|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **LECTURE CODE** | **LECTURE** | **LECTURE CREDIT INFORMATION** | | | | | **APPLICANT DEPARTMENT** |
| **INDUSTRIAL ENGINEERING** | | | | | | | **COMPUTER ENG.** |
| **1  Fall Semester** | | **Credits** | **Theory** | **Practice** | **Lab** | **ECTS** |  |
| CS 101 | Introduction to Programming I | 4 | 3 | 0 | 2 | 6 | EQUIVALENT |
| ENEN 101 | English for Engineers I | 4 | 4 | 0 | 0 | 4 | EQUIVALENT |
| GEN 100 | Introduction to Engineering and Ethics | 0 | 1 | 0 | 0 | 0 | EQUIVALENT |
| MATH 101 | Calculus I | 5 | 4 | 2 | 0 | 6 | EQUIVALENT |
| PHYS 101 | Physics I | 3 | 3 | 0 | 0 | 4 | EQUIVALENT |
| PHYS 101L | Physics Laboratory I | 1 | 0 | 0 | 2 | 2 | EQUIVALENT |
| CHEM 101 | Chemistry | 4 | 3 | 2 | 0 | 6 | EQUIVALENT |
| TURK 101 | Turkish I | 2 | 2 | 0 | 0 | 2 | EQUIVALENT |
| **2  Spring Semester** | | **Credits** | **Theory** | **Practice** | **Lab** | **ECTS** |  |
| CS 102 | Introduction to Programming II | 4 | 3 | 0 | 2 | 6 | EQUIVALENT |
| ENEN 102 | English for Engineers II | 4 | 4 | 0 | 0 | 4 | EQUIVALENT |
| MATH 102 | Calculus II | 5 | 4 | 2 | 0 | 6 | EQUIVALENT |
| PHYS 102 | Physics II | 3 | 3 | 0 | 0 | 4 | EQUIVALENT |
| PHYS 102L | Physics Laboratory II | 1 | 0 | 0 | 2 | 2 | EQUIVALENT |
| BIO 102 | Biology | 3 | 3 | 0 | 0 | 4 | EQUIVALENT |
| TURK 102 | Turkish II | 2 | 2 | 0 | 0 | 2 | EQUIVALENT |
| IE 102 | Introduction to Industrial Engineering | 2 | 2 | 0 | 0 | 2 | OBLIGATORY |
| **3  Fall Semester** | | **Credits** | **Theory** | **Practice** | **Lab** | **ECTS** |  |
| IE 201 | Operations Research I | 3 | 3 | 0 | 0 | 5 | OBLIGATORY |
| IE 203 | Principles of Microeconomics | 4 | 3 | 2 | 0 | 5 | OBLIGATORY |
| NDAE XXX | Non-Departmental Elective | 3 | 3 | 0 | 0 | 4 | (\*\*) |
| HIST 101 | Atatürk's Prin. and Rev. History  I | 2 | 2 | 0 | 0 | 2 | EQUIVALENT |
| GEN 200 | Engineering Economics | 3 | 3 | 0 | 0 | 4 | EQUIVALENT |
| MATH 201 | Linear Algebra | 4 | 4 | 0 | 0 | 5 | EQUIVALENT |
| MATH 211 | Probability and Statistics for Eng. | 3 | 3 | 0 | 0 | 5 | EQUIVALENT |
| **4 Spring Semester** | | **Credits** | **Theory** | **Practice** | **Lab** | **ECTS** |  |
| IE 212 | Statistical Models | 3 | 3 | 0 | 0 | 5 | OBLIGATORY |
| IE 202 | Operations Research II | 3 | 3 | 0 | 0 | 5 | OBLIGATORY |
| ME 112 | Computer-Aided  Technical Drawing | 3 | 3 | 0 | 0 | 4 | OBLIGATORY |
| DAE XXX | Area Elective | 3 | 3 | 0 | 0 | 5 | OBLIGATORY |
| HIST 102 | Atatürk's Prin. and Rev. History  II | 2 | 2 | 0 | 0 | 2 | EQUIVALENT |
| MATH 202 | Differential Equations | 4 | 4 | 0 | 0 | 5 | EQUIVALENT |
| NAE XXX | Non-Area Elective | 3 | 3 | 0 | 0 | 4 | (\*\*) |
| **5 Fall Semester** | | **Credits** | **Theory** | **Practice** | **Lab** | **ECTS** |  |
| IE 381 | Simulation | 4 | 3 | 0 | 2 | 7 | OBLIGATORY |
| IE 361 | Production Planning and Control | 3 | 3 | 0 | 0 | 6 | OBLIGATORY |
| IE 301 | Special Topics in Industrial Eng. | 2 | 2 | 0 | 0 | 2 | OBLIGATORY |
| NDAE XXX | Non-Departmental Elective | 3 | 3 | 0 | 0 | 4 | (\*\*) |
| DAE XXX | Area Elective | 3 | 3 | 0 | 0 | 6 | OBLIGATORY |
| IE 291 | Summer Internship I | 0 | 0 | 0 | 0 | 0 | (\*\*\*) |
| MATH 300 | Numerical Analysis for Engineering | 4 | 4 | 0 | 0 | 5 | EQUIVALENT |
| **6 Spring Semester** | | **Credits** | **Theory** | **Practice** | **Lab** | **ECTS** |  |
| IE 312 | Engineering Quality Control | 3 | 3 | 0 | 0 | 7 | OBLIGATORY |

(\*) It is considered EQUIVALENT, when the two registered courses  (IE 491Senior Project I and IE 492 Senior Project II)  are managed  by two advisers (coming from each department)  as an interdisciplinary project

(\*\*) At least 20 ECTS elective courses (from NDAE and NAE list, not from DAE list) in total has to be registered and completed,  provided that at least two courses  has to be taken from the  NDAE (non-departmental elective) list.

(\*\*\*) At least one of the industrial engineering internships is OBLIGATORY.

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| IE 304 | Facility Layout and Design | 3 | 3 | 0 | 0 | 7 | OBLIGATORY |
| IE 303 | Operations Research III | 3 | 3 | 0 | 0 | 6 | OBLIGATORY |
| DAE XXX | Area Elective | 3 | 3 | 0 | 0 | 6 | OBLIGATORY |
| NAE XXX | Non-Area Elective | 3 | 3 | 0 | 0 | 4 | (\*\*) |
| **7 Fall Semester** | | **Credits** | **Theory** | **Practice** | **Lab** | **ECTS** |  |
| DAE XXX | Area Elective | 3 | 3 | 0 | 0 | 6 | OBLIGATORY |
| DAE XXX | Non-Area Elective | 3 | 3 | 0 | 0 | 6 | OBLIGATORY |
| NDAE XXX | Non-Departmental Elective | 3 | 3 | 0 | 0 | 6 | (\*\*) |
| IE 391 | Summer Internship II | 0 | 0 | 0 | 0 | 0 | (\*\*\*) |
| ENEN 401 | Technical Writing and Presentation | 3 | 3 | 0 | 0 | 3 | EQUIVALENT |
| GEN 401 | Worker Health and Work Safety I | 2 | 2 | 0 | 0 | 2 | EQUIVALENT |
| IE 491 | Senior Project I | 0 | 0 | 2 | 0 | 2 | (\*) |
| NAE XXX | Non-Area Elective | 3 | 3 | 0 | 0 | 5 | (\*\*) |
| **8 Spring Semester** | | **Credits** | **Theory** | **Practice** | **Lab** | **ECTS** |  |
| NAE XXX | Non-Area Elective | 3 | 3 | 0 | 0 | 5 | (\*\*) |
| GEN 402 | Worker Health and Work Safety II | 2 | 2 | 0 | 0 | 2 | EQUIVALENT |
| IE 492 | Senior Project II | 0 | 0 | 6 | 0 | 6 | (\*) |
| GEN 404 | Innovation and Entrepreneurship | 2 | 2 | 0 | 0 | 2 | EQUIVALENT |
| DAE XXX | Area Elective | 3 | 3 | 0 | 0 | 5 | OBLIGATORY |
| DAE XXX | Area Elective | 3 | 3 | 0 | 0 | 5 | OBLIGATORY |
| NDAE XXX | Non-Area Elective | 3 | 3 | 0 | 0 | 5 | (\*\*) |

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(\*\*) At least 20 ECTS elective courses (from NDAE and NAE list, not from DAE list) in total has to be registered and completed,  provided that at least two courses  has to be taken from the  NDAE (non-departmental elective) list.

(\*\*\*) At least one of the industrial engineering internships is OBLIGATORY.