

# "Todor Kableshkov" University of Transport

Faculty: Telecommunications and Electrical Equipment in Transport

Programme: Automation, Electronics and Computer Management in Electric Transport

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	871	Mathematics	75	7
2	1114	Physics	75	7
3	821	Informatics	60	7
4	703	Economic History	45	4
5	702	Economics	45	4
6	881	Applied Mathematics	75	8
7	715	Foreign Language - English, German, French, Russian	75	7
8	824	Computer Technologies and Programming	75	6
9	1101	Theoretical Electrical Engineering part I	75	8
10	1102	Theoretical Electrical Engineering part II	75	8
11	13123	Principles of Electronics	60	5
12	1110	Electrical and Electronic Measurements	75	8
13	1216	Materials and Technologies in Electronics	45	4
14	904	mechatronic systems	45	5
15	13165	Technical and Fire Safety	45	3
16	1398	Electromechanical Devices	75	7
17	13124	Theory of Management	60	6
18	13125	Analog and Pulse Circuitry	60	7
19	13122	Electromechanical Devices - make a project	0	3
20	13126	Schematics - practicum	60	4
21	13127	Digital and Microprocessor Technique	60	5
22	13198	Sensor and transducer technology	60	7
23	1383	Electrical Power Supply of the Electric Transport	60	5
24	1010	Computer Graphics for Engineers (Electrical Specialists)	45	3
25	13129	Technically Automation Tools	75	7
26	13130	Technically Automation Tools - make a project	0	3
27	13199	Power electronic converters in electric transport	75	7
28	1380	Electrical equipment of electric transport	60	6
29	1385	Microprocessor systems in electric transport	60	6
30	13133	Automatics in Electrical Transport	60	6
31	1375	Computer diagnostic systems in electric transport	60	7
32	13135	Management of Electromechanical Systems	75	8
33	13136	Computer-aided Design of Project Documentation	75	6
34	13137	Microprocessor System Setup and Diagnostics	75	8
35	719	Physical Education and Sports	0	0
	1223	Thermal Treatment	0	0
	1225	Turnery	0	0
	1224	Locksmith	0	0

	1221	Casting	0	0
	1379	Training practice in electrical technology	0	0
	1222	Welding	0	0
<i>Elective courses</i>				
36.1	707	Course in Foreign Language in Engineering	45	3
37.1	13210	Systems for control and protection in electric vehicles	45	6
37.2	13211	Systems for control and protection of power supply facilities of electric transport	45	6
38.1	13140	Electric Drives Control Algorithms of Electrical Vehicles	45	6
38.2	13141	Automatics and Control of Electric Power Supplies Equipment of Electric Transport	45	6
38.3	13142	Design and Simulation of Circuits in the Programmable Environment	45	6
39.1	13228	Course project on "Power electronic converters in electric transport"	0	3
39.2	13144	Electrical Equipment in Electrical Transport - make a project	0	3
39.3	13145	Management of Electromechanical Systems - make a project	0	3
40.1	1323	Advanced Systems for Construction of Traction Power Supply Stations	45	6
40.2	1326	Contemporary Trends in the Traction Power Supply and Electric Drives Systems in the Electric Transport	45	6
<i>Optional courses</i>				
41.1	13148	Schemes of Main Electrical Circuits and Automation of Electrical Transport Vehicles of Urban Transport	75	6
41.2	13149	Schemes of Main Electrical Circuits and Automation of Electrical Rolling Stock in the Rail Transport	75	6
41.3	13150	Schematics of Main Electrical Circuits and Automation of Power Supply Systems in Electric Transport	75	6
41.4	13151	Design of Electronic Control Circuits for Driving Electrical Transport Vehicles	75	6
42.1	13152	Electronic Devices and Control Systems for Electrical Vehicles in the Public Transport	75	6
42.2	13153	Electronic Devices and Control Systems for Electrical Rolling Stock in Rail Transport	75	6
42.3	13154	Electronic Devices and Control Systems for Power Supply Systems in the Electrical Transport	75	6
42.4	13155	Design of Electronic Circuits for Management of Power Supply and Building Systems	75	6
43.1	13156	Diagnostics and Repair of Electronic Devices for Electrical Transport Vehicles for Public Transport	75	6
43.2	13157	Diagnostics and Repair of Electronic Devices for Electrical Rolling Stock for Railway Transport	75	6
43.3	13158	Diagnostics and Repair of Electronic Devices for Power Supply Systems in Electrical Transport	75	6
43.4	13159	Programming Microcontrollers and Working with PLC	75	6