

Informatics

Bachelor, academic studies

3 years, 180 ECTS points

Obligatory courses for all (59 ECTS), with recommended year of enrollment:

Year	Semester	Code	Course	Contact hours	ECTS
1	W	I011	Introduction to programming	2+2+1	9
1	S	I021	Data structures and algorithms I	2+1+2	8
2	W	I031	Databases I	2+1+2	7
2	W	I032	Object-oriented programming I	2+2+2	7
2	W	I033	Data structures and algorithms II	2+1+2	7
2	W	I034	Discrete mathematics I	3+2+0	7
3	W	I051	Operating systems I	2+2+1	7
3	W	I052	Information systems I	2+2+1	7

Obligatory courses for elective module 'Computer Science' (85 ECTS), with recommended year of enrollment:

Year	Semester	Code	Course	Contact hours	ECTS
1	W	I111	Elements of mathematical logic	3+3+0	9
1	W	I112	Mathematical analysis I	3+3+0	9
1	S	I121	Fundamentals of algebra	3+3+0	8
1	S	I122	Mathematical analysis II	3+3+0	8
2	S	I141	Programming languages	2+1+2	7
2	S	I142	Formal languages and automata	3+3+0	8
2	S	I142	Linear algebra	3+2+0	7
3	W	I151	Artificial intelligence I	2+2+1	7
3	W	I152	Algorithm analysis	3+3+0	8
3	S	I161	Computer graphics I	2+2+1	7
3	S	I162	Numerical analysis	3+2+0	7

Obligatory courses for elective module 'Information technologies' (80 ECTS), with recommended year of enrollment:

Year	Semester	Code	Course	Contact hours	ECTS
1	W	I211	Theoretical foundations of informatics I	3+3+0	8
1	W	I222	Mathematical analysis for informatics	3+3+0	8
1	S	I221	Introduction to e-business	2+1+1	7
1	S	I222	Algebra for informatics	3+3+0	8
2	S	I241	Databases II	2+1+2	7
2	S	I242	Computer organization	2+1+1	7
2	S	I243	Computer networks	2+1+1	7
3	W	I251	Software engineering	4+1+1	8
3	W	I252	Theoretical foundations of informatics II	2+2+0	6
3	S	I261	Operating systems II	2+1+2	7
3	S	I262	Information systems II	2+1+2	7

Elective courses for all, up to 180 ECTS.

	Code	Course	Contact hours	ECTS	Availability according to				
					years			modules	
					1	2	3	CS	IT
Winter semester	M172	English language I	2+0+0	4	+	+	+	+	+
	M311	Economy	4+0+0	5	+	+	+	+	+
	I311	Software practice I	1+0+3	6	+	+	+	+	+
	M431	Boolean algebra and optimization	2+3+0	5		+	+	+	+
	I331	Seminar paper A	1+0+3	6		+	+	+	+
	M331	Finances I	3+3+0	8		+	+	+	+
	I251	Software engineering	4+1+1	8			+	+	
	I151	Artificial intelligence I	2+2+1	7			+		+
	I152	Algorithm analysis	3+3+0	8			+		+
	M341	Accounting	3+2+0	7			+	+	+
	I351	Applied analysis	2+2+0	6			+	+	+
	MB414	Selected topics from applied algebra	2+2+0	6			+	+	+
Summer semester	M182	English language II	2+0+0	4	+	+	+	+	+
	M183	Sociology	2+0+0	4	+	+	+	+	+
	I321	Fundamentals of digital electronics	3+3+0	8	+	+	+	+	+
	M321	Financial mathematics I	3+4+0	9	+	+	+	+	+
	I221	Introduction to e-business	2+1+1	7	+	+	+	+	+
	I322	Software practice II	1+0+3	6	+	+	+	+	+
	I241	Databases II	2+1+2	7		+	+	+	
	I341	Object-oriented programming II	2+1+2	7		+	+	+	+
	I242	Computer organization	2+1+1	7		+	+	+	
	I243	Computer networks	2+1+1	7		+	+	+	
	I141	Programming languages	2+1+2	7		+	+		+
	I143	Linear algebra	3+2+0	7		+	+		+
	I342	Discrete mathematics II	2+3+0	6		+	+	+	+
	MB221	Theory of information and coding	3+3+0	8		+	+	+	+
	I361	Seminar paper B	1+0+3	4			+	+	+
	I161	Computer graphics I	2+2+1	7			+		+
	I162	Numerical analysis	3+2+0	7			+		+
	I261	Operating systems II	2+1+2	7			+	+	
I262	Information systems II	2+1+2	7			+	+		

Software practice 1 (winter semester):

Software practice 1 (winter semester)	Software practice 2 (summer semester)
Desktop publishing	Visual programming
Office automation	Web design
Symbolic computation	Multimedia