

"Todor Kableshkov" University of Transport

Faculty: Telecommunications and Electrical Equipment in Transport

Programme: KST

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	8
2	566	Algorithms Analysis and Synthesis	45	4
3	821	Informatics	60	7
4	5105	Introduction to Cyber Security	45	5
5	702	Economics	45	5
6	881	Applied Mathematics	75	8
7	715	Foreign Language - English, German, French, Russian	75	7
8	5108	Fundamentals of object-oriented programming	60	7
9	570	Operating Systems	60	7
10	572	Microcontrollers and Microprocessor Systems	75	8
11	5114	Linux Operating Systems	45	4
12	5110	Technical means of security and protection	45	5
13	5111	Finite automata theory	75	8
14	567	Databases	45	4
15	552	Computer Systems and Architectures	75	7
16	5112	Intrusion detection and prevention systems	60	8
17	5113	Security of computer systems	60	6
18	569	Technical Resources for Management and Control	45	3
19	5115	Power supply systems in computer technology	45	6
20	5116	A social engineer	45	5
21	573	Object-Oriented Programming and Web Design	45	5
22	556	Information-Managing Systems and Processes	60	6
23	583	Reliability and Quality of Software	45	5
24	5117	Design and security of industrial applications	75	6
25	5118	Design and security of industrial applications - KP	0	3
26	5119	Types of attacks in computer networks	60	7
27	558	Computer Communications and Networks	45	5
28	584	Risk Management Systems for Technological Processes	75	7
29	585	Project in Risk Management Systems for Technological Processes	0	3
30	589	Modeling and Simulation of Communication and Computer Systems	45	4
31	5121	Designing Cyber Security Systems	60	6
32	5122	Designing Cyber Security Systems - Course Project	0	3
34	564	Measurement, Control and Diagnostics of Computer and Communication Systems	60	4
35	5126	Corporate security	60	4
36	5127	Hazard management systems	45	3

37	590	Computer Systems for Monitoring and Control in Transport	75	6
38	719	Physical Education and Sports	0	0
39	5106	Educational practice on computer networks - Part I	0	0
40	571	Computer System Organization - practicum	0	0
41	5107	Educational practice on computer networks - Part II	0	0
<i>Elective courses</i>				
42.1	5120	Security management and regulatory framework	60	5
42.2	559	Discrete Structures	60	5
43.1	707	Course in Foreign Language in Engineering	45	3
44.1	5129	Introduction to Artificial Intelligence and Applications in Security	60	6
44.2	5123	Applied Cryptography	60	6
45.1	5124	Security of mobile communications	45	4
45.2	5125	Cloud based systems and protection of user data therein	45	4
46.1	5128	National security and cyber security of the state	45	3
46.2	565	Computer-based on-board Safety Systems	45	3
<i>Optional courses</i>				
47	703	Economic History	45	4