

# "Todor Kableshkov" University of Transport

Faculty: Telecommunications and Electrical Equipment in Transport

Programme: Electric Power Engineering and Electrical Equipment

Degree: Bachelor

Mode of study: Part time

Duration of study: 4.0 years

| No                        | Code | Course   | Total contact hours<br>(Hours of lectures<br>and seminars) | ECTS<br>credits |
|---------------------------|------|--|--|-----------------|
| <i>Compulsory courses</i> |      |  |  |                 |
| 1                         | 811  | Mathematics part I   | 38   | 7               |
| 2                         | 1114 | Physics  | 45   | 7               |
| 3                         | 821  | Informatics  | 45   | 7               |
| 4                         | 721  | Political Science  | 23   | 3               |
| 5                         | 914  | Applied Mechanics  | 38   | 6               |
| 6                         | 812  | Mathematics part II  | 38   | 7               |
| 7                         | 1210 | Chemistry  | 23   | 4               |
| 8                         | 715  | Foreign Language - English, German, French, Russian                                    | 45   | 6               |
| 9                         | 702  | Economics  | 30   | 4               |
| 10                        | 1101 | Theoretical Electrical Engineering part I  | 53   | 9               |
| 11                        | 815  | Mathematics part III   | 30   | 6               |
| 12                        | 1102 | Theoretical Electrical Engineering part II   | 30   | 6               |
| 13                        | 1006 | Fundamentals of Machine Design and Construction  | 45   | 6               |
| 14                        | 1104 | Electrical Measurements  | 38   | 6               |
| 15                        | 1308 | Electrical Supply  | 45   | 6               |
| 16                        | 1301 | Safety Rules and Ecology   | 23   | 3               |
| 17                        | 1302 | High Voltage Technique   | 53   | 8               |
| 18                        | 1309 | Power Electronics  | 38   | 6               |
| 19                        | 246  | Heat Engineering and Heat Power Engineering  | 23   | 3               |
| 20                        | 1305 | Electrical Power Networks and Systems  | 53   | 7               |
| 21                        | 1373 | Electrical Power Networks and Systems - Course Project                                 | 0  | 3               |
| 22                        | 1303 | Electrical Machines  | 45   | 6               |
| 23                        | 1304 | Electrical Apparatuses   | 45   | 7               |
| 24                        | 1372 | Operation Modes of Electric Power Systems  | 45   | 7               |
| 25                        | 1310 | Traction and Energy Calculation  | 30   | 4               |
| 26                        | 1443 | Management of Energy Systems in Transport  | 23   | 3               |
| 27                        | 1368 | Electrical Machines- Course Project  | 0  | 3               |
| 28                        | 1329 | Relay Protection   | 30   | 5               |
| 29                        | 1306 | Electrical Part of Electric Power Plants   | 45   | 6               |
| 30                        | 1307 | Electrical Equipment   | 45   | 6               |
| 31                        | 1344 | Systems for Automatic Control  | 38   | 6               |
| 32                        | 1349 | Testing of Transport Electrical Equipment  | 30   | 4               |
| 33                        | 1369 | Electrical Equipment - Course Project  | 0  | 3               |
| 34                        | 1328 | Electrical Drives  | 45   | 10              |
| 35                        | 1330 | Design of Installation for Electricity Supply and Electrical Equipment                 | 23   | 6               |
| 36                        | 1374 | Design of Installation for Electricity Supply and Electrical Equipment- Course Project | 0  | 4               |

|                         |      |  |    |    |
|-------------------------|------|--|----|----|
| 37                      | 1331 | Contemporary Trends of Electric Transport Development                | 30 | 10 |
| 38                      | 1325 | Current Collection in Electric Transport Vehicles                    | 30 | 10 |
| <i>Elective courses</i> |      |  |    |    |
|                         | 1333 | Stationary Electrical Installations                                  | 45 | 10 |
|                         | 1357 | Control and Protection of Electric Transport Vehicles                | 53 | 10 |
|                         | 1334 | Control and Protection of Stationary Electrical Installations        | 53 | 10 |
|                         | 1356 | Electric Transport   | 45 | 10 |
| <i>Optional courses</i> |      |  |    |    |
|                         | 1335 | Norms for Railway Transport  | 30 | 6  |
|                         | 141  | Technical Operation and Traffic Safety in Railway Transport          | 30 | 6  |
|                         | 1336 | Technical Operation and Traffic Safety in Urban Electrical Transport | 30 | 6  |
|                         | 1337 | Structure and Control Systems of Stationary Electrical Installations | 45 | 6  |
|                         | 1338 | Structure and Control Systems of Electric Locomotives                | 45 | 6  |
|                         | 1355 | Operation of Urban Electric Transport Vehicles                       | 38 | 5  |
|                         | 1352 | Maintenance and Repair of Stationary Electrical Installations        | 38 | 5  |
|                         | 223  | Train Brakes   | 38 | 5  |
|                         | 1353 | Brake Systems of Urban Electric Transport Vehicles                   | 38 | 5  |
|                         | 1354 | Operation of Stationary Electrical Installations                     | 38 | 5  |
|                         | 1345 | Operation of Electric Locomotives                                    | 38 | 5  |
|                         | 1339 | Structure and Control Systems of Urban Electric Transport Vehicles   | 45 | 6  |