

BANDIRMA ONYEDİ EYLÜL UNIVERSITY FACULTY OF ENGINEERING AND NATURAL SCIENCES DEPARTMENT OF COMPUTER ENGINEERING 2022-2023 CURRICULUM

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

| | | II. SEMESTER/SPRING | | | | | | |
|----------------|---|--|----|---|----|------|--|--|
| COURSE CODE | COURSE TYPE | COURSE NAME | Т | P | С | 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 | С | Atatürk's Principles and History of Revolutions II | 2 | 0 | 2 | 2 | | |
| TDI1201 | С | Turkish Language II | 2 | 0 | 2 | 2 | | |
| YDI1201 | С | 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 | С | 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 | С | Advanced Programming** | 3 | 2 | 4 | 6 | | | |
| | Е | Elective Course I | 3 | 0 | 3 | 4 | | | |
| CUM | | | 10 | | 21 | 20 | | | |
| * | 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 5.) | stude | nts enr | olled in | 2021 and | | | |

IV. SEMESTER/SPRING

| TT DESTERO TENO | | | | | | | | |
|-----------------|----------------|--------------------------------|----|---|----|------|--|--|
| COURSE CODE | COURSE TYPE | COURSE NAME | Т | P | С | ECTS | | |
| BMI2221 | С | Logic Circuits | 3 | 0 | 3 | 4 | | |
| BMI2222 | C | Programming Languages Concepts | 4 | 0 | 4 | 6 | | |
| BMI2223 | С | Database Management Systems | 3 | 2 | 4 | 6 | | |
| BMI2224 | С | Algorithms | 4 | 0 | 4 | 5 | | |
| BMI2225 | С | Internet Based Programming | 3 | 0 | 3 | 5 | | |
| | Е | Elective Course I | 3 | 0 | 3 | 4 | | |
| | | | | | | | | |
| SUM | | | 20 | 2 | 21 | 30 | | |
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V. SEMESTER/FALL

| COURSE CODE | COURSE TYPE | COURSE NAME | T | P | С | 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 | С | Computer Operating Systems | 3 | 0 | 3 | 5 | |
| | E | Elective Course I | 3 | 0 | 3 | 4 | |
| | Е | Elective Course II | 3 | 0 | 3 | 4 | |
| | | T | | | | | |
| 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 | С | ECTS | | |
|----------------|--------------------------------|--|-------------|--------|--------|------|--|--|
| BMI3221 | C | Automata Theory | 3 | 0 | 3 | 4 | | |
| BMI3222 | C | Signals And Systems* | 3 | 0 | 3 | 5 | | |
| BMI3223 | С | Software Engineering | 2 | 0 | 2 | 4 | | |
| BMI3224 | С | Computer Architecture** | 3 | 0 | 3 | 4 | | |
| BMI3226 | С | Computer Networks | 3 | 0 | 3 | 4 | | |
| | E | Elective Course I | 2 | 0 | 2 | 3 | | |
| | E | Elective Course II | 2 | 0 | 2 | 3 | | |
| | Е | Elective Course III | 2 | 0 | 2 | 3 | | |
| SUM | | | 20 | 0 | 20 | 30 | | |
| | Precondition: | BMI2121 should have been taken (It will be also applied to studen | its enrolle | d in 2 | 021 ar | nd | | |
| * | previous year | rs.) | | | | | | |
| ** | Precondition: previous year | Precondition: BMI2123 should have been taken (It will be also applied to students enrolled in 2021 and | | | | | | |

VII. SEMESTER/FALL

| 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 |
| | Е | 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 |
| | | I | | | | |
| SUM | | | 14 | 4 | 16 | 30 |
| | | | | | | |

VIII. SEMESTER/SPRING

| TYPE | COURSE NAME | T | P | C | ECTS | |
|--|-----------------------------------|---|--|--|---|--|
| С | Graduation Project * | 0 | 4 | 2 | 3 | |
| С | Occupational Health and Safety II | 2 | 0 | 2 | 2 | |
| E | Elective Course I | 3 | 0 | 3 | 5 | |
| Е | Elective Course II | 3 | 0 | 3 | 5 | |
| E | Elective Course III | 3 | 0 | 3 | 5 | |
| Е | Elective Course IV | 3 | 0 | 3 | 5 | |
| Е | Elective Course V | 3 | 0 | 3 | 5 | |
| | | | | | | |
| | | 17 | 4 | 19 | 30 | |
| Precondition: BMI4121 should have been taken (It will be also applied to students enrolled in 2021 and | | | | | | |
| | C E E E E E F Precondition: | C Occupational Health and Safety II E Elective Course I E Elective Course II E Elective Course III E Elective Course IV E Elective Course V | C Occupational Health and Safety II 2 E Elective Course I 3 E Elective Course III 3 E Elective Course III 3 E Elective Course IV 3 E Elective Course V 3 E Elective Course V 3 | C Occupational Health and Safety II 2 0 E Elective Course I 3 0 E Elective Course II 3 0 E Elective Course III 3 0 E Elective Course IV 3 0 E Elective Course IV 3 0 E Elective Course V 3 0 F Elective Course V 3 1 Precondition: BMI4121 should have been taken (It will be also applied to students enrolled in 2 | C Occupational Health and Safety II 2 0 2 E Elective Course I 3 0 3 E Elective Course II 3 0 3 E Elective Course III 3 0 3 E Elective Course IV 3 0 3 E Elective Course V 3 0 3 E Plective Course V 3 0 3 E Precondition: BMI4121 should have been taken (It will be also applied to students enrolled in 2021 or | |

DEPARTMENT OF COMPUTER ENGINEERING 2022-2023 ACADEMIC YEAR ELECTIVE COURSES

III. SEMESTER/FALL

| COURSE CODE | COURSE TYPE | COURSE NAME | Т | P | С | 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 | С | 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 | С | 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 |

| | | | | | | | | | |
|--|-----|------|---------|----|-------------------------|------|---|---|---|
| | 1 1 | | 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 |
| | | | | | | |