



| 1.Semester Course Plan |                                                      |       |                     |      |
|------------------------|------------------------------------------------------|-------|---------------------|------|
| Course Code            | Course Name                                          | T+A+L | Compulsory/Elective | ECTS |
| IENL160                | Introduction to Industrial Eng.                      | 3+0+0 | Compulsory          | 4    |
| MBBL002                | Calculus-I                                           | 4+2+0 | Compulsory          | 7    |
| MBBL018                | Physics-I                                            | 4+2+0 | Compulsory          | 7    |
| MBBL029                | Chemistry                                            | 2+0+0 | Compulsory          | 3    |
| ORTL102                | Introduction to Higher Education and Career Planning | 1+0+0 | Compulsory          | 1    |
| ORTL162                | Principles of Atatürk and History of Reforms-I       | 2+0+0 | Compulsory          | 2    |
| ORTL172                | Turkish Language-I                                   | 2+0+0 | Compulsory          | 2    |
| YDLL323                | Academic English-I                                   | 4+0+0 | Compulsory          | 4    |
|                        |                                                      |       | Total ECTS          | 30   |

| 2.Semester Course Plan |                                                 |       |                     |      |
|------------------------|-------------------------------------------------|-------|---------------------|------|
| Course Code            | Course Name                                     | T+A+L | Compulsory/Elective | ECTS |
| IENL102                | Computer Aided Engineering Drawing              | 1+2+0 | Compulsory          | 4    |
| IENL204                | Computer Programming and IE Software            | 2+0+0 | Compulsory          | 4    |
| MBBL004                | Calculus-II                                     | 4+2+0 | Compulsory          | 7    |
| MBBL020                | Physics-II                                      | 4+2+0 | Compulsory          | 7    |
| ORTL262                | Principles of Atatürk and History of Reforms-II | 2+0+0 | Compulsory          | 2    |
| ORTL272                | Turkish Language-II                             | 2+0+0 | Compulsory          | 2    |
| YDLL324                | Academic English-II                             | 4+0+0 | Compulsory          | 4    |
|                        |                                                 |       | Total ECTS          | 30   |

| 3.Semester Course Plan |                                       |       |                     |      |
|------------------------|---------------------------------------|-------|---------------------|------|
| Course Code            | Course Name                           | T+A+L | Compulsory/Elective | ECTS |
| IENL201                | Product and Process Design            | 1+2+0 | Compulsory          | 4    |
| IENL221                | Economics and Accounting              | 3+0+0 | Compulsory          | 3    |
| IENL261                | Thermodynamics                        | 2+2+0 | Compulsory          | 4    |
| IENL263                | Materials and Manufacturing Processes | 2+2+0 | Compulsory          | 5    |
| MBBL016                | Differential Equations                | 2+2+0 | Compulsory          | 6    |
| MBBL201                | Probability                           | 2+2+0 | Compulsory          | 6    |
| Sec2.1                 | 21. Century Skills                    | -     | Compulsory          | 2    |
|                        |                                       |       | Total ECTS          | 30   |

| Course Groups |                                                          |       |            |   |
|---------------|----------------------------------------------------------|-------|------------|---|
| ORTL362       | Environmental Protection, Occupational Health and Safety | 2+0+0 | Compulsory | 2 |
| ORTL364       | Critical Thinking, Creativity and Entrepreneurship       | 2+0+0 | Compulsory | 2 |
| ORTL368       | Professional Responsibilities and Ethics                 | 2+0+0 | Compulsory | 2 |
| ORTL372       | Strategic Planning, Project and Risk Management          | 2+0+0 | Compulsory | 2 |

| 4.Semester Course Plan |                                         |       |                     |      |
|------------------------|-----------------------------------------|-------|---------------------|------|
| Course Code            | Course Name                             | T+A+L | Compulsory/Elective | ECTS |
| CENL181                | Computer Programming                    | 1+2+0 | Compulsory          | 3    |
| IENL202                | Operations Research-I                   | 3+2+0 | Compulsory          | 6    |
| MBBL008                | Linear Algebra and its Applications     | 2+2+0 | Compulsory          | 4    |
| MBBL010                | Numerical Analysis and Its Applications | 2+2+0 | Compulsory          | 5    |
| MBBL012                | Engineering Mathematics                 | 2+2+0 | Compulsory          | 4    |
| MBBL202                | Statistics                              | 3+0+0 | Compulsory          | 4    |
| Sec2.2                 | 21.YY Competence skills-I               | -     | Compulsory          | 2    |
| Sec2.3                 | 21.YY Competence skills-II              | -     | Compulsory          | 2    |
|                        |                                         |       | Total ECTS          | 30   |

| Course Groups |                                                          |       |            |   |
|---------------|----------------------------------------------------------|-------|------------|---|
| ORTL362       | Environmental Protection, Occupational Health and Safety | 2+0+0 | Compulsory | 2 |
| ORTL364       | Critical Thinking, Creativity and Entrepreneurship       | 2+0+0 | Compulsory | 2 |
| ORTL368       | Professional Responsibilities and Ethics                 | 2+0+0 | Compulsory | 2 |
| ORTL372       | Strategic Planning, Project and Risk Management          | 2+0+0 | Compulsory | 2 |

| 5.Semester Course Plan |                          |       |                     |      |
|------------------------|--------------------------|-------|---------------------|------|
| Course Code            | Course Name              | T+A+L | Compulsory/Elective | ECTS |
| IENL303                | Operations Research-II   | 3+2+0 | Compulsory          | 6    |
| IENL305                | Project Management       | 2+2+0 | Compulsory          | 5    |
| IENL311                | Work Analysis and Design | 1+2+0 | Compulsory          | 5    |
| IENL315                | Forecasting Theory       | 3+0+0 | Compulsory          | 5    |
| IENL361                | Production Management    | 3+0+0 | Compulsory          | 5    |
| Sec. 5.1               | Tecnical Elective-I      | -     | Compulsory          | 4    |

|               |                                               |       |            | Total ECTS | 30 |
|---------------|-----------------------------------------------|-------|------------|------------|----|
| Course Groups |                                               |       |            |            |    |
| BUSL223       | Financial Management                          | 2+0+0 | Elective   |            | 4  |
| CENL407       | Machine Learning                              | 3+0+0 | Elective   |            | 5  |
| CENL408       | Artificial Intelligence                       | 3+0+0 | Elective   |            | 5  |
| EENL322       | Electric Circuits Measurements and Laboratory | 3+0+0 | Elective   |            | 4  |
| IENL312       | Total Quality Management                      | 3+0+0 | Elective   |            | 4  |
| IENL313       | Risk Analysis                                 | 3+0+0 | Elective   |            | 4  |
| IENL314       | Game Theory                                   | 3+0+0 | Elective   |            | 4  |
| IENL317       | Feasibility Study & Entrepreneurship          | 3+0+0 | Elective   |            | 4  |
| IENL318       | Advanced Statistics Using R                   | 3+0+0 | Compulsory |            | 4  |
| IENL320       | Industrial Clusters and Networks              | 3+0+0 | Elective   |            | 4  |
| IENL322       | Management Informations Systems               | 3+0+0 | Elective   |            | 4  |
| IENL324       | Maintenance Management and Engineering        | 3+0+0 | Elective   |            | 4  |
| IENL327       | Technology Management and Innovation          | 3+0+0 | Elective   |            | 4  |
| IENL328       | Data Mining                                   | 3+0+0 | Elective   |            | 4  |
| IENL329       | Productivity Management                       | 3+0+0 | Elective   |            | 4  |
| IENL330       | System Dynamics                               | 3+0+0 | Elective   |            | 4  |
| IENL370       | Uyumsoft ERP                                  | 3+0+0 | Elective   |            | 4  |
| IENL372       | Xpoda ERP                                     | 3+0+0 | Elective   |            | 4  |
| IENL409       | Strategic Management & Entrepreneurship       | 3+0+0 | Elective   |            | 4  |
| IENL411       | Stochastic Models                             | 3+0+0 | Elective   |            | 4  |
| IENL413       | Inventory Systems                             | 3+0+0 | Elective   |            | 4  |
| IENL461       | Statistical Quality Control                   | 2+2+0 | Elective   |            | 4  |

| 6.Semester Course Plan |                                     |       |                     |      |   |
|------------------------|-------------------------------------|-------|---------------------|------|---|
| Course Code            | Course Name                         | T+A+L | Compulsory/Elective | ECTS |   |
| IENL306                | Human Factors and Ergonomics        | 3+0+0 | Compulsory          |      | 4 |
| IENL310                | System Analysis and Simulation      | 2+2+0 | Compulsory          |      | 5 |
| IENL360                | Decision Analysis                   | 2+2+0 | Compulsory          |      | 5 |
| IENL362                | Plant Layout Facility Planning      | 3+0+0 | Compulsory          |      | 4 |
| IENL364                | Engineering Economy & Cost Analysis | 3+0+0 | Compulsory          |      | 4 |
| IENL366                | Supply Chain Management             | 3+0+0 | Compulsory          |      | 4 |
| Sec6.2                 | Tecnical Elective-II                | -     | Compulsory          |      | 4 |

|               |                                               |       |            | Total ECTS | 30 |
|---------------|-----------------------------------------------|-------|------------|------------|----|
| Course Groups |                                               |       |            |            |    |
| BUSL223       | Financial Management                          | 2+0+0 | Elective   |            | 4  |
| CENL407       | Machine Learning                              | 3+0+0 | Elective   |            | 5  |
| CENL408       | Artificial Intelligence                       | 3+0+0 | Elective   |            | 5  |
| EENL322       | Electric Circuits Measurements and Laboratory | 3+0+0 | Elective   |            | 4  |
| IENL308       | Modeling with Optimization Software           | 3+0+0 | Elective   |            | 4  |
| IENL312       | Total Quality Management                      | 3+0+0 | Elective   |            | 4  |
| IENL313       | Risk Analysis                                 | 3+0+0 | Elective   |            | 4  |
| IENL314       | Game Theory                                   | 3+0+0 | Elective   |            | 4  |
| IENL317       | Feasibility Study & Entrepreneurship          | 3+0+0 | Elective   |            | 4  |
| IENL318       | Advanced Statistics Using R                   | 3+0+0 | Compulsory |            | 4  |
| IENL320       | Industrial Clusters and Networks              | 3+0+0 | Elective   |            | 4  |
| IENL322       | Management Informations Systems               | 3+0+0 | Elective   |            | 4  |
| IENL324       | Maintenance Management and Engineering        | 3+0+0 | Elective   |            | 4  |
| IENL327       | Technology Management and Innovation          | 3+0+0 | Elective   |            | 4  |
| IENL328       | Data Mining                                   | 3+0+0 | Elective   |            | 4  |
| IENL329       | Productivity Management                       | 3+0+0 | Elective   |            | 4  |
| IENL330       | System Dynamics                               | 3+0+0 | Elective   |            | 4  |
| IENL370       | Uyumsoft ERP                                  | 3+0+0 | Elective   |            | 4  |
| IENL372       | Xpoda ERP                                     | 3+0+0 | Elective   |            | 4  |
| IENL409       | Strategic Management & Entrepreneurship       | 3+0+0 | Elective   |            | 4  |
| IENL411       | Stochastic Models                             | 3+0+0 | Elective   |            | 4  |
| IENL413       | Inventory Systems                             | 3+0+0 | Elective   |            | 4  |
| IENL461       | Statistical Quality Control                   | 2+2+0 | Elective   |            | 4  |

| 7.Semester Course Plan |                               |       |                     |      |   |
|------------------------|-------------------------------|-------|---------------------|------|---|
| Course Code            | Course Name                   | T+A+L | Compulsory/Elective | ECTS |   |
| IENL401                | Graduation Design             | 2+4+0 | Compulsory          |      | 4 |
| IENL463                | Production Planning & Control | 2+2+0 | Compulsory          |      | 5 |
| MMFL400                | Interdisciplinary Project     | 2+0+0 | Compulsory          |      | 4 |
| Sec7.3                 | Tecnical Elective-III         | -     | Compulsory          |      | 4 |
| Sec7.4                 | Tecnical Elective-IV          | -     | Compulsory          |      | 4 |
| Sec7.5                 | Tecnical Elective-V           | -     | Compulsory          |      | 4 |
| Sec7.6                 | 21. Century Skils             | -     | Compulsory          |      | 2 |
| Sec7.7                 | Univesity Elective-I          | -     | Compulsory          |      | 3 |

|               |                                                          |       |            | Total ECTS | 30 |
|---------------|----------------------------------------------------------|-------|------------|------------|----|
| Course Groups |                                                          |       |            |            |    |
| BUSL223       | Financial Management                                     | 2+0+0 | Elective   | 4          |    |
| CENL407       | Machine Learning                                         | 3+0+0 | Elective   | 5          |    |
| CENL408       | Artificial Intelligence                                  | 3+0+0 | Elective   | 5          |    |
| EENL322       | Electric Circuits Measurements and Laboratory            | 3+0+0 | Elective   | 4          |    |
| IENL312       | Total Quality Management                                 | 3+0+0 | Elective   | 4          |    |
| IENL313       | Risk Analysis                                            | 3+0+0 | Elective   | 4          |    |
| IENL314       | Game Theory                                              | 3+0+0 | Elective   | 4          |    |
| IENL317       | Feasibility Study & Entrepreneurship                     | 3+0+0 | Elective   | 4          |    |
| IENL318       | Advanced Statistics Using R                              | 3+0+0 | Compulsory | 4          |    |
| IENL320       | Industrial Clusters and Networks                         | 3+0+0 | Elective   | 4          |    |
| IENL322       | Management Informations Systems                          | 3+0+0 | Elective   | 4          |    |
| IENL324       | Maintenance Management and Engineering                   | 3+0+0 | Elective   | 4          |    |
| IENL327       | Technology Management and Innovation                     | 3+0+0 | Elective   | 4          |    |
| IENL328       | Data Mining                                              | 3+0+0 | Elective   | 4          |    |
| IENL329       | Productivity Management                                  | 3+0+0 | Elective   | 4          |    |
| IENL330       | System Dynamics                                          | 3+0+0 | Elective   | 4          |    |
| IENL370       | Uyumsoft ERP                                             | 3+0+0 | Elective   | 4          |    |
| IENL372       | Xpoda ERP                                                | 3+0+0 | Elective   | 4          |    |
| IENL409       | Strategic Management & Entrepreneurship                  | 3+0+0 | Elective   | 4          |    |
| IENL411       | Stochastic Models                                        | 3+0+0 | Elective   | 4          |    |
| IENL413       | Inventory Systems                                        | 3+0+0 | Elective   | 4          |    |
| IENL461       | Statistical Quality Control                              | 2+2+0 | Elective   | 4          |    |
| IENL464       | Industrial Engineering Applications in MS Excel          | 3+0+0 | Elective   | 5          |    |
| ORTL362       | Environmental Protection, Occupational Health and Safety | 2+0+0 | Compulsory | 2          |    |
| ORTL364       | Critical Thinking, Creativity and Entrepreneurship       | 2+0+0 | Compulsory | 2          |    |
| ORTL372       | Strategic Planning, Project and Risk Management          | 2+0+0 | Compulsory | 2          |    |
| ÜSDL108       | Biotechnology                                            | 3+0+0 | Elective   | 3          |    |
| ÜSDL109       | The World of Genes                                       | 2+0+0 | Elective   | 3          |    |
| ÜSDL175       | Global Economy                                           | 3+0+0 | Elective   | 3          |    |

| 8.Semester Course Plan |                                |       |                     |            |    |
|------------------------|--------------------------------|-------|---------------------|------------|----|
| Course Code            | Course Name                    | T+A+L | Compulsory/Elective | ECTS       |    |
| BUSL264                | Labour Law and Social Security | 3+0+0 | Compulsory          | 4          |    |
| IENL400                | Professional Training          | 0+8+0 | Compulsory          | 10         |    |
| IENL462                | Graduation Project             | 0+4+0 | Compulsory          | 12         |    |
| Sec8.1                 | Univesity Elective-II          | -     | Compulsory          | 3          |    |
| 21yd8.1                | 21st Century Skills            | -     | Compulsory          | 1          |    |
|                        |                                |       |                     | Total ECTS | 30 |
| Course Groups          |                                |       |                     |            |    |
| ORTL462                | Project Mangement              | 1+0+0 | Elective            | 1          |    |
| ORTL464                | Data Literacy                  | 1+0+0 | Elective            | 1          |    |
| ORTL468                | Leadership and Teamwork        | 1+0+0 | Elective            | 1          |    |
| ORTL470                | We Code CS50X (ING)            | 1+0+0 | Elective            | 1          |    |
| ÜSDL108                | Biotechnology                  | 3+0+0 | Elective            | 3          |    |
| ÜSDL109                | The World of Genes             | 2+0+0 | Elective            | 3          |    |
| ÜSDL116                | China in Global Politics       | 2+0+0 | Elective            | 3          |    |
| ÜSDL175                | Global Economy                 | 3+0+0 | Elective            | 3          |    |