |
|----------------------|---|---|---|---|---|------|--------------|----------------------|--|---|---|---|---|------|--------------|----|
| 1st Term | | | | | | | 2nd Term | | | | | | | | | |
| Code | Course Name | T | P | L | C | ECTS | Prerequisite | Code | Course Name | T | P | L | C | ECTS | Prerequisite | |
| MATH101 | Calculus I* | 3 | 2 | 0 | 4 | 6 | | MATH102 | Calculus II* | 3 | 2 | 0 | 4 | 6 | | |
| PHYS101 | Physics I* | 3 | 0 | 2 | 4 | 6 | | PHYS102 | Physics II* | 3 | 0 | 2 | 4 | 6 | | |
| CHEM101 | General Chemistry I* | 3 | 0 | 2 | 4 | 6 | | IE110 | Introduction to Industrial Engineering | 3 | 0 | 0 | 3 | 3 | | |
| ENG103 | English I | 2 | 0 | 0 | 2 | 2 | | ENG104 | English II | 2 | 0 | 0 | 2 | 2 | | |
| ATA103 | Principles of Atatürk and History of Turkish Revolution I | 2 | 0 | 0 | 2 | 2 | | ATA104 | Principles of Atatürk and History of Turkish Revolution II | 2 | 0 | 0 | 2 | 2 | | |
| RPSC109 | Positive Psychology and Communication Skills | 3 | 0 | 0 | 3 | 5 | | COME102 | Introduction to Algorithms and Programming* | 2 | 0 | 2 | 3 | 4 | | |
| RCUL103 | University Culture I | 0 | 2 | 0 | 1 | 4 | | MATH104 | Basic Linear Algebra* | 2 | 2 | 0 | 3 | 5 | | |
| | | | | | | | | RCUL104 | University Culture II | 0 | 2 | 0 | 1 | 4 | | |
| Total Credits | | | | | | | | Total Credits | | | | | | | | |
| 16 | | | | | | | 4 | 20 | | | | | | | 31 | |
| YEAR TWO | | | | | | | | | | | | | | | | |
| 3rd Term | | | | | | | 4th Term | | | | | | | | | |
| Code | Course Name | T | P | L | C | ECTS | Prerequisite | Code | Course Name | T | P | L | C | ECTS | Prerequisite | |
| MATH207 | Probability* | 2 | 2 | 0 | 3 | 4 | | MATH204 | Statistics | 3 | 0 | 0 | 3 | 5 | | |
| MATH203 | Differential Equations* | 2 | 2 | 0 | 3 | 5 | | MATH302 | Numerical Analysis | 3 | 0 | 0 | 3 | 6 | | |
| IE215 | Operations Research I* | 3 | 0 | 2 | 4 | 6 | | RPRE104 | Entrepreneurship and Project Culture | 2 | 0 | 0 | 2 | 3 | | |
| IE223 | Computer Aided Engineering Graphics* | 2 | 0 | 2 | 3 | 4 | | IE226 | Operations Research II* | 3 | 0 | 2 | 4 | 6 | | |
| IE217 | Manufacturing Systems Analysis | 3 | 0 | 0 | 3 | 4 | | IE250 | Work Systems Analysis and Design | 3 | 0 | 0 | 3 | 5 | | |
| TURK103 | Turkish Language I | 2 | 0 | 0 | 2 | 2 | | TURK104 | Turkish Language II | 2 | 0 | 0 | 2 | 2 | | |
| IE211 | Engineering Economics | 3 | 0 | 0 | 3 | 4 | | IE284 | Summer Practice I** | 0 | 0 | 0 | 0 | 5 | | |
| Total Credits | | | | | | | | Total Credits | | | | | | | | |
| 17 | | | | | | | 4 | 21 | | | | | | | 29 | |
| YEAR THREE | | | | | | | | | | | | | | | | |
| 5th Term | | | | | | | 6th Term | | | | | | | | | |
| Code | Course Name | T | P | L | C | ECTS | Prerequisite | Code | Course Name | T | P | L | C | ECTS | Prerequisite | |
| IE305 | System Simulation* | 2 | 0 | 2 | 3 | 5 | | IE304 | Facility Planning and Layout Design | 3 | 0 | 0 | 3 | 5 | | |
| IE325 | Production and Inventory Systems | 3 | 0 | 0 | 3 | 5 | | IE346 | Management Information Systems | 2 | 0 | 0 | 2 | 3 | | |
| IE351 | Ergonomics | 3 | 0 | 0 | 3 | 5 | | IEXXX | Departmental Elective II | 3 | 0 | 0 | 3 | 5 | | |
| IEXXX | Departmental Elective I | 3 | 0 | 0 | 3 | 5 | | XXXXXX | Field Elective II | 3 | 0 | 0 | 3 | 5 | | |
| XXXXXX | Field Elective I | 3 | 0 | 0 | 3 | 5 | | XXXXXX | Social Elective II | 3 | 0 | 0 | 3 | 5 | | |
| XXXXXX | Social Elective I | 3 | 0 | 0 | 3 | 5 | | IE384 | Summer Practice II** | 0 | 0 | 0 | 0 | 5 | | |
| Total Credits | | | | | | | | Total Credits | | | | | | | | |
| 17 | | | | | | | 0 | 2 | | | | | | | 18 | 30 |
| YEAR FOUR | | | | | | | | | | | | | | | | |
| 7th Term | | | | | | | 8th Term | | | | | | | | | |
| Code | Course Name | T | P | L | C | ECTS | Prerequisite | Code | Course Name | T | P | L | C | ECTS | Prerequisite | |
| IE491 | Graduation Project* | 2 | 0 | 4 | 4 | 5 | | IE492 | Graduation Thesis* | 2 | 0 | 6 | 5 | 8 | | |
| IE413 | Statistical Quality Control | 3 | 0 | 0 | 3 | 5 | | IE420 | Project Management | 3 | 0 | 0 | 3 | 5 | | |
| IEXXX | Departmental Elective III | 3 | 0 | 0 | 3 | 5 | | IE408 | Supply Chain Management | 3 | 0 | 0 | 3 | 5 | | |
| IEXXX | Departmental Elective IV | 3 | 0 | 0 | 3 | 5 | | IEXXX | Departmental Elective V | 3 | 0 | 0 | 3 | 5 | | |
| XXXXX | Field Elective III | 3 | 0 | 0 | 3 | 5 | | IEXXX | Departmental Elective VI | 3 | 0 | 0 | 3 | 5 | | |
| XXXXX | Social Elective III | 3 | 0 | 0 | 3 | 5 | | OH5404 | Occupational Health and Safety | 4 | 0 | 0 | 4 | 4 | | |
| Total Credits | | | | | | | | Total Credits | | | | | | | | |
| 17 | | | | | | | 0 | 4 | | | | | | | 19 | 30 |
| 18 | | | | | | | 0 | 6 | | | | | | | 21 | 32 |

| | | |
|-----------|--|-----|
| 2024-2025 | Total Course Credits for Graduation | 152 |
| | Total Course ECTS for Graduation | 244 |
| | Total Elective Courses ECTS | 60 |
| | Elective Course Ratio | 25% |

* These courses are under the Applied Course status.
** These courses are under the Internship Course status.

| Elective Course Pool | | | | | | | | | | | | | | | |
|-------------------------------|--|---|---|---|---|------|---|--------|-------------|---|---|---|---|------|--------------|
| Departmental Elective Courses | | | | | | | Social Elective Courses (Foreign Languages) | | | | | | | | |
| Code | Course Name | T | P | L | C | ECTS | Prerequisite | Code | Course Name | T | P | L | C | ECTS | Prerequisite |
| IE301 | Creativity and Innovation | 3 | 0 | 0 | 3 | 5 | | ARB123 | Arabic I | 3 | 0 | 0 | 3 | 5 | |
| IE303 | Leadership and Communication Skills | 3 | 0 | 0 | 3 | 5 | | ARB124 | Arabic II | 3 | 0 | 0 | 3 | 5 | ARB123 |
| IE312 | Human Resources Management | 3 | 0 | 0 | 3 | 5 | | CHN123 | Chinese I | 3 | 0 | 0 | 3 | 5 | |
| IE315 | Decision Making in Health Services | 3 | 0 | 0 | 3 | 5 | | CHN124 | Chinese II | 3 | 0 | 0 | 3 | 5 | CHN123 |
| IE317 | Organizational Behaviour | 3 | 0 | 0 | 3 | 5 | | ESP123 | Spanish I | 3 | 0 | 0 | 3 | 5 | |
| IE319 | Computer Integrated Manufacturing | 3 | 0 | 0 | 3 | 5 | | ESP124 | Spanish II | 3 | 0 | 0 | 3 | 5 | ESP123 |
| IE323 | Cost Analysis | 3 | 0 | 0 | 3 | 5 | | FRN123 | French I | 3 | 0 | 0 | 3 | 5 | |
| IE324 | Engineering Management | 3 | 0 | 0 | 3 | 5 | | FRN124 | French II | 3 | 0 | 0 | 3 | 5 | FRN123 |
| IE333 | Data Science and Analytics | 3 | 0 | 0 | 3 | 5 | | GER123 | German I | 3 | 0 | 0 | 3 | 5 | |
| IE343 | Decision Analysis | 3 | 0 | 0 | 3 | 5 | | GER124 | German II | 3 | 0 | 0 | 3 | 5 | GER123 |
| IE344 | Start-up Projects in Engineering | 3 | 0 | 0 | 3 | 5 | | RSN123 | Russian I | 3 | 0 | 0 | 3 | 5 | |
| IE352 | Probabilistic Models in Operations Research | 3 | 0 | 0 | 3 | 5 | | RSN124 | Russian II | 3 | 0 | 0 | 3 | 5 | RSN123 |
| IE402 | Portfolio and Risk Analytics | 3 | 0 | 0 | 3 | 5 | | | | | | | | | |
| IE403 | System Dynamics | 3 | 0 | 0 | 3 | 5 | | | | | | | | | |
| IE405 | Enterprise Resource Planning | 3 | 0 | 0 | 3 | 5 | | | | | | | | | |
| IE410 | Decision Support Systems | 3 | 0 | 0 | 3 | 5 | | | | | | | | | |
| IE411 | Introduction to Fuzzy Logic | 3 | 0 | 0 | 3 | 5 | | | | | | | | | |
| IE415 | Lean and Agile Production Systems | 3 | 0 | 0 | 3 | 5 | | | | | | | | | |
| IE416 | Design of Experiments | 3 | 0 | 0 | 3 | 5 | | | | | | | | | |
| IE421 | Robotics and Intelligent Systems | 3 | 0 | 0 | 3 | 5 | | | | | | | | | |
| IE426 | Operation Scheduling | 3 | 0 | 0 | 3 | 5 | | | | | | | | | |
| IE430 | Reliability Engineering and Maintenance Management | 3 | 0 | 0 | 3 | 5 | | | | | | | | | |
| IE431 | Optimization | 3 | 0 | 0 | 3 | 5 | | | | | | | | | |
| IE436 | Healthcare Quality Management | 3 | 0 | 0 | 3 | 5 | | | | | | | | | |
| IE438 | Forecasting and Predictive Analysis | 3 | 0 | 0 | 3 | 5 | | | | | | | | | |
| IE439 | Expert Systems and Artificial Intelligence | 3 | 0 | 0 | 3 | 5 | | | | | | | | | |
| IE443 | Special Topics in Industrial Engineering | 3 | 0 | 0 | 3 | 5 | | | | | | | | | |

For Field Elective courses, any departmental elective course having appropriate credits from other departments of Faculty of Engineering and Natural Sciences can be elected.

For Social Elective courses, either foreign language course or course having appropriate credits from other faculties can be elected.