

Department of Electrical and Electronic Engineering Educators

- **Degree Option A:** Electrical Engineering Educators
- **Degree Option B:** Electronic Engineering Educators

Title:

Degree Option A: Electrical Engineering Educator

Degree Option B: Electronic Engineering Educator

Level: Undergraduate (1st Cycle)

Duration: 5 years/10 academic semesters

ECTS: 300 **Total Workload:** 7500

STUDY PROGRAMME

Abbreviations used:

A: Degree Option A, **B:** Degree Option B, **C:** Compulsory, **CE:** Compulsory Elective, **O:** Optional (no ECTS credits)
T: Technological Course, **P:** Pedagogical Course, **Th.:** Theory/Hours per Week, **Lab:** Hours per Week, **Total:** Total No. of Hours per Week, **WL:** Workload

| 1st SEMESTER | | | | | | | | |
|--------------|------------------------------------|--------|-----|-----------|----------|-----------|-------------|-------------|
| Code | COURSE TITLE | C/CE/O | T/P | Th. | Lab | Total | WL | ECTS |
| EE101 | Mathematics I | C | T | 4 | 0 | 4 | 9.0 | 5.0 |
| EE102 | Physics | C | T | 4 | 2 | 6 | 11.0 | 6.0 |
| EE103 | Electric Circuits I | C | T | 4 | 2 | 6 | 11.0 | 6.0 |
| EE104 | Computer Programming | C | T | 2 | 2 | 4 | 6.0 | 3.0 |
| EE105 | Pedagogy & Philosophy of Education | C | P | 3 | 0 | 3 | 6.5 | 5.0 |
| EE106 | Developmental Psychology | C | P | 3 | 0 | 3 | 6.5 | 5.0 |
| Total | | | | 20 | 6 | 26 | 50.0 | 30.0 |

| 2nd SEMESTER | | | | | | | | |
|--------------|---|--------|-----|-----------|----------|-----------|-------------|-------------|
| Code | COURSE TITLE | C/CE/O | T/P | Th. | Lab | Total | WL | ECTS |
| EE201 | Mathematics II | C | T | 4 | 0 | 4 | 9.0 | 5.0 |
| EE202 | Electronics I | C | T | 3 | 2 | 5 | 8.5 | 5.0 |
| EE203 | Electric Circuits II | C | T | 4 | 2 | 6 | 11.0 | 6.0 |
| EE204A | Electrical Drawing | C | T | 2 | 2 | 4 | 6.5 | 4.0 |
| EE204B | Component Technology - Electronic Design | C | T | 2 | 2 | 4 | | |
| EE205 | Computer Programming for Engineering Applications | C | T | 3 | 2 | 5 | 8.5 | 5.0 |
| EE206 | Educational Psychology | C | P | 3 | 0 | 3 | 6.5 | 5.0 |
| Total | | | | 19 | 8 | 27 | 50.0 | 30.0 |

| 3rd SEMESTER | | | | | | | | |
|--------------|------------------------------------|--------|-----|-----------|----------|-----------|-------------|-------------|
| Code | COURSE TITLE | C/CE/O | T/P | Th. | Lab | Total | WL | ECTS |
| EE301 | Mathematics III | C | T | 4 | 0 | 4 | 9.0 | 5.0 |
| EE302 | Electronics II | C | T | 4 | 2 | 6 | 11.5 | 7.0 |
| EE303 | Electromagnetic Fields | C | T | 4 | 0 | 4 | 9.0 | 5.0 |
| EE304 | Signals and Systems | C | T | 4 | 0 | 4 | 9.0 | 5.0 |
| EE305 | Educational Evaluation | C | P | 3 | 0 | 3 | 7.0 | 5.0 |
| EE306 | Computer Applications in Education | C | P | 1 | 2 | 3 | 4.5 | 3.0 |
| Total | | | | 20 | 4 | 24 | 50.0 | 30.0 |

| 4th SEMESTER | | | | | | | | | |
|--------------|-----------------------------------|--------|-----|--------------|-----------|----------|-----------|-------------|-------------|
| Code | COURSE TITLE | C/CE/O | T/P | Th. | Lab | Total | WL | ECTS | |
| EE401A | Electric Machines I | C | T | 3 | 2 | 5 | | | |
| EE401B | Electronics III | C | T | 3 | 2 | 5 | 9.5 | 5.5 | |
| EE402 | Logic Design | C | T | 3 | 2 | 5 | 9.5 | 5.5 | |
| EE403 | Instrumentation -Measurements | C | T | 3 | 2 | 5 | 9.5 | 5.5 | |
| EE404 | Foreign Language-ESP | C | T | 3 | 0 | 3 | 7.5 | 3.5 | |
| EE405 | Teaching Methodology | C | P | 3 | 0 | 3 | 7.0 | 5.0 | |
| EE406 | Counselling Psychology & Guidance | C | P | 3 | 0 | 3 | 7.0 | 5.0 | |
| | | | | Total | 18 | 6 | 24 | 50.0 | 30.0 |

| 5th SEMESTER | | | | | | | | | |
|--------------|---|--------|-----|--------------|-----------|----------|-----------|-------------|-------------|
| Code | COURSE TITLE | C/CE/O | T/P | Th. | Lab | Total | WL | ECTS | |
| EE501 | Automatic Control Systems | C | T | 3 | 2 | 5 | 9.0 | 5.0 | |
| EE502A | Electric Machines II | C | T | 3 | 2 | 5 | 9.0 | 5.0 | |
| EE502B | Analog & Digital Filters | C | T | 3 | 2 | 5 | | | |
| EE503 | Reliability Engineering | C | T | 4 | 0 | 4 | 9.0 | 5.0 | |
| EE504 | Entrepreneurship – Innovation I & Subject Didactics | C | T | 2 | 0 | 2 | 5.0 | 3.0 | |
| EE505A | Electrical Installation I | C | T | 3 | 3 | 6 | 12.0 | 7.0 | |
| EE505B | Telecommunication Systems | C | T | 4 | 2 | 6 | | | |
| EE506 | Organization, Administration & Sociology of Education | C | P | 3 | 0 | 3 | 6.0 | 5.0 | |
| | | | | Total | 18 | 7 | 25 | 50.0 | 30.0 |
| | | | | | 19 | 6 | | | |

| 6th SEMESTER | | | | | | | | | |
|--------------|-----------------------------------|--------|-----|--------------|-----------|-----------|-----------|-------------|-------------|
| Code | COURSE TITLE | C/CE/O | T/P | Th. | Lab | Total | WL | ECTS | |
| EE601 | Power Electronics | C | T | 3 | 2 | 5 | 9.0 | 5.0 | |
| EE602 | Industrial Automatic Control | C | T | 3 | 2 | 5 | 9.0 | 5.0 | |
| EE603A | Electrical Installations II | C | T | 3 | 3 | 6 | 11.5 | 7.0 | |
| EE603B | Optical Communications | C | T | 4 | 2 | 6 | | | |
| EE604A | Electrical Energy Systems I | C | T | 3 | 2 | 5 | 9.0 | 5.0 | |
| EE604B | Transmission Lines | C | T | 3 | 2 | 5 | | | |
| EE605 | Subject Didactics | C | P | 3 | 0 | 3 | 7.0 | 5.0 | |
| EE606 | Educational Technology-Multimedia | C | P | 1 | 2 | 3 | 4.5 | 3.0 | |
| | | | | Total | 16 | 11 | 27 | 50.0 | 30.0 |
| | | | | | 17 | 10 | | | |

| 7th SEMESTER | | | | | | | | | |
|--------------|---|--------|-----|--------------|-----------|-----------|-----------|-------------|-------------|
| Code | COURSE TITLE | C/CE/O | T/P | Th. | Lab | Total | WL | ECTS | |
| EE701A | Electrical Energy Systems II | C | T | 4 | 2 | 6 | 11.5 | 7.0 | |
| EE701B | Microwaves-Antennas | C | T | 4 | 2 | 6 | | | |
| EE702A | Quality Assurance | C | T | 3 | 0 | 3 | 7.0 | 4.0 | |
| EE702B | Operating Systems | C | T | 3 | 0 | 3 | | | |
| EE703A | Lighting Technology | C | T | 3 | 2 | 5 | 9.0 | 5.0 | |
| EE703B | Digital Design | C | T | 3 | 2 | 5 | | | |
| EE704A | Computer Aided Design of Electrical Installations | C | T | 1 | 4 | 5 | 9.0 | 5.0 | |
| EE704B | Broadcasting Systems | C | T | 3 | 2 | 5 | | | |
| EE705 | Educational Research Methodology | C | P | 3 | 0 | 3 | 7.0 | 5.0 | |
| EE706 | General Technology | C | T | 2 | 2 | 4 | 6.5 | 4.0 | |
| | | | | Total | 16 | 10 | 26 | 50.0 | 30.0 |
| | | | | | 18 | 8 | | | |

| 8th SEMESTER | | | | | | | | |
|--------------|--------------------------------------|--------|-----|-----------|----------|-----------|-------------|-------------|
| Code | COURSE TITLE | C/CE/O | T/P | Th. | Lab | Total | WL | ECTS |
| EE801A | Electric Car System | C | T | 3 | 2 | 5 | 10.0 | 6.0 |
| EE801B | Computer Networks | C | T | 3 | 2 | 5 | | |
| EE802 | Data Acquisition & Processing | C | T | 2 | 2 | 4 | 6.5 | 4.0 |
| EE803A | High Voltages | C | T | 4 | 2 | 6 | 11.5 | 7.0 |
| EE803B | Wireless Communications | C | T | 4 | 2 | 6 | | |
| EE804 | Advanced Circuit Analysis | C | T | 4 | 0 | 4 | 6.5 | 4.0 |
| EE805A | Environmental Technology | C | T | 4 | 0 | 4 | 6.5 | 4.0 |
| EE805B | Digital Signal Analysis & Processing | C | T | 2 | 2 | 4 | | |
| EE806 | Teaching Practice I | C | P | | | | 9.0 | 5.0 |
| EE807 | Entrepreneurship – Innovation II * | O | | 0 | (2) | (2) | | |
| Total | | | | 17 | 6 | 23 | 50.0 | 30.0 |
| | | | | 15 | 8 | | | |

*Optional, pass/fail course with no grade or ECTS involved. Mandatory prerequisite: passing grade in EE504.

| 9th SEMESTER | | | | | | | | |
|--------------|-------------------------------|--------|-----|-----------|----------|-----------|-------------|-------------|
| Code | COURSE TITLE | C/CE/O | T/P | Th. | Lab | Total | WL | ECTS |
| EE901A | Electric Motion | C | T | 4 | 2 | 6 | 11.5 | 7.0 |
| EE901B | Digital Broadcasting Services | C | T | 4 | 2 | 6 | | |
| EE902 | Microcomputers | C | T | 4 | 2 | 6 | 11.5 | 7.0 |
| EE903A | Power Systems Economics | C | T | 4 | 0 | 4 | 10.0 | 6.0 |
| EE903B | Broadband Communications | C | T | 4 | | 4 | | |
| EE904 | Alternative Energy Sources | C | T | 3 | 0 | 3 | 7.0 | 4.0 |
| EE905 | Smart Grid | C | T | 4 | 0 | 4 | 10.0 | 6.0 |
| Total | | | | 19 | 4 | 23 | 50.0 | 30.0 |

| 10th SEMESTER | | | | | | | | |
|---------------|----------------------------|--------|-----|-----|-----|-------|-------------|-------------|
| Code | COURSE TITLE | C/CE/O | T/P | Th. | Lab | Total | WL | ECTS |
| EE1001 | Engineering Work Placement | C | T | | | | 10.0 | 6.0 |
| EE1002 | Teaching Practice II | C | P | | | | 7.0 | 4.0 |
| EE1003 | Graduation Thesis | C | T/P | | | | 33.0 | 20.0 |
| Total | | | | | | | 50.0 | 30.0 |