

## Software Engineering (bachelor degree) Curriculum

Subjects	Credits
<b>Humanitarian block</b>	
National history	5
Philosophy	3
Foreign language	7
Economics	4
Law	2
Russian language and speech standards	2
Sociology	2
Advances studies of foreign language	3
Culture studies	2
<b>Optional disciplines - 1</b>	
Psychology and pedagogy	3
Psychology of production activity	3
<b>Optional disciplines - 2</b>	
Rhetoric	4
Communication processes in modern society	4
<b>Optional disciplines - 3</b>	
Information law and protection of intellectual property	4
Technology transfer	4
<b>Mathematics and natural science block</b>	
Mathematical analysis	11
Algebra and geometry	6
Mathematical logics and theory of algorithms	4
Discrete mathematics	4
Probability theory and mathematical statistics	9
Theory of automata and formal languages	3
Calculus mathematics	5
Systems theory and system analysis	7
System modelling	7
Operations studies	7
<b>Optional disciplines - 1</b>	
Artificial intelligence systems	4
Expert systems	4
<b>Optional disciplines -2</b>	
Modelling and analysis of business processes	7
IT - consulting	7

<b>Subjects</b>	<b>Credits</b>
<b>Professional block</b>	
Computing and programming	9
Algorithms and data structures	3
Intoduction to software engineering	2
Operating systems and networks	4
Computer system architecture	4
Database organization	2
Design of human-machine interface	7
Software systems design and architecture	2
Software testing	2
Requirements development and analysis	2
Software project management	4
Software engineering economics	2
Survival studies	2
Software design	2
Computer systems, networks and communication	3
Computer graphics	7
Data warehousing	4
Internet programming	3
Databases	6
Information security	5
Object-oriented programming and analysis	4
Geographic information systems	4
<b>Optional disciplines - 1</b>	
Education research activity	8
IT - management	8
<b>Optional disciplines - 2</b>	
Functional and logic programming	9
Knowledge bases	9
<b>Optional disciplines - 3</b>	
Integrated CASE tools	2
Program engineering tools and technics	2
<b>Elective course</b>	
Accounting information systems	3
<b>Physical education</b>	
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