

Transilvania University of Braşov, Romania

Study program: Advanced Electrical System (in English)

Faculty: Electrical Engineering and Computer Science
 Study period: 2 years (master)
 Academic year structure: 2 semesters (14 weeks per semester)
 Examination sessions (two): winter session (January/February)
 summer session (June/July)

Courses per years (C= course; S = seminar; L = laboratory; P = project)

1st Year

| No. crt. | Course | Code | 1 st Semester | | | | | 2 nd Semester | | | | | |
|----------|---|--------|--------------------------|---|---|----|------|--------------------------|---|---|----|------|---|
| | | | C | S | L | P | Cred | C | S | L | P | Cred | |
| 01 | Numerical methods for advanced electrical systems analysis | SEA101 | 1 | | 2 | | 4 | | | | | | |
| 02 | Advanced systems for measuring, data acquisition and processing | SEA102 | 2 | | 1 | | 5 | | | | | | |
| 03 | Environmental policy and electromagnetic compatibility | SEA103 | 2 | | 1 | | 4 | | | | | | |
| 04 | Modern energy storage systems | SEA104 | 2 | | 1 | | 4 | | | | | | |
| 05 | Control of power electronic converters | SEA105 | 2 | | 1 | 1 | 5 | | | | | | |
| 06 | Research practical stage SEA-1 | SEA106 | | | | 10 | 8 | | | | | | |
| 07 | CAD for electrical systems | SEA107 | | | | | | 1 | | 2 | | | 5 |
| 08 | Dynamic modelling of electrical systems | SEA108 | | | | | | 1 | | 1 | 1 | | 5 |
| 09 | Advanced optimization methods for electrical systems | SEA109 | | | | | | 2 | | | 1 | | 5 |
| 10 | Smart electrical microgrids | SEA110 | | | | | | 2 | | 1 | 1 | | 5 |
| 11 | Ethics and academic integrity | SEA111 | | | | | | 1 | | | | | 2 |
| 12 | Research practical stage SEA-2 | SEA112 | | | | | | | | | 12 | | 8 |

2nd Year

| No. crt. | Course | Code | 3 rd Semester | | | | | 4 th Semester | | | | |
|----------------------------------|---|--------|--------------------------|---|---|----|------|--------------------------|---|---|----|------|
| | | | C | S | L | P | Cred | C | S | L | P | Cred |
| Optional study package 1: | | | | | | | | | | | | |
| 01 | Hydro power energy conversion systems | SEA201 | 2 | | 1 | | 5 | | | | | |
| 02 | Testing to electromagnetic disturbances | SEA202 | 2 | | 1 | | 5 | | | | | |
| Optional study package 2: | | | | | | | | | | | | |
| 03 | CAD/CAE in power electronics | SEA203 | 2 | | 1 | 1 | 5 | | | | | |
| 04 | Modern optimization solutions of electrical systems | SEA204 | 2 | | 1 | 1 | 5 | | | | | |
| Optional study package 3: | | | | | | | | | | | | |
| 05 | Digital systems for power quality monitoring | SEA205 | 2 | | 1 | | 5 | | | | | |
| 06 | Wind energy conversion systems | SEA206 | 2 | | | 1 | 5 | | | | | |
| Optional study package 4: | | | | | | | | | | | | |
| 07 | Solar power plants and hybrid energy systems | SEA207 | 2 | | 1 | 1 | 5 | | | | | |
| 08 | Computer-aided instrumentation | SEA208 | 2 | | 1 | 1 | 5 | | | | | |
| 09 | Research practical stage SEA-3 | SEA209 | | | | 12 | 10 | | | | | |
| 10 | Research practical stage SEA-4 | SEA210 | | | | | | | | | 12 | 10 |
| 11 | Practical stage for dissertation thesis preparation | SEA211 | | | | | | | | | 12 | 10 |
| 12 | Dissertation thesis preparation | SEA212 | | | | | | | | | 2 | 10 |