

# Transilvania University of Braşov, Romania

## Study program: Traffic and Transport Engineering

|                            |   |
|----------------------------|---|
| Faculty                    | Mechanical Engineering  |
| Study period               | 4 years (bachelor)  |
| Academic year structure    | 2 semesters (14 weeks per semester)                             |
| Examination sessions (two) | Winter session (January/February)<br>Summer session (June/July) |

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

1<sup>st</sup> Year

| No. crt. | Course  | Code        | 1 <sup>st</sup> Semester |   |   |   |      | 2 <sup>nd</sup> Semester |   |   |   |      |
|----------|---|-------------|--------------------------|---|---|---|------|--------------------------|---|---|---|------|
|          |   |             | C                        | S | L | P | Cred | C                        | S | L | P | Cred |
| 01       | Mathematical Analysis                                   | AnaM        | 3                        | 2 |   |   | 5    |                          |   |   |   |      |
| 02       | Descriptive Geometry                                    | GD          | 2                        |   | 2 |   | 5    |                          |   |   |   |      |
| 03       | Chemistry   | Chim        | 2                        |   | 1 |   | 4    |                          |   |   |   |      |
| 04       | Materials Science                                       | SM          | 2                        |   | 1 |   | 3    |                          |   |   |   |      |
| 05       | Materials Technology                                    | TM          | 2                        |   | 1 |   | 3    |                          |   |   |   |      |
| 06       | Applied Informatics                                     | INFA        | 2                        |   | 2 |   | 5    |                          |   |   |   |      |
| 07       | Linear Algebra and Analytical and Differential Geometry | AGAD        |                          |   |   |   |      | 2                        | 3 |   |   | 5    |
| 08       | Technical Drawing and Infographics I                    | DT1         |                          |   |   |   |      | 2                        |   | 2 |   | 5    |
| 09       | Physics   | Fizi        |                          |   |   |   |      | 2                        |   | 1 |   | 4    |
| 10       | Mechanics I   | Mec1        |                          |   |   |   |      | 3                        | 1 | 1 |   | 5    |
| 11       | Computers Programming and Programming Languages         | PCLP        |                          |   |   |   |      | 2                        |   | 2 |   | 5    |
| 12       | Electrical Engineering and Electrical Machines          | ELME        |                          |   |   |   |      | 2                        |   | 1 |   | 4    |
| 13       | (O1) Academic Writing and Communication                 | COM         | 1                        | 1 |   |   | 3    |                          |   |   |   |      |
|          | (O2) Academic Ethics and Integrity                      | EIA         | 1                        | 1 |   |   | 3    |                          |   |   |   |      |
| 14       | Foreign Language - English                              | LE01/LE02   | 1                        | 1 |   |   | 2    | 1                        | 1 |   |   | 2    |
|          | Foreign Language - French                               | LF01/LF02   |                          |   |   |   |      |                          |   |   |   |      |
|          | Foreign Language - German                               | LG01/LG02   |                          |   |   |   |      |                          |   |   |   |      |
| 15       | Sport and Physical Training                             | EF01 / EF02 |                          | 1 |   |   | 1    |                          | 1 |   |   | 1    |

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

| No. crt. | Course  | Code      | 3 <sup>rd</sup> Semester |   |   |   |      | 2 <sup>nd</sup> Semester |   |   |   |      |
|----------|---|-----------|--------------------------|---|---|---|------|--------------------------|---|---|---|------|
|          |   |           | C                        | S | L | P | Cred | C                        | S | L | P | Cred |
| 01       | Economics                                       | ECON      | 1                        | 1 |   |   | 3    |                          |   |   |   |      |
| 02       | Technical Drawing and Infographics II           | DT2       | 2                        |   | 2 |   | 4    |                          |   |   |   |      |
| 03       | Mechanics II                                    | Mec2      | 3                        | 2 | 1 |   | 6    |                          |   |   |   |      |
| 04       | Strength of Materials I                         | RM1       | 2                        | 2 | 2 |   | 6    |                          |   |   |   |      |
| 05       | Special Mathematics and Mathematical Statistics | MSSM      | 2                        | 2 |   |   | 4    |                          |   |   |   |      |
| 06       | Informatics and Cybernetics in Transports       | ICT       | 2                        |   | 1 |   | 4    |                          |   |   |   |      |
| 07       | Information Theory and Codes                    | TIC       |                          |   |   |   |      | 2                        |   | 2 |   | 3    |
| 08       | Fluids Mechanics and Hydraulic Machines         | MFMH      |                          |   |   |   |      | 2                        |   | 2 |   | 4    |
| 09       | Strength of Materials II                        | RM2       |                          |   |   |   |      | 3                        | 1 | 1 |   | 5    |
| 10       | Mechanisms                                      | Mecs      |                          |   |   |   |      | 3                        |   | 1 | 1 | 5    |
| 11       | Machine Elements I                              | OM1       |                          |   |   |   |      | 2                        |   | 1 | 1 | 4    |
| 12       | Management                                      | MANAG     |                          |   |   |   |      | 2                        |   | 1 |   | 3    |
| 13       | Foreign Language - English                      | LE03/LE04 | 1                        | 1 |   |   | 2    | 1                        | 1 |   |   | 2    |
|          | Foreign Language - French                       | LF03/LF04 |                          |   |   |   |      |                          |   |   |   |      |
|          | Foreign Language - German                       | LG03/LG04 |                          |   |   |   |      |                          |   |   |   |      |
| 14       | Sport and Physical Training                     | EF03/EF04 |                          | 1 |   |   | 1    |                          | 1 |   |   | 1    |
| 15       | Practical Placement                             | PT1       | 90 hours/ year           |   |   |   |      |                          |   |   |   | 4    |

## 3<sup>rd</sup> Year

| No. crt. | Course  | Code  | 5 <sup>th</sup> Semester |   |   |   |      | 6 <sup>th</sup> Semester |   |   |   |      |
|----------|---|-------|--------------------------|---|---|---|------|--------------------------|---|---|---|------|
|          |   |       | C                        | S | L | P | Cred | C                        | S | L | P | Cred |
| 01       | Thermodynamics and Thermal Machines           | TMT   | 2                        | 1 | 2 |   | 5    |                          |   |   |   |      |
| 02       | Machine Elements 2                            | OM2   | 2                        |   | 2 |   | 5    |                          |   |   |   |      |
| 03       | Machines and Installations for Goods Handling | MIMM  | 2                        |   | 1 |   | 5    |                          |   |   |   |      |
| 04       | Means of Transports                           | MT    | 2                        |   | 2 |   | 5    |                          |   |   |   |      |
| 05       | Internal Combustion Engines                   | MAI   | 3                        |   | 2 | 1 | 5    |                          |   |   |   |      |
| 06       | Automotives                                   | AUT   | 2                        |   | 2 | 1 | 5    |                          |   |   |   |      |
| 07       | Elements of Vehicle Dynamics                  | EDA   |                          |   |   |   |      | 2                        |   | 2 | 1 | 5    |
| 08       | Road Infrastructure                           | IRUT  |                          |   |   |   |      | 2                        |   |   | 2 | 4    |
| 09       | Transport Control and Command Installations   | ICCC  |                          |   |   |   |      | 2                        |   | 2 |   | 4    |
| 10       | Environment Protection and Engineering        | PIM   |                          |   |   |   |      | 2                        |   | 2 |   | 4    |
| 11       | Road Traffic Management and Telematics I      | MTRT1 |                          |   |   |   |      | 3                        |   | 2 |   | 5    |
| 12       | (O1) Multimodal Transports                    | TM    |                          |   |   |   |      | 1                        | 1 |   |   | 2    |

|    |                                     |       |                |  |  |  |  |   |   |  |  |   |
|----|-------------------------------------|-------|----------------|--|--|--|--|---|---|--|--|---|
|    | (01) Transport Systems              | STR   |                |  |  |  |  | 1 | 1 |  |  | 2 |
| 13 | (02) Economic Analysis of Transport | AET   |                |  |  |  |  | 1 | 1 |  |  | 2 |
|    | (02) Transport Logistics            | LOGT  |                |  |  |  |  | 1 | 1 |  |  | 2 |
| 14 | Practical Placement                 | PPTH2 | 90 hours/ year |  |  |  |  |   |   |  |  | 4 |

#### 4<sup>th</sup> Year

| No. crt. | Course  | Code   | 7 <sup>th</sup> Semester |   |   |   |      | 8 <sup>th</sup> Semester |   |   |   |      |
|----------|---|--------|--------------------------|---|---|---|------|--------------------------|---|---|---|------|
|          |   |        | C                        | S | L | P | Cred | C                        | S | L | P | Cred |
| 01       | Automotive Electric Systems                                   | EEA    | 2                        |   | 2 |   | 5    |                          |   |   |   |      |
| 02       | Road Traffic Management and Telematics II                     | MTRT2  | 3                        |   | 2 |   | 5    |                          |   |   |   |      |
| 03       | Machines for Road Infrastructure                              | UIR    | 2                        |   |   | 2 | 4    |                          |   |   |   |      |
| 04       | CAD in Transport Engineering                                  | PAT    |                          |   |   |   |      | 2                        |   | 2 |   | 4    |
| 05       | Functional Reliability of Transport Systems                   | FFST   |                          |   |   |   |      | 2                        |   | 2 |   | 4    |
| 06       | Fuels, Lubricants and Maintenance Materials for Vehicles      | CLMIA  |                          |   |   |   |      | 2                        |   | 2 |   | 4    |
| 07       | Diploma Project Develop                                       | EPD    |                          |   |   |   |      |                          |   | 4 |   | 5    |
| 08       | Practice for Diploma Project                                  | PPD    |                          |   |   |   |      | 60 hours/semester        |   |   |   | 5    |
| 09       | (01) Vehicle Fleet Maintenance I                              | MPV1   |                          |   |   |   |      |                          |   |   |   |      |
|          | (01) Vehicles Maintenance and Reliability                     | FMA    | 2                        |   | 2 | 1 | 6    |                          |   |   |   |      |
| 10       | (02) Traffic Accidents Analysis and Reconstruction            | ARAC   | 2                        |   | 2 |   | 5    |                          |   |   |   |      |
|          | (02) Special Transports                                       | TRS    |                          |   |   |   |      |                          |   |   |   |      |
| 11       | (03) Automotive Passive Safety                                | SPA    | 2                        |   | 2 |   | 5    |                          |   |   |   |      |
|          | (03) International Transports                                 | TI     |                          |   |   |   |      |                          |   |   |   |      |
| 12       | (04) Quality in Transports                                    | CALT   |                          |   |   |   |      |                          |   |   |   |      |
|          | (04) Auxiliary systems of Transport Means                     | SAMT   |                          |   |   |   |      | 2                        |   | 2 |   | 3    |
| 13       | (05) Vehicle Fleet Maintenance II                             | MPV2   |                          |   |   |   |      |                          |   |   |   |      |
|          | (05) Risk Evaluation, Insurance and Vehicles Trade Techniques | ERATCA |                          |   |   |   |      | 2                        |   | 2 |   | 3    |
| 14       | (06) Transport Terminals                                      | TT     |                          |   |   |   |      |                          |   |   |   |      |
|          | (06) Transport Management and Marketing                       | MKTR   |                          |   |   |   |      | 2                        | 2 |   |   | 2    |