

**Department of Mechatronics Engineering; Undergraduate Curriculum**

*(to be applied to students started to department before 2012-2013 Term)*

| <b>FIRST YEAR; I. Semester</b>     |   |                |      |       |       |        |
|------------------------------------|---|----------------|------|-------|-------|--------|
| Code                               | Course name                                 | T              | A    | Cr.   | ECTS  |        |
| MATH 157                           | Extended Calculus I                         | 4              | 2    | 5     | 7,50  |        |
| PHYS 101                           | Physics I                                   | 3              | 2    | 4     | 6,00  |        |
| CHEM 102                           | Chemistry                                   | 3              | 2    | 4     | 6,00  |        |
| COMPE 101                          | Introduction to Computers & Programming     | 2              | 2    | 3     | 4,50  |        |
| E 101                              | Fundamentals of Engineering                 | 1              | 0    | 1     | 1,50  |        |
| ENG 111*                           | Introduction to Communication Skills        | 2              | 4    | 4     | 4,50  |        |
| ENG 113*                           | Listening and Note-taking Skills            | 3              | 0    | 3     | 4,50  |        |
| TURK 101                           | Turkish Language I                          | 2              | 0    | 2     | 2,00  |        |
| Total                              |   | 17/18          | 12/8 | 23/22 | 32,00 |        |
| <b>FIRST YEAR; II. Semester</b>    |   |                |      |       |       |        |
| Code                               | Course name                                 | T              | A    | Cr.   | ECTS  |        |
| MATH 158                           | Extended Calculus II                        | 4              | 2    | 5     | 7,50  |        |
| PHYS 102                           | Physics II                                  | 3              | 2    | 4     | 6,00  |        |
| CompE 102                          | Computer Programming                        | 2              | 2    | 3     | 4,50  |        |
| MECE 102                           | Fundamentals of Mechatronics Engineering    | 1              | 0    | 1     | 2,00  |        |
| MECE 104                           | Computer Aided Engineering Drawing          | 2              | 2    | 3     | 2,00  |        |
| ENG 104                            | Communication Skills II                     | 2              | 2    | 3     | 4,00  |        |
| TURK 102                           | Turkish Language II                         | 2              | 0    | 2     | 2,00  |        |
| Total                              |   | 16             | 10   | 21    | 28,00 |        |
| <b>SECOND YEAR; III. Semester</b>  |   |                |      |       |       |        |
| Code                               | Course name                                 | T              | A    | Cr.   | ECTS  |        |
| MATH 275                           | Linear Algebra                              | 4              | 0    | 4     | 6,00  |        |
| MECE 203                           | Engineering Mechanics I                     | 2              | 2    | 3     | 5,00  |        |
| MATE 208                           | Introduction to Materials Engineering       | 3              | 0    | 3     | 5,00  |        |
| MECE 211                           | Electrical Systems Analysis                 | 2              | 2    | 3     | 4,00  |        |
| IE 220                             | Probability and Statistics                  | 3              | 0    | 3     | 5,00  |        |
| HIST 101                           | Princ. of Atatürk & Hist. of Turk. Rev. I   | 2              | 0    | 2     | 2,00  |        |
| ENG 211                            | Communication Skills III                    | 1              | 2    | 2     | 3,00  |        |
| Total                              |   | 17             | 6    | 20    | 30    |        |
| <b>SECOND YEAR; IV. Semester</b>   |   |                |      |       |       |        |
| Code                               | Course name                                 | T              | A    | Cr.   | ECTS  |        |
| MATH 276                           | Differential Equations                      | 4              | 0    | 4     | 6,00  |        |
| MECE 212                           | Electronic Circuits                         | 2              | 2    | 3     | 4,00  |        |
| MECE 202                           | Principles of Engineering Design            | 2              | 2    | 3     | 5,00  |        |
| MECE 204                           | Engineering Mechanics II                    | 2              | 2    | 3     | 5,00  |        |
| MFGE 206                           | Manufacturing Processes                     | 2              | 2    | 3     | 5,00  |        |
| HIST 102                           | Princ. of Atatürk & Hist. of Turk. Rev. I   | 2              | 0    | 2     | 2,00  |        |
| ENG 212                            | Technical Report Writing and Communications | 2              | 0    | 2     | 3,00  |        |
| Total                              |   | 16             | 8    | 20    | 30    |        |
| <b>THIRD YEAR; V. Semester</b>     |   |                |      |       |       |        |
| Code                               | Course name                                 | T              | A    | Cr.   | ECTS  |        |
| MECE 301                           | Numerical Methods                           | 2              | 2    | 3     | 4,00  |        |
| MECE 303                           | Theory of Machines                          | 2              | 2    | 3     | 5,00  |        |
| MECE 305                           | Digital Systems                             | 2              | 2    | 3     | 5,00  |        |
| MECE 307                           | Signals and Mechatronic Systems             | 2              | 2    | 3     | 5,00  |        |
| IE 305                             | Engineering Economic Analysis               | 3              | 0    | 3     | 5,00  |        |
| NTE                                | Humanities & Social Sciences Elective       | 3              | 0    | 3     | 5,00  |        |
| MECE 399                           | Summer Practice I                           |                |      | NC    | 1,00  |        |
| Total                              |   | 14             | 8    | 18    | 30    |        |
| <b>THIRD YEAR; VI. Semester</b>    |   |                |      |       |       |        |
| Code                               | Course name                                 | T              | A    | Cr.   | ECTS  |        |
| MECE 302                           | Mechatronic Components                      | 2              | 2    | 3     | 5,00  |        |
| MECE 304                           | Mechanical Machine Elements                 | 2              | 2    | 3     | 5,00  |        |
| MECE 306                           | Control Systems                             | 3              | 0    | 3     | 5,00  |        |
| MECE 308                           | Microcontrollers                            | 2              | 2    | 3     | 5,00  |        |
| MECE 310                           | Thermodynamics and Heat Transfer            | 3              | 0    | 3     | 5,00  |        |
| NTE                                | Humanities & Social Sciences Elective       | 3              | 0    | 3     | 5,00  |        |
| Total                              |   | 15             | 6    | 18    | 30    |        |
| <b>FOURTH YEAR; VII. Semester</b>  |   |                |      |       |       |        |
| Code                               | Course name                                 | T              | A    | Cr.   | ECTS  |        |
| MECE 401                           | Mechatronic Design I                        | 1              | 4    | 3     | 6,00  |        |
| MECE 403                           | Mechatronic Instrumentation                 | 1              | 4    | 3     | 6,00  |        |
| MECE 407                           | Undergraduate Research Project I            | 1              | 4    | 3     | 5,00  |        |
| TE                                 | Technical Elective                          | 3              | 0    | 3     | 6,00  |        |
| TE                                 | Technical Elective                          | 3              | 0    | 3     | 6,00  |        |
| MECE 499                           | Summer Practice II                          |                |      | NC    | 1,00  |        |
| Total                              |   | 9              | 12   | 15    | 30    |        |
| <b>FOURTH YEAR; VIII. Semester</b> |   |                |      |       |       |        |
| Code                               | Course name                                 | T              | A    | Cr.   | ECTS  |        |
| MECE 402                           | Mechatronic Design II                       | 1              | 4    | 3     | 6,00  |        |
| MECE 404                           | Intelligent Mechatronics                    | 3              | 0    | 3     | 6,00  |        |
| MECE 408                           | Undergraduate Research Project II           | 1              | 4    | 3     | 5,00  |        |
| TE                                 | Technical Elective                          | 3              | 0    | 3     | 6,00  |        |
| TE                                 | Technical Elective                          | 3              | 0    | 3     | 6,00  |        |
| ORY 400                            | Social and Cultural Activities              |                |      | NC    | 1,00  |        |
| Total                              |   | 11             | 8    | 15    | 30    |        |
| <b>Total Credits</b>               |   |                |      |       |       |        |
|                                    |   | * with ENG 111 | 117  | 66    | 150   | 240,00 |
|                                    |   | * with ENG 113 | 118  | 62    | 149   |        |

*\*Students should register either ENG 111 or ENG 113 according to their performances in the English Qualification Examination.*