Degree Structure

#	*Activity Type*	*ECTS cr*
1.	**Basic studies**	**134**
	General studies	71
	Basic professional studies	63
2.	**Professional studies**	**67**
3.	**Elective studies**	**6**
	Professional studies	6
4.	**Practice and Scientific Research**	**24**
5.	**Final Certification**	**9**
	Total	**240**

Courses

#	*Course Name*	*Period (semester)*	*ECTS cr*
Basic General Studies*(71 ECTS cr)*			
1.	Physical culture	1,2,3,4,5,6	2
2.	Foreign language	1,2,3,4	20
3.	History	1	3
4.	Philosophy	5	3
5.	Economics	5	4
6.	Mathematics	1,2,3	20
7.	Physics	2,3	12
8.	Life safety	7	3
9.	Jurisprudence	7	2
10.	Ecology	7	2
Basic Professional Studies*(63 ECTS cr)*			
11.	Computer science	1	3
12.	Theory of automata and formal languages	5	3
13.	Methods of computing	4	2
14.	Basics of programming	1	4
15.	Programming on high-level languages	2	4
16.	Object-oriented programming	3	4
17.	Operating systems	5	3
18.	Optimization methods and operation research	7	4
19.	Algorithms and complexity analysis	3	3
20.	Stochastic theory and mathematical statistics	4	4
21.	Database technologies	5	3
22.	Discrete mathematics	1	4
23.	Complex analysis	3	3
24.	Computer networks	5	3
25.	Applied software packages	2	2
26.	Functional analysis	4	3
27.	Geographical information systems	7	3
28.	Applied problems of stochastic theory	8	3
29.	Differential and difference equations	4,5	5
Professional Studies *(67 ECTS cr)*			
30.	Basics of Web programming	5	3
31.	Mathematical logic and theory of algorithms	4	3
32.	Structures and algorithms of data processing	4	3
33.	Architecture of computing systems	2	2
34.	Practice on professional activities	6,7,8	6
35.	Basics of parallel programming	6	3
36.	Unix/Linux operating systems	6	4
37.	Basics of .Net programming	5	3
38.	Java programming	6	3
39.	Software engineering	6	4
40.	Enterprise automation	7	3
41.	Web-design	6	3
42.	Functional and logical programming	7	3

43.	Mobile programming	8	3
44.	Analytical information processing technologies	8	2
45.	Basics of cloud computing	8	3
46.	Management of IT-projects	8	2
47.	Physical principles of computers	4	2
48.	Finite graph theory and its applications	6	2
49.	Computer graphics	7	3
50.	Information systems security	8	3
51.	Modeling of information processes	4	2
52.	Intellectual systems and technologies	7	2
Elective Professional Studies ***(total 6 ECTS cr)***			
53.	Social and ethical issues of IT	2	2
54.	History of information technology		
55.	Basics of computer games development	6	4
56.	Games development of social networks		
Practice and Scientific Research***(24 ECTS cr)***			
57.	Teaching and technological practice	2	6
58.	Teaching practice, research project	4	6
59.	Industrial and technological practice	6	6
60.	Industrial practice, research project	8	6
Final Certification***(9 ECTS cr)***			
61.	Bachelor's thesis and seminar	8	9