

"Todor Kableshkov" University of Transport

Faculty: Machinery and Construction Technologies in Transport

Programme: Rolling Stock for High Speed Trains and Subway

Degree: Bachelor

Mode of study: Part 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	38	7
2	1207	Chemistry	23	4
3	715	Foreign Language - English, German, French, Russian	45	6
4	702	Economics	30	4
5	1201	Material Science and Technology	45	8
6	812	Mathematics part II	38	7
7	1114	Physics	45	7
8	821	Informatics	45	6
9	1011	Applied Geometry and Engineering Drawing I	23	3
10	906	Theoretical Mechanics part I	30	6
11	813	Mathematics part III	30	6
12	907	Theoretical Mechanics part II	30	6
13	1012	Applied Geometry and Engineering Drawing II	23	3
14	902	Strength of Materials	53	7
15	278	Heat Transfer Equipment	30	5
16	1002	Computer Drawing for Engineers	23	3
17	903	Theory of Mechanisms and Machines	30	5
18	1116	Electrical Engineering and Electronics	45	6
19	1013	Metrology and Measurement Equipment	30	4
20	908	Fluid Mechanics	30	5
21	1008	Machine Elements	53	8
22	1009	Machine Elements - make a project	0	2
23	1341	Electrical Machines, Apparatuses and Drive	30	4
24	1205	Mechanical Engineering Technologies	38	5
25	202	Rolling stock	30	6
26	690	Hydraulic and Pneumatic Drives and Equipment	30	5
27	1360	Electrical Railway Equipment	38	5
28	706	Specialized Course in a Foreign Language	23	5
29	222	Train Traction	23	4
30	201	Technical Safety and Ecology	23	4
31	279	Reliability of Vehicles	30	5
32	284	Brake Systems in Railway Vehicles	23	4
33	190	Rail Transport Technology and Organization	30	5
34	376	Railway infrastructure	23	5
35	281	Railway Equipment Testing and Diagnostics	38	10
36	282	Railway Equipment Repair	38	6
37	703	Economic History	23	3
38	230	Railway Equipment Dynamics	38	9

	1222	Welding	3	0
	1221	Casting	3	0
	1223	Thermal Treatment	3	0
	1225	Turnery	3	0
	1224	Locksmith	3	0
<i>Elective courses</i>				
39.1	215	Rolling stock for high-speed trains	45	6
39.2	266	Metropolitan Rolling Stock	45	6
40.1	216	Project in Rolling stock for high-speed trains	0	4
40.2	291	Metropolitan Rolling Stock - make a project	0	4
41.1	13160	Propulsion Equipment and Energy Supply of High-Speed Trains	30	6
41.2	13161	Propulsion Equipment and Energy Supply of Rolling Stock for Subway	30	6
42.1	192	European Rail Traffic Management (ERTMS) and Interoperability Management System	23	5
42.2	2191	Traffic Management and Control	23	5
<i>Optional courses</i>				
43.1	194	Technical Operation and Traffic Safety in Subway Areas	30	4
43.2	141	Railways Technical Operation and Traffic Safety	30	4
44.1	1350	Structure and Systems for Control and Protection of Subway Trains	45	6
44.2	1338	Control Systems of Electric Locomotives	45	6
44.3	286	Structure, Systems and Technical Control of Railway Wagons	45	6
45.1	1378	Maintenance of Subway Trains	38	5
45.2	1345	Operation of Electric Locomotives	38	5
45.3	236	Railway Wagon Operation	38	5
46.1	217	Braking Systems of Rolling Stock of Metropolitan	38	5
46.2	223	Train Brakes	38	5