

# "Todor Kableshkov" University of Transport

Faculty: Telecommunications and Electrical Equipment in Transport

Programme: Telecommunications and Computer Engineering and Systems

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	1002	Computer Drawing for Engineers	45	4
5	702	Economics	45	4
6	826	Programming and Information Technologies - practicum	0	1
7	812	Mathematics part II	75	7
8	715	Foreign Language - English, German, French, Russian	90	6
9	824	Computer Technologies and Programming	75	7
10	1101	Theoretical Electrical Engineering part I	90	8
11	571	Computer System Organization - practicum	0	2
12	815	Mathematics part III	60	6
13	1102	Theoretical Electrical Engineering part II	60	6
14	566	Algorithms Analysis and Synthesis	60	4
15	1110	Electrical and Electronic Measurements	75	5
16	567	Databases	45	3
17	501	Semiconductor Elements	75	6
18	552	Computer Systems and Architectures	75	7
19	553	Signals and Systems	75	7
20	568	Digital and Analogue Circuit Design	75	6
21	570	Operating Systems	75	6
22	569	Technical Resources for Management and Control	45	3
22	555	Analysis and Synthesis of Analogue and Pulse Circuits and Devices - practicum	0	0
24	572	Microcontrollers and Microprocessor Systems	75	7
25	573	Object-Oriented Programming and Web Design	45	4
26	556	Information-Managing Systems and Processes	60	5
27	557	Information Theory and Channel Encoding	60	5
28	583	Reliability and Quality of Software	45	4
29	534	Optic Technologies and Networks	60	5
30	512	Radio Communications	75	7
31	558	Computer Communications and Networks	45	4
32	559	Discrete Structures	60	6
33	584	Risk Management Systems for Technological Processes	75	7
34	585	Project in Risk Management Systems for Technological Processes	0	3
35	561	Communication and Computer Terminals	75	6

36	586	Design of Communication and Computer Engineering	45	3
37	587	Design of Communication and Computer Engineering - make a project	0	3
38	588	Fault-tolerance computer systems	75	6
39	589	Modeling and Simulation of Communication and Computer Systems	45	3
40	564	Measurement, Control and Diagnostics of Computer and Communication Systems	75	7
41	590	Computer Systems for Monitoring and Control in Transport	75	7
42	719	Physical Education and Sports	0	0
<i>Elective courses</i>				
43	707	Course in Foreign Language in Engineering	45	3
44.1	526	Mobile Telecommunications	60	5
44.2	562	Sensors and Personal Wireless Networks	60	5
45.1	550	Intelligent Systems for Security and Protection	60	4
45.2	563	Fixed Networks	60	4
46.1	527	Terminal Interfaces and Protocols	60	6
46.2	565	Computer-based on-board Safety Systems	60	6
<i>Optional courses</i>				
47	591	Parametrization and diagnosis of safety equipment	45	4
48	188	Regulations in Railway Transport	45	4
49	593	Operation of Communication and Safety Equipment	75	6
50	592	Safety Management Systems of Safety Processes	45	4