

Years of Study: 2018/2019 - 2021/2022
Length of Programme: 4 years
Mode of Study: Full Time
Degree: Bachelor's degree

Faculty of Economics, Management and Business Informatics, Perm

Block Code	Course	Credits	Credits by Years				Planned Educational Programme Development Results (competencies according to the educational standard)
			1	2	3	4	
	Degree Programme	240	60	60	60	60	
	General Courses	5	5				
1	Safe Living Basics	1	1				-1
2	Physical Training	0	0		0		-32
3	History	4	4				-1, -2, -3
	Courses of the Professional Programme Part (Major)	152	38	39	39	36	
	Basic Components	121	38	39	29	15	
1	Calculus	8	8				-2
2	Algebra	8	8				-1, -2
3	Programming	10	10				-1, -2, -3, -4, -10, -11, -16, -17, -19, -6
4	Discrete Mathematics	8	8				-1, -2, -4, -12, -13, -6
5	Introduction into Software Engineering	4	4				-1, -2, -4, -6, -10, -16, -18, -19, -23, -26, -7
6	Computer System Architecture	4		4			-1, -10, -11, -16, -17, -9
7	Operating Systems	4		4			-16, -17, -9, -1, -2, -10, -11, -12, -14, -15
8	Probability Theory and Mathematical Statistics	5		5			-2, -3
9	Statistical and Empirical Methods of Computing	5		5			-2, -3, -1
10	Algorithms and Data Structures	8		8			-4, -13, -16, -17, -7
11	Databases	5		5			-6, -1, -2, -3, -10, -11, -12, -15, -16, -17, -19
12	Software Design	8		8			-1, -10, -12, -14, -16, -17, -19
13	Group Dynamics and Communication in Software Engineering Professional Practice	5		5			-7, -8, -20, -21, -24, -28, -29, -30, -31, -34, -35, -5
14	Software Engineering Economics	5		5			-4, -7, -8
15	Software Quality Assurance and Testing (offered in English)	5		5			-23, -8, -1, -2, -10, -11
16	Development and Analysis of Requirements	5		5			-23, -118, -139, -18, -23, -27, -3
17	Intellectual Law	4		4			-31, -35
18	Software Systems Architecture Design	5		5			-2, -3, -4, -6, -10, -12, -13, -14, -15, -16, -19, -27, -9
19	Software Project Management	6			6		-25, -7, -4, -3, -22, -24
20	Distributed Computing (offered in English)	4			4		-3, -5, -3, -4, -6, -10, -11, -12, -13, -14, -15, -16, -17, -9
21	Philosophy of Science	5			5		-1, -2, -6, -9, -30, -31, -33, -36
22	English Language Integrative Exam						-1, -10, -8
23	Independent English Language Test						-1, -10, -8
	Elective Courses	31		10	21		
	Elective Courses (3d Year, 1 Term)	5		5			
1	Computer Graphics	5		5			-3, -10, -11, -12, -16, -17, -4, -1, -2
2	Machine Learning 1	5		5			-3, -1, -2
3	High-Performance Computing	5		5			-1, -2, -3
4	Formal Languages (offered in English)	3		3			-1, -3, -2
5	Compilers	4		4			-1, -2, -3
	Elective Courses (3d Year, 2 Term)	5		5			
1	Mobile Development	5		5			-10, -11, -6, -9, -12, -13, -14, -16, -4, -17, -3
2	Modern Programming Languages and Technologies	5		5			-1, -3, -4, -6, -10, -11, -12, -13, -14, -16, -17, -9
3	Integration, Processing and Visualization of Data	5		5			-11, -14, -2, -3, -6
	Elective Courses (4th Year)	21			21		
1	Data Analysis Technologies in Internet	7			7		-1, -2, -16, -17, -3
2	Web Programming	7			7		-15, -16, -17, -18, -7
3	Intelligent Systems	7			7		-1, -2, -16, -17, -3
4	Neuron Networks	7			7		-1, -2, -16, -17, -3
5	Semantic system	7			7		-2, -3, -1, -16, -17
	Extra Profile (Minor)	20		10	10		
1	Minor	20		10	10		-1, -2, -3
	Internships, Projects and/or Research Activity	60	17	11	11	21	
	Internship	15	3	3	3	6	
1	Educational Internship	3	3				-8, -10, -16, -23, -6
2	Technological Internship	3		3			-8, -10, -15, -17, -23, -25, -6
3	Work Experience Internship	3			3		-10, -15, -17, -19, -22, -23, -24, -25, -26, -27, -7
4	Graduation Internship	6				6	-8, -2, -10, -11, -16, -23, -24, -25, -26, -27, -7
	Project	6		0	6		
1	Software Engineering Capstone Design Project	6				6	-8, -6, -16, -25, -28, -29, -30, -31, -9, -4, -7, -4, -5, -6, -7, -10, -11, -12, -13, -19, -20, -21, -23, -24, -1
	Research Seminar/Project Seminar	12	3	3	3	3	
1	Research Seminar	12	3	3	3	3	-1, -2, -6, -2, -4, -5
	Research Seminar						
1	Research Seminar "Formal Methods in Software Engineering"	3			3		-2, -4, -5, -1, -2, -6
2	Research Seminar "Analytics in IoT"	3			3		-2, -4, -5, -1, -2, -6
3	Research Seminar "Data Analysis Methods in Software Engineering"	3			3		-2, -4, -5, -2, -6, -1
4	Research Seminar "Technology of Distributed Ledger Systems"	3			3		-1, -2, -6, -5, -2, -4
5	Research Seminar "Data and Knowledge Management"	3			3		-2, -4, -5, -1, -2, -6
6	Research Seminar "Cloud Technology"	3			3		-6, -1, -2, -4, -5, -2
	Term Papers	15	5	5	5		
1	Term Paper	15	5	5	5		-6, -9, -10, -1, -2, -9, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -23, -8, -3, -5, -5, -21, -8
5	Computer Practice in Application Suite	3	3				-1
6	Computer Practice in Foundations of Algorithmization and Programming Techniques	3	3				-3, -10, -11, -17, -18, -9
7	Graduation Thesis	6				6	-3, -5, -2, -3, -4, -10, -11, -12, -13, -14, -15, -17, -18, -19, -23, -6, -29, -30, -31, -32, -33, -34, -35, -36, -9, -1, -2, -4, -6, -7, -8, -10, -1, -2, -5, -7, -8, -9, -16, -20, -21, -5, -7, -24, -25, -26, -27, -28
8	Project Proposal	3					-10, -31, -36
	Final State Certification (FSC)	3	0		3		
1	Graduation Thesis	3				3	-21, -22, -23, -24, -25, -26, -27, -28, -29, -30, -31, -32, -33, -34, -35, -36, -9, -1, -2, -3, -4, -6, -7, -8, -9, -10, -1, -2, -3, -4, -5, -6, -7, -8, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -20
	Optional Courses	0					
1	English Language	14	8	6			-1, -5, -7, -8
2	Academic English Writing	2				2	-1, -2, -5, -6, -8, -5