# BANDIRMA ONYEDİ EYLÜL UNIVERSITY
## FACULTY OF ENGINEERING AND NATURAL SCIENCES
## DEPARTMENT OF COMPUTER ENGINEERING
## 2023-2024 CURRICULUM

### I. SEMESTER/FALL

| COURSE CODE | COURSE TYPE | COURSE NAME | T | P | C | ECTS |
|---|---|---|---|---|---|---|
| FZI1101 | C | Physics I | 3 | 2 | 4 | 5 |
| MTI1121 | C | Mathematics I | 5 | 0 | 5 | 5 |
| BMI1121 | C | Linear Algebra | 3 | 0 | 3 | 4 |
| BMI1122 | C | Introduction to Computer Engineering | 2 | 0 | 2 | 2 |
| BMI1123 | C | Introduction to Programming | 3 | 2 | 4 | 4 |
| | SUM | | 16 | 4 | 18 | 20 |
| AIT1101 | C | Atatürk's Principles and History of Revolutions I (UÖ) | 2 | 0 | 2 | 2 |
| TDI1101 | C | Turkish Language I | 2 | 0 | 2 | 2 |
| YDI1101 | C | Foreign Language I | 3 | 0 | 3 | 4 |
| KAR1101 | C | Career Planning | 1 | 0 | 1 | 2 |
| SUM | | | 24 | 4 | 26 | 30 |

### II. SEMESTER/SPRING

| COURSE CODE | COURSE TYPE | COURSE NAME | T | P | C | ECTS |
|---|---|---|---|---|---|---|
| FZI1201 | C | Physics II | 3 | 2 | 4 | 5 |
| MTI1221 | C | Mathematics II | 5 | 0 | 5 | 5 |
| BMI1221 | C | Discrete Mathematics | 3 | 0 | 3 | 4 |
| BMI1222 | C | Object Oriented Programming* | 3 | 2 | 4 | 4 |
| BMI1223 | C | Analysis of Circuits | 3 | 2 | 4 | 4 |
| | SUM | | 17 | 6 | 20 | 22 |
| AIT1201 | C | Atatürk's Principles and History of Revolutions II | 2 | 0 | 2 | 2 |
| TDI1201 | C | Turkish Language II | 2 | 0 | 2 | 2 |
| YDI1201 | C | Foreign Language II | 3 | 0 | 3 | 4 |
| SUM | | | 24 | 6 | 27 | 30 |

*Precondition: BMI1123 should have been taken (It will be also applied to students enrolled in 2021 and previous years.)*

### III. SEMESTER/FALL

| COURSE CODE | COURSE TYPE | COURSE NAME | T | P | C | ECTS |
|---|---|---|---|---|---|---|
| BMI2120 | C | Differential Equations | 3 | 0 | 3 | 5 |
| BMI2121 | C | Probability and Statistics | 3 | 0 | 3 | 5 |
| BMI2122 | C | Electronics* | 3 | 2 | 4 | 5 |
| BMI2123 | C | Data Structures | 4 | 0 | 4 | 5 |
| BMI2124 | C | Advanced Programming** | 3 | 2 | 4 | 6 |
| | E | Elective Course I | 3 | 0 | 3 | 4 |
| SUM | | | 19 | 4 | 21 | 30 |

*Precondition: BMI1223 should have been taken (It will be also applied to students enrolled in 2021 and previous years.)*

**Precondition: BMI1222 should have been taken (It will be also applied to students enrolled in 2021 and previous years.)*

### IV. SEMESTER/SPRING

| COURSE CODE | COURSE TYPE | COURSE NAME | T | P | C | ECTS |
|---|---|---|---|---|---|---|
| BMI2221 | C | Logic Circuits | 3 | 0 | 3 | 4 |
| BMI2222 | C | Programming Languages Concepts | 4 | 0 | 4 | 6 |
| BMI2223 | C | Database Management Systems | 3 | 2 | 4 | 6 |
| BMI2224 | C | Algorithms | 4 | 0 | 4 | 5 |
| BMI2225 | C | Internet Based Programming | 3 | 0 | 3 | 5 |
| | E | Elective Course I | 3 | 0 | 3 | 4 |
| SUM | | | 20 | 2 | 21 | 30 |

### V. SEMESTER/FALL

| COURSE CODE | COURSE TYPE | COURSE NAME | T | P | C | ECTS |
|---|---|---|---|---|---|---|
| BMI3120 | C | Summer Practice I | 0 | 0 | 0 | 2 |
| BMI3121 | C | Microprocessor Systems | 3 | 2 | 4 | 5 |
| BMI3122 | C | Numerical Analysis* | 3 | 0 | 3 | 5 |
| BMI3123 | C | Data Communications | 3 | 0 | 3 | 5 |
| BMI3125 | C | Computer Operating Systems | 3 | 0 | 3 | 5 |
| | E | Elective Course I | 3 | 0 | 3 | 4 |
| | E | Elective Course II | 3 | 0 | 3 | 4 |
| SUM | | | 18 | 2 | 19 | 30 |

*Precondition: BMI1121 should have been taken (It will be also applied to students enrolled in 2021 and previous years.)*

### VI. SEMESTER/SPRING

| COURSE CODE | COURSE TYPE | COURSE NAME | T | P | C | ECTS |
|---|---|---|---|---|---|---|
| BMI3221 | C | Automata Theory | 3 | 0 | 3 | 4 |
| BMI3222 | C | Signals And Systems* | 3 | 0 | 3 | 5 |
| BMI3223 | C | Software Engineering | 2 | 0 | 2 | 4 |
| BMI3224 | C | Computer Architecture** | 3 | 0 | 3 | 4 |
| BMI3227 | C | Computer Networks | 3 | 0 | 3 | 4 |
| | E | Elective Course I | 2 | 0 | 2 | 3 |
| | E | Elective Course II | 2 | 0 | 2 | 3 |
| | E | Elective Course III | 2 | 0 | 2 | 3 |
| SUM | | | 20 | 0 | 20 | 30 |

*Precondition: BMI2121 should have been taken (It will be also applied to students enrolled in 2021 and previous years.)*

**Precondition: BMI2123 should have been taken (It will be also applied to students enrolled in 2021 and previous years.)*

### VII. SEMESTER/FALL

| COURSE CODE | COURSE TYPE | COURSE NAME | T | P | C | ECTS |
|---|---|---|---|---|---|---|
| BMI4120 | C | Summer Practice II | 0 | 0 | 0 | 2 |
| BMI4121 | C | Engineering Design | 0 | 4 | 2 | 6 |
| MIS4101 | C | Occupational Health and Safety I | 2 | 0 | 2 | 2 |
| | E | Elective Course I | 3 | 0 | 3 | 5 |
| | E | Elective Course II | 3 | 0 | 3 | 5 |
| | E | Elective Course III | 3 | 0 | 3 | 5 |
| | E | Elective Course IV | 3 | 0 | 3 | 5 |
| SUM | | | 14 | 4 | 16 | 30 |

### VIII. SEMESTER/SPRING

| COURSE CODE | COURSE TYPE | COURSE NAME | T | P | C | ECTS |
|---|---|---|---|---|---|---|
| BMI4220 | C | Graduation Project * | 0 | 4 | 2 | 3 |
| MIS4201 | C | Occupational Health and Safety II | 2 | 0 | 2 | 2 |
| | E | Elective Course I | 3 | 0 | 3 | 5 |
| | E | Elective Course II | 3 | 0 | 3 | 5 |
| | E | Elective Course III | 3 | 0 | 3 | 5 |
| | E | Elective Course IV | 3 | 0 | 3 | 5 |
| | E | Elective Course V | 3 | 0 | 3 | 5 |
| SUM | | | 17 | 4 | 19 | 30 |

*Precondition: BMI4121 should have been taken (It will be also applied to students enrolled in 2021 and previous years.)*

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## DEPARTMENT OF COMPUTER ENGINEERING 2023-2024 ACADEMIC YEAR ELECTİVE COURSES

### III. SEMESTER/FALL — Elective Courses

| COURSE CODE | COURSE TYPE | COURSE NAME | T | P | C | ECTS |
|---|---|---|---|---|---|---|
| BMI2131 | OE | Professional Foreign Language I | 3 | 0 | 3 | 4 |
| BMI2132 | OE | Patent and Industrial Design | 3 | 0 | 3 | 4 |
| ATU2199 | OE | Academic Turkish* | 3 | 0 | 3 | 4 |

*Precondition: Foreign students can only take it.*

### IV. SEMESTER/SPRING — Elective Courses

| COURSE CODE | COURSE TYPE | COURSE NAME | T | P | C | ECTS |
|---|---|---|---|---|---|---|
| BMI2231 | OE | Professional Foreign Language II | 3 | 0 | 3 | 4 |
| BMI2232 | OE | Engineering Management and Human Relations | 3 | 0 | 3 | 4 |
| BMI2233 | OE | Software Project Management | 3 | 0 | 3 | 4 |
| ATU2299 | OE | Academic Turkish* | 3 | 0 | 3 | 4 |

*Precondition: Foreign students can only take it.*

### V. SEMESTER/FALL — Elective Courses

| COURSE CODE | COURSE TYPE | COURSE NAME | T | P | C | ECTS |
|---|---|---|---|---|---|---|
| BMI3141 | OE | Computer Graphics | 3 | 0 | 3 | 4 |
| BMI3142 | OE | Robotics | 3 | 0 | 3 | 4 |
| BMI3144 | OE | Visual Programming | 3 | 0 | 3 | 4 |
| BMI3145 | OE | Functional Programming | 3 | 0 | 3 | 4 |
| BMI3146 | OE | Digital Design With Verilog-HDL | 3 | 0 | 3 | 4 |

### VI. SEMESTER/SPRING — Elective Courses

| COURSE CODE | COURSE TYPE | COURSE NAME | T | P | C | ECTS |
|---|---|---|---|---|---|---|
| BMI3241 | OE | File Organization | 2 | 0 | 2 | 3 |
| BMI3242 | OE | Remote Sensing Technologies | 2 | 0 | 2 | 3 |
| BMI3243 | OE | Embedded Systems | 2 | 0 | 2 | 3 |
| BMI3245 | OE | Data Security | 2 | 0 | 2 | 3 |
| BMI3246 | OE | System Programming | 2 | 0 | 2 | 3 |
| BMI3247 | OE | Fundemental of Big Data | 2 | 0 | 2 | 3 |

### VII. SEMESTER/FALL — Elective Courses

| COURSE CODE | COURSE TYPE | COURSE NAME | T | P | C | ECTS |
|---|---|---|---|---|---|---|
| BMI4141 | OE | Mobile Programming | 3 | 0 | 3 | 5 |
| BMI4142 | OE | Image Processing | 3 | 0 | 3 | 5 |
| BMI4143 | OE | Artificial Intelligence | 3 | 0 | 3 | 5 |
| BMI4144 | OE | Wireless Networks | 3 | 0 | 3 | 5 |
| BMI4145 | OE | Compiler Design | 3 | 0 | 3 | 5 |
| BMI4146 | OE | Data Mining | 3 | 0 | 3 | 5 |
| BMI4147 | OE | Server Side Programming | 3 | 0 | 3 | 5 |
| BMI4148 | OE | Cloud Computing | 3 | 0 | 3 | 5 |
| BMI4149 | OE | Internet of Things | 3 | 0 | 3 | 5 |
| BMI4150 | OE | Introduction to Social Network Analysis | 3 | 0 | 3 | 5 |

### VIII. SEMESTER/SPRING — Elective Courses

| COURSE CODE | COURSE TYPE | COURSE NAME | T | P | C | ECTS |
|---|---|---|---|---|---|---|
| BMI4241 | OE | Parallel Programming | 3 | 0 | 3 | 5 |
| BMI4242 | OE | Game Programming | 3 | 0 | 3 | 5 |
| BMI4243 | OE | Geographic Information Systems | 3 | 0 | 3 | 5 |
| BMI4244 | OE | Pattern Recognition | 3 | 0 | 3 | 5 |
| BMI4245 | OE | Bioinformatics | 3 | 0 | 3 | 5 |
| BMI4246 | OE | Optimization Theory | 3 | 0 | 3 | 5 |
| BMI4247 | OE | Computer Vision And Imaging Techniques | 3 | 0 | 3 | 5 |
| BMI4248 | OE | Computer And Network Security | 3 | 0 | 3 | 5 |
| BMI4249 | OE | Introduction to Machine Learning | 3 | 0 | 3 | 5 |