

# Transilvania University of Braşov, Romania

## Study program: Command and control systems for motor vehicles

Faculty:

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

#### 1<sup>st</sup> Year

|   | Course   | Code | Semester 1 |   |   |    |    | Semester 2 |   |   |    |    |
|---|--|------|------------|---|---|----|----|------------|---|---|----|----|
|   |  |      | C          | S | L | P  | Cr | C          | S | L | P  | Cr |
| 1 | Vehicle dynamics complements                           | CDA  | 2          | 0 | 1 | 0  | 5  |            |   |   |    |    |
| 2 | Programming and simulation languages                   | LPS  | 1          | 0 | 2 | 0  | 5  |            |   |   |    |    |
| 3 | Propulsion of electric and hybrid vehicles             | PAEH | 2          | 0 | 2 | 0  | 5  |            |   |   |    |    |
| 4 | Sensors and actuators                                  | SA   | 1          | 0 | 1 | 0  | 5  |            |   |   |    |    |
| 5 | Automatic hydraulic and pneumatic systems for vehicles | SHPA | 2          | 0 | 2 | 0  | 5  |            |   |   |    |    |
| 6 | Professional practice I                                | PP1  | 0          | 0 | 0 | 12 | 5  |            |   |   |    |    |
| 1 | Integrated electronic control units                    | UCI  |            |   |   |    |    | 2          | 0 | 1 | 0  | 5  |
| 2 | Energy storage and energy management                   | SEME |            |   |   |    |    | 2          | 0 | 2 | 0  | 5  |
| 3 | Networks and communication protocols in vehicles       | RPCA |            |   |   |    |    | 2          | 0 | 1 | 0  | 5  |
| 4 | Driver assistance systems                              | SCA  |            |   |   |    |    | 1          | 0 | 2 | 0  | 5  |
| 5 | Professional practice II                               | PP2  |            |   |   |    |    | 0          | 0 | 0 | 12 | 5  |
| 6 | Advanced testing and diagnostics                       | TDA  |            |   |   |    |    | 1          | 0 | 2 | 0  | 5  |

#### 2<sup>nd</sup> Year

|   | Course                            | Code | Semester 1 |   |   |   |    | Semester 2 |   |   |   |    |
|---|-----------------------------------|------|------------|---|---|---|----|------------|---|---|---|----|
|   |                                   |      | C          | S | L | P | Cr | C          | S | L | P | Cr |
| 1 | Autonomous and connected vehicles | AAC  | 2          | 0 | 1 | 0 | 5  |            |   |   |   |    |
| 2 | Automotive software development   | DSA  | 1          | 0 | 0 | 2 | 5  |            |   |   |   |    |

|   |   |      |   |   |   |    |   |   |   |    |    |    |
|---|---|------|---|---|---|----|---|---|---|----|----|----|
| 3 | Modeling and simulation in Virtual Reality    | MSRV | 2 | 0 | 2 | 0  | 5 |   |   |    |    |    |
| 4 | Integrated vehicle control                    | CVI  | 2 | 0 | 1 | 0  | 5 |   |   |    |    |    |
| 5 | Vibrations and noises in electric vehicles    | AVZA | 1 | 0 | 2 | 0  | 5 |   |   |    |    |    |
| 6 | Professional practice III                     | PP3  | 0 | 0 | 0 | 12 | 5 |   |   |    |    |    |
| 1 | University Ethics                             | EU   |   |   |   |    |   | 0 | 1 | 0  | 0  | 2  |
| 2 | Practical activity and/or scientific research | APCS |   |   |   |    |   | 0 | 0 | 10 | 0  | 13 |
| 3 | Elaboration of the dissertation               | ELD  |   |   |   |    |   | 0 | 0 | 5  | 0  | 10 |
| 4 | Professional practice IV                      | PP4  |   |   |   |    |   | 0 | 0 | 0  | 12 | 5  |