

Course Structure Diagram with Course Credits

The undergraduate program in Electrical & Electronic Engineering consists of 50 courses with 248 ECTS credits in total. There are at least 5 courses in each semester, excluding common compulsory courses and elective courses. In each program, there are common compulsory courses identified by the Higher Education Council of Turkey (YÖK) and other common courses determined by the University Senate.

Beginning from the senior (fourth) year, elective courses are anticipated in each semester.

5% of the elective courses are taken from other faculties.

There are at least 10 elective courses in each undergraduate program.

| COURSES OFFERED THROUGHOUT THE UNIVERSITY | | |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Common University Courses | Campus Orientation | The students are registered to this course at the beginning of the first semester of the freshman year to familiarize them with the campus life at NEU. |
| | Career Planning | The students are registered to this course at the beginning of their second semester of the freshman year to help them prepare for work life after graduation. |
| | Cyprus History and Culture | This course is taken by students in their freshmen year and it aims to help them to familiarize them with the local history and culture. |
| Common Compulsory Courses (YÖK Courses) | Turkish Language I-II (Turkish for Foreigners I & II to replace this course for international students) Principles of Atatürk and History of Revolution I-II | These are the compulsory courses which are required to be offered in all of the associate and undergraduate programs in Turkey according to the Higher Education Legislation. |
| | Information Technologies | This course is anticipated in all the associate and undergraduate programs in Turkey in order to make the students gain the qualifications related to basic information technologies. |
| | Foreign Language (ENGLISH) I & II | This course is offered in the first and second semester and conducted according to the program curriculum of each faculty. |

1st Year Fall Semester

| Course Code | Pre. | Course Name | Theory | Application/ Laboratory | Local Credits | ECTS |
|-------------|------|-------------------------------------------|--------|----------------------------|------------------|------|
| CHM 101 | * | General Chemistry | 3 | 1 | 4 | 5 |
| ECC 101 | * | Computer Programming | 2 | 1 | 3 | 5 |
| ENG 101 | * | English I | 3 | 0 | 3 | 4 |
| MTH 101 | * | Calculus I | 3 | 0 | 4 | 5 |
| PHY 101 | * | General Physics I | 3 | 1 | 4 | 5 |
| TUR 101 | * | Turkish Language I | 2 | 0 | 2 | 2 |
| AİT 103 | * | Atatürk's Principles and Turkish Reform I | 2 | 0 | 2 | 2 |
| CHC 100 | * | Cyprus Culture and History | 2 | 0 | 2 | 2 |
| CAM 100 | * | Campus Integration | 2 | 0 | 0 | 2 |

Total **30**

1st Year Spring Semester

| Course Code | Pre. | Course Name | Theory | Application/ Laboratory | Local Credits | ECTS |
|-------------|---------|----------------------------------------------|--------|----------------------------|------------------|------|
| ENG 102 | ENG 101 | English II | 3 | 0 | 3 | 6 |
| MTH 102 | MTH 101 | Calculus II | 3 | 0 | 4 | 6 |
| MTH 113 | MTH 101 | Linear Algebra | 3 | 0 | 3 | 6 |
| PHY 102 | PHY 101 | General Physics I | 3 | 1 | 4 | 6 |
| EEE 102 | * | Technical Drawing & Electrical Applications | 3 | 0 | 3 | 3 |
| EEE 100 | * | Introduction to Electrical & Electronic Eng. | 2 | 0 | 1 | 1 |
| CAR 100 | * | Career Planning | 2 | 0 | 0 | 2 |

Total **30**

| 2 nd Year Fall Semester | | | | | | |
|------------------------------------|-------------------|------------------------------|--------|----------------------------|------------------|-----------|
| Course Code | Pre. | Course Name | Theory | Application/ Laboratory | Local Credits | ECTS |
| ECC 216 | PHY 102 / MTH 101 | Circuit Theory I | 3 | 1 | 4 | 5 |
| EEE 210 | ECC 101 | Computer Applications | 2 | 1 | 3 | 5 |
| EEE 241 | CHM 101 | Electrical Materials | 3 | 0 | 3 | 4 |
| ENG 201 | ENG 102 | English Communication Skills | 3 | 0 | 3 | 6 |
| MTH 201 | MTH 102 | Differential Equations | 4 | 0 | 4 | 6 |
| NTE | * | Non-Technical Elective | 3 | 0 | 3 | 4 |
| Total | | | | | | 30 |

| 2 nd Year Spring Semester | | | | | | |
|--------------------------------------|-------------------|-------------------------------------------|--------|----------------------------|------------------|-------------|
| Course Code | Pre. | Course Name | Theory | Application/ Laboratory | Local Credits | ECTS |
| EEE 202 | ECC 216 | Circuit Theory II | 3 | 1 | 4 | 5 |
| EEE 216 | PHY 102 / MTH 102 | Electromagnetic Theory | 3 | 0 | 3 | 5 |
| EEE 220 | ECC 216 | Electrical Measurements | 2 | 1 | 3 | 5 |
| ECC 218 | ECC 216 / EEE 241 | Electronics I | 3 | 1 | 4 | 5 |
| MTH 241 | MTH 102 | Complex Calculus | 3 | 0 | 3 | 5 |
| EEE 200 | * | Summer Training I | 0 | 0 | 0 | 7,5 |
| AİT 101 | * | Atatürk's Principles and Turkish Reform I | 2 | 0 | 2 | 2 |
| YİT 101 | * | Turkish For Foreign Students I | 2 | 0 | 2 | 2 |
| Total | | | | | | 34,5 |

| 3 rd Year Fall Semester | | | | | | |
|------------------------------------|------|-------------|--------|----------------------------|------------------|------|
| Course Code | Pre. | Course Name | Theory | Application/ Laboratory | Local Credits | ECTS |

| | | | | | | |
|---------|-------------------|---------------------------------------|---|---|---|---|
| EEE 315 | ECC 218 | Logic Circuit Design | 3 | 1 | 4 | 5 |
| EEE 321 | ECC 218 | Electronics II | 3 | 1 | 4 | 6 |
| EEE 331 | EEE 202 / EEE 216 | Electromechanical Energy Conversion I | 3 | 1 | 4 | 6 |
| ECC 008 | EEE 202 | Signals and Systems | 3 | 1 | 4 | 7 |
| MTH 251 | MTH 102 | Probability and Statistics | 3 | 0 | 3 | 6 |

| | | | | | | |
|--------------|--|--|--|--|--|-----------|
| Total | | | | | | 30 |
|--------------|--|--|--|--|--|-----------|

3rd Year Spring Semester

| Course Code | Pre. | Course Name | Theory | Application/ Laboratory | Local Credits | ECTS |
|-------------|-------------------|----------------------------------------|--------|----------------------------|------------------|------|
| EEE 302 | EEE 315 | Embedded Systems | 3 | 1 | 4 | 6 |
| EEE 324 | MTH 201 / MTH 113 | Linear Control Systems | 3 | 0 | 3 | 4 |
| EEE 346 | ECC 008 | Communication Systems | 3 | 1 | 4 | 6 |
| MTH 323 | MTH 201 | Numerical Analysis | 3 | 0 | 3 | 6 |
| EEE 332 | EEE 331 | Electromechanical Energy Conversion II | 3 | 0 | 3 | 4 |
| EEE 300 | EEE 200 | Summer Training II | 0 | 0 | 0 | 7,5 |

| | | | | | | |
|--------------|--|--|--|--|--|-------------|
| Total | | | | | | 33.5 |
|--------------|--|--|--|--|--|-------------|

4th Year Fall Semester

| Course Code | Pre. | Course Name | Theory | Application/ Laboratory | Local Credits | ECTS |
|-------------|------|---------------------|--------|----------------------------|------------------|------|
| RE | * | Restricted Elective | 3 | 0 | 3 | 5 |
| TE | * | Technical Elective | 3 | 0 | 3 | 5 |
| TE | * | Technical Elective | 3 | 0 | 3 | 5 |
| TE | * | Technical Elective | 3 | 0 | 3 | 5 |

| | | | | | | |
|--------------|---|----------------------|---|---|---|-----------|
| TE | * | Technical Elective | 3 | 0 | 3 | 5 |
| EEE 401 | * | Engineering Design I | 4 | 0 | 4 | 5 |
| Total | | | | | | 30 |

4th Year Spring Semester

| Course Code | Pre. | Course Name | Theory | Application/ Laboratory | Local Credits | ECTS |
|--------------|---------|--------------------------------------------|--------|----------------------------|------------------|-----------|
| EEE 402 | EEE 401 | Engineering Design II | 4 | 0 | 4 | 6 |
| TE | * | Technical Elective | 3 | 0 | 3 | 5 |
| TE | * | Technical Elective | 3 | 0 | 3 | 5 |
| TE | * | Technical Elective | 3 | 0 | 3 | 5 |
| TE | * | Technical Elective | 3 | 0 | 3 | 5 |
| AİT 104 | AİT 103 | Atatürk's Principles and Turkish Reform II | 2 | 0 | 2 | 2 |
| YİT 102 | YİT 101 | Turkish For Foreign Students I | 2 | 0 | 2 | 2 |
| AİT 102 | AİT 101 | Atatürk's Principles and Turkish Reform II | 2 | 0 | 2 | 2 |
| TUR 102 | TUR 101 | Turkish Language II | 2 | 0 | 2 | 2 |
| Total | | | | | | 30 |

Field-Related / Technical Elective Courses

| Code | Pre. | Course Name | Theory | Applic ation/ Labora tory | Local Credits | ECTS |
|---------|-------------------|---------------------------------|--------|------------------------------------|------------------|------|
| EEE 411 | EEE 346 | Telecommunications | 2 | 1 | 3 | 5 |
| EEE 412 | ECC 008 / MTH 251 | Radar Systems | 3 | 0 | 3 | 5 |
| EEE 416 | ECC 008 | Computer Networking | 3 | 0 | 3 | 5 |
| EEE 425 | EEE 346 | Satellite Communication Systems | 3 | 0 | 3 | 5 |

| | | | | | | |
|---------|-------------------|-----------------------------------------------|---|---|---|---|
| EEE 427 | ECC 008 / MTH 251 | Information Theory and Coding | 3 | 0 | 3 | 5 |
| EEE 428 | EEE 346 | Communication Electronics | 3 | 0 | 3 | 5 |
| EEE 429 | EEE 346 | Mobile Communication Systems | 2 | 1 | 3 | 5 |
| EEE 430 | EEE 346 | Wireless and Personnel Communications Systems | 2 | 1 | 3 | 5 |
| ECC 411 | ECC 008 | Digital Signal Processing | 2 | 1 | 3 | 5 |
| EEE 463 | ECC 008 | Machine Learning in Computer Vision | 2 | 1 | 3 | 5 |
| EEE 469 | EEE 346 | Electromagnetic Wave Propagation Antennas | 2 | 0 | 3 | 5 |
| EEE 494 | * | Introduction to Computer Vision | 3 | 0 | 3 | 5 |
| EEE 420 | EEE 210 | Intelligent Control Systems | 2 | 1 | 3 | 5 |
| EEE 424 | EEE 324 | Process Control Instrumentation Technology | 3 | 0 | 3 | 5 |
| EEE 435 | EEE 324 | Mechatronics | 3 | 0 | 3 | 5 |
| EEE 451 | ECC 001 | Digital Electronics | 3 | 0 | 3 | 5 |
| EEE 454 | EEE 324 | Digital Control Systems | 3 | 0 | 3 | 5 |
| ECC 437 | EEE 324 | Robotic Systems | 3 | 0 | 3 | 5 |
| EEE 470 | ECC 001 | Programmable Logic Controllers | 2 | 1 | 3 | 5 |
| EEE 495 | * | Optimal and Adaptive Control | 3 | 0 | 3 | 5 |
| EEE 433 | EEE 321 / EEE 331 | Power Electronics | 2 | 1 | 3 | 5 |
| EEE 471 | EEE 331 | Power System Analysis I | 3 | 0 | 3 | 5 |
| EEE 472 | EEE 471 | Power System Analysis II | 2 | 1 | 3 | 5 |
| EEE 473 | EEE 471 | Power System Protection | 3 | 0 | 3 | 5 |
| EEE 474 | EEE 433 | Static Power Conversion | 3 | 0 | 3 | 5 |
| EEE 475 | EEE 331 | High Voltage Techniques I | 2 | 1 | 3 | 5 |
| EEE 476 | EEE 475 | High Voltage Techniques II | 3 | 0 | 3 | 5 |

| | | | | | | |
|---------|---------|--------------------------------|---|---|---|---|
| EEE 478 | EEE 471 | Distribution System Techniques | 3 | 0 | 3 | 5 |
| EEE 492 | EEE 331 | Illumination Engineering | 3 | 0 | 3 | 5 |
| EEE 496 | * | Solar Energy and Systems | 3 | 0 | 3 | 5 |

Non Field-Related / Non-Technical Elective Courses

| Code | Pre. | Course Name | Theory | Application/Laboratory | Local Credits | ECTS |
|---------|------|--------------------------|--------|------------------------|---------------|------|
| ECC 426 | * | Economics for Engineers | 3 | 0 | 3 | 5 |
| ECC 427 | * | Management for Engineers | 3 | 0 | 3 | 5 |