### 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)

Summer session (June/July)

#### **Courses per years**

### 1 Year

| No.  | Course  | Cada        |   | S | emest | er I |      | Semester II |   |   |   |      |  |
|------|---|-------------|---|---|-------|------|------|-------------|---|---|---|------|--|
| crt. | Course  | Code        | С | S | L     | Р    | Cred | С           | S | L | Р | 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<br>Programming Languages      | PCLP        |   |   |       |      |      | 2           |   | 2 |   | 5    |  |
| 12   | Electrical Engineering and<br>Electrical Machines       | ELME        |   |   |       |      |      | 2           |   | 1 |   | 4    |  |
| 12   | (O1) Academic Writing and Communication                 | СОМ         | 1 | 1 |       |      | 3    |             |   |   |   |      |  |
| 13   | (O2) Academic Ethics and Integrity                      | EIA         | 1 | 1 |       |      | 3    |             |   |   |   |      |  |
|      | Foreign Language - English                              | LE01/LE02   |   |   |       |      |      |             |   |   |   |      |  |
| 14   | Foreign Language - French                               | LF01/LF02   | 1 | 1 |       |      | 2    | 1           | 1 |   |   | 2    |  |
| 14   | Foreign Language - German                               | LG01/LG02   |   |   |       |      |      |             |   |   |   |      |  |
| 15   | Sport and Physical Training                             | EF01 / EF02 |   | 1 |       |      | 1    |             | 1 |   |   | 1    |  |

## 2 Year

| No.  | Course  | Code |   | Se | mest | er III |      | Semester IV |   |   |   |      |  |
|------|---|------|---|----|------|--------|------|-------------|---|---|---|------|--|
| crt. | Course  | Code | С | S  | L    | Р      | Cred | С           | S | L | Р | 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<br>Transports    | ICT  | 2 |    | 1    |        | 4    |             |   |   |   |      |  |
| 07   | Information Theory and Codes                    | TIC  |   |    |      |        |      | 2           |   | 2 |   | 3    |  |

| 08 | Fluids Mechanics and Hydraulic Machines | МҒМН       |   |                |  |  |   | 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 |
|    | Foreign Language - English              | LE03/LE04  |   |                |  |  |   |   |   |   |   |   |
| 13 | Foreign Language - French               | LF03/LF04  | 1 | 1              |  |  | 2 | 1 | 1 |   |   | 2 |
|    | 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.  | No.   |       |   | Se | er V |    | Semester VI |     |   |   |   |      |
|------|---|-------|---|----|------|----|-------------|-----|---|---|---|------|
| crt. | Course  | Code  | С | S  | L    | Р  | Cred        | С   | S | L | Р | 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<br>Engineering     | PIM   |   |    |      |    |             | 2   |   | 2 |   | 4    |
| 11   | Road Traffic Management and Telematics I      | MTRT1 |   |    |      |    |             | 3   |   | 2 |   | 5    |
| 12   | (O1) Multimodal Transports                    | TM    |   |    |      |    |             | 1   | 1 |   |   | 2    |
| 12   | (O1) Transport Systems                        | STR   |   |    |      |    |             | 1   | 1 |   |   | 2    |
| 13   | (O2) Economic Analysis of Transport           | AET   |   |    |      |    |             | 1   | 1 |   |   | 2    |
| 13   | (O2) Transport Logistics                      | LOGT  |   |    |      |    |             | 1   | 1 |   |   | 2    |
| 14   | Practical Placement                           | PRTH2 |   |    |      | 90 | hours/ y    | ear |   |   |   | 4    |

# 4<sup>th</sup> Year

| No.  | Course   | Code  |     | Se | meste | er VII |      | Semester VIII |        |        |    |      |  |
|------|--|-------|-----|----|-------|--------|------|---------------|--------|--------|----|------|--|
| crt. | Course   | Code  | С   | S  | L     | Р      | Cred | С             | S      | L      | Р  | Cred |  |
| 01   | Automotive Electric Systems                                    | EEA   | 2   |    | 2     |        | 5    |               |        |        |    |      |  |
| 02   | Road Traffic Management and Telematics II                      | MTRT2 | 3   |    | 2     |        | 5    |               |        |        |    |      |  |
| 03   | Machines for Road<br>Infrastructure                            | UIR   | 2   |    |       | 2      | 4    |               |        |        |    |      |  |
| 04   | CAD in Transport Engineering                                   | PAT   |     |    |       |        |      | 2             |        | 2      |    | 4    |  |
| 05   | Functional Reliability of<br>Transport Systems                 | FFST  |     |    |       |        |      | 2             |        | 2      |    | 4    |  |
| 06   | Fuels, Lubricants and<br>Maintenance Materials for<br>Vehicles | CLMIA |     |    |       |        |      | 2             |        | 2      |    | 4    |  |
| 07   | Diploma Project Develop  | EPD   |     |    |       |        |      |               |        | 4      |    | 5    |  |
| 08   | Practice for Diploma Project                                   | PPD   |     |    |       |        |      | 60 I          | nours/ | semest | er | 5    |  |
| 09   | (O1) Vehicle Fleet<br>Maintenance I                            | MPV1  | - 2 |    | 2     | 1      | 6    |               |        |        |    |      |  |
| 09   | (O1) Vehicles Maintenance and Reliability                      | FMA   | 2   |    | 2     | 1      | Ь    |               |        |        |    |      |  |
| 10   | (O2) Traffic Accidents Analysis and Reconstruction             | ARAC  | 2   |    | 2     |        | 5    |               |        |        |    |      |  |
|      | (O2) Special Transports  | TRS   |     |    |       |        |      |               |        |        |    |      |  |

| 11 | (O3) Automotive Passive<br>Safety                             | SPA    | 2 |  | 2 |  | 5 |   |   |   |  |   |
|----|---|--------|---|--|---|--|---|---|---|---|--|---|
|    | (O3) International Transports                                 | TI     |   |  |   |  |   |   |   |   |  |   |
|    | (O4) Quality in Transports                                    | CALT   |   |  |   |  |   |   |   |   |  |   |
| 12 | (O4) Auxiliary systems of                                     | SAMT   |   |  |   |  |   | 2 |   | 2 |  | 3 |
|    | Transport Means   | SAIVII |   |  |   |  |   |   |   |   |  |   |
|    | (O5) Vehicle Fleet  | MPV2   |   |  |   |  |   | 2 |   | 2 |  |   |
| 13 | Maintenance II  |        |   |  |   |  |   |   |   |   |  | 3 |
| 15 | (O5) Risk Evaluation, Insurance and Vehicles Trade Techniques | ERATCA |   |  |   |  |   | 2 |   | 2 |  | 3 |
|    | (O6) Transport Terminals                                      | TT     |   |  |   |  |   |   |   |   |  |   |
| 14 | (O6) Transport Management                                     | MKTR   |   |  |   |  |   | 2 | 2 |   |  | 2 |
|    | and Marketing   | IVINTR |   |  |   |  |   |   |   |   |  |   |