

"Todor Kableshkov" University of Transport

Faculty: Telecommunications and Electrical Equipment in Transport

Programme: Electric Power Engineering and Electrical Equipment

Degree: Bachelor

Mode of study: Full time

Duration of study: 4.0 years

No	Code	Course	Total contact hours (Hours of lectures and seminars)	ECTS credits
<i>Compulsory courses</i>				
1	811	Mathematics part I	75	7
2	1114	Physics	90	7
3	821	Informatics	90	7
4	703	Economic History	45	4
5	702	Economics	45	4
7	812	Mathematics part II	75	7
8	1210	Chemistry	45	3
9	715	Foreign Language - English, German, French, Russian	90	6
10	914	Applied Mechanics	75	6
11	1101	Theoretical Electrical Engineering part I	90	8
12	815	Mathematics part III	60	6
13	1102	Theoretical Electrical Engineering part II	60	6
14	1006	Fundamentals of Machine Design and Construction	90	6
15	1110	Electrical and Electronic Measurements	75	5
16	1302	High Voltage Technique	90	7
17	13165	Technical and Fire Safety	45	3
18	1309	Power Electronics	75	6
19	246	Heat Engineering and Heat Power Engineering	45	3
20	1305	Electrical Power Networks and Systems	90	7
21	1373	Electrical Power Networks and Systems - Course Project	0	3
22	1303	Electrical Machines	90	7
24	1308	Electrical Supply	75	7
25	1304	Electrical Apparatuses	90	7
26	1372	Operation Modes of Electric Power Systems	75	6
27	1310	Traction and Energy Calculation	60	4
28	1443	Management of Energy Systems in Transport	45	3
29	1368	Electrical Machines- Course Project	0	3
30	1329	Relay Protection	60	5
31	1321	Electrical Equipment in Power Plants and Substations	60	4
32	1307	Electrical Equipment	75	6
33	1344	Systems for Automatic Control	75	5
34	1369	Electrical Equipment - Course Project	0	3
36	1328	Electrical Drives	75	7
37	1330	Design of Installation for Electricity Supply and Electrical Equipment	45	6
38	1374	Design of Installation for Electricity Supply and Electrical Equipment- Course Project	0	4
39	13167	Diagnostics and Electrical Equipment Testing	60	6

40	719	Physical Education and Sports	0	0
	1221	Casting	0	0
	1223	Thermal Treatment	0	0
	1224	Locksmith	0	0
	1225	Turnery	0	0
	1222	Welding	0	0
<i>Elective courses</i>				
41.1	1325	Current Collection in Electric Transport Vehicles	60	5
41.2	13166	Lighting and Installation Equipment	60	5
42.1	1322	Electric Transport Propulsion	75	7
42.2	1356	Electric Transport	75	7
43.1	1323	Advanced Systems for Construction of Traction Power Supply Stations	45	6
43.2	1326	Contemporary Trends in the Traction Power Supply and Electric Drives Systems in the Electric Transport	45	6
44.1	1327	Control and Protection of Power Supply Traction Systems in the Electric Transport	90	8
44.2	1357	Control and Protection of Electric Transport Vehicles	90	8
45.1	1332	Management and Protection of Power Supply Traction Systems - practicum	60	6
45.2	13164	Management and Protection of Electric Transport Vehicles - practicum	60	6
<i>Optional courses</i>				
46.1	1342	Structure, Management and Protection of the Power Supply Systems 25kV, 50 Hz	60	7
46.2	1343	Structure of Traction Substations in Rail Transport	60	7
46.3	141	Technical Operation and Traffic Safety in Railway Transport	60	7
46.4	194	Technical Operation and Traffic Safety in Subway Areas	60	7
47.1	1346	Technical Exploitation of the Power Supply Network 225 kV, 50 Hz, Traction Substations and Section Stations	75	7
47.2	1347	Automatics and Telemechanics of Traction Substations and Section Stations	75	7
47.3	1348	Structure, Management Systems and Protection of Electric Locomotives	75	7
47.4	1350	Structure and Systems for Control and Protection of Subway Trains	75	7
48.1	1351	Ongoing Maintenance and Repair of the Electric Power Supply Network 25 kV, 50 Hz	75	6
48.2	13168	Diagnostics and Parameterization of Digital Relay Protection in Traction Substations	75	6
48.3	223	Train Brakes	75	6
48.4	217	Braking Systems of Rolling Stock of Metropolitan	75	6
49.1	1363	Ongoing Maintenance and Repair of Traction Substation Facilities	75	6
49.3	1378	Maintenance of Subway Trains	75	6
49.4	1345	Operation of Electric Locomotives	75	6