

**Schedule of study programme implementation: computer science second degree**

mode of study: full-time study

Institute of Computer Science

ITEM	NAME OF A GROUP OF COURSES/NAME OF A COURSE	COURSE USOS CODE	ECTS points	Exam after semester	Course credit after semester	A number of hours in the course								I year				II year				ECTS points acquired during the course:					
						TOTAL	LECTURES	CLASSES	DISCUSSION CLASSES	LABORATORIES	FOREIGN LANGUAGE CLASSES	SEMINARS/PROSEMINARS	FIELD CLASSES	1 sem.		2 sem.		3 sem.		4 sem.							
														LECTURES	C/DC/L/FLC/SaP/FC	LECTURES	C/DC/L/FLC/SaP/FC	LECTURES	C/DC/L/FLC/SaP/FC	LECTURES	C/DC/L/FLC/SaP/FC	elective	with direct participation of academic teachers or other persons conducting classes and students	from the area of humanities or social sciences*	connected with scientific activity carried out at the university in the discipline or disciplines the field of study is assigned to, for the study of a general academic profile	developing practical skills, for the study of a practical profile	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
<b>Group of Courses_ 1 General Education</b>																											
1	Intellectual Property Rights	420-IS2-1OWI-22CS	1		1	10	10							10										0,5			
2	Foreign language	420-IS2-1JAI-22 / 420-IS2-1JN1-22 / 420-IS2-1JR1-22 / 420-IS2-1JPI-22	2		1	30					30			30								2	1,5				
3	English for IT Professionals	420-IS2-1JAI-22CS	2		2	30					30					30							1,5				
4	Course to choose from humanities		2		3	10	10											10				2	0,5		2		
5	Course to choose from social sciences		3		4	25	10			15										10	15	3	1,2		3		
<b>TOTAL</b>			<b>10</b>			<b>105</b>	<b>30</b>			<b>15</b>	<b>60</b>			<b>10</b>	<b>30</b>		<b>30</b>	<b>10</b>		<b>10</b>	<b>15</b>	<b>7</b>	<b>5,2</b>		<b>5</b>		
<b>Group of Courses_ 2 Main courses</b>																											
1	Modelling and Analysis of IT Systems	420-IS2-1MASI-22CS	3		1	30	15			15				15	15									1,7			
2	Advanced Databases	420-IS2-1ZBD-22CS	4	1		45	15			30				15	30									2,4			4
3	Global Optimization	420-IS2-1OG-22CS	4		1	45	15			30				15	30									2,4			4
4	Algebraic Methods in Computer Science	420-IS2-1MAL-22CS	4		2	45	15	30								15	30							3			
5	Introduction to Fuzzy Modelling and Analysis	420-IS2-1MSR-22CS	4	2		45	30			15						30	15							2,4			4
6	Rule-based and Expert Systems	420-IS2-1SE-22CS	3		2	30	15			15						15	15							1,6			3
7	Massively Parallel Computations	420-IS2-1MOR-22CS	4		2	45	15			30						15	30							3			4
8	Deep Learning	420-IS2-1GUM-22CS	4	2		45	15			30						15	30							2,4			4
9	Security of Data and IT Systems	420-IS2-2BDSI-22CS	4	3		45	15			30								15	30					2,4			2
10	Advanced Algorithms and Data Structures	420-IS2-2ZASD-22CS	4	3		45	30			15								30	15					2,4			4
11	Management of IT Projects	420-IS2-2ZPI-22CS	4	4		30	15			15										15	15			1,7			4
<b>TOTAL</b>			<b>42</b>			<b>450</b>	<b>195</b>	<b>30</b>		<b>225</b>				<b>45</b>	<b>75</b>	<b>90</b>	<b>120</b>	<b>45</b>	<b>45</b>	<b>15</b>	<b>15</b>		<b>25,4</b>		<b>33</b>		

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
<b>Group of Courses_ 3 Elective courses</b>																											
1	Analytic Methods in Computer Science1 1)	420-IS2-1MAI-22CS / 420-IS2-1GAGK-22CS	4		1	45	15	30						15	30								4	2,2			
2	Advanced Object-Oriented Programming	420-IS2-1ZPC-22CS / 420-IS2-1ZPJ-22CS / 420-IS2-1ZPO-22CS	4		1	30	15			15				15	15								4	1,7		4	
3	Multimedia Techniques and Systems	420-IS2-1TMUL-22CS / 420-IS2-1AISM-22CS / 420-IS2-1IMSU-22CS	4		2	30	15			15				15	15								4	1,7		4	
<b>TOTAL</b>			<b>12</b>			<b>105</b>	<b>45</b>	<b>30</b>		<b>30</b>				<b>45</b>	<b>60</b>							<b>12</b>	<b>5,6</b>		<b>8</b>		
<b>Specialization module_ 1 (Internet and Mobile Technologies)</b>																											
<b>Group of Courses_ 4A Specialization courses</b>																											
1	Internet Applications Design	420-IS2-1PAI-22CS	4		1	30	15			15				15	15									1,7		4	
2	Virtual Technologies and Containers	420-IS2-1TWK-22CS	4		1	30	15			15					15	15								1,7		4	
3	Data Serialization Formats	420-IS2-1TXP-22CS	4		2	45	15			30					15	30								2,4		4	
4	Mobile Technologies	420-IS2-1TMO-22CS	3		2	30	15			15					15	15								1,7		3	
5	Internet Data Analysis	420-IS2-2ADI-22CS	3	3		30	15			15							15	15						1,7		3	
6	Internet Frameworks	420-IS2-2PFI-22CS	4		3	45	15			30							15	30						2,4		4	
7	Mobile Applications Programming	420-IS2-2PAM-22CS	4		3	45	15			30							15	30						2,4		4	
8	Network Programming	420-IS2-2PSS-22CS	4	3		45	15			30							15	30						2,4		2	
<b>TOTAL</b>			<b>30</b>			<b>300</b>	<b>120</b>			<b>180</b>				<b>15</b>	<b>15</b>	<b>45</b>	<b>60</b>	<b>60</b>	<b>105</b>				<b>16,4</b>		<b>28</b>		
<b>Group of Courses_ 5 Diploma Module</b>																											
	M.Sc. Diploma Seminar 1	420-IS2-2SM1-22CS	3		3	30						30						30				3	1,7			3	
	M.Sc. Diploma Seminar 2	420-IS2-2SM2-22CS	3		4	30						30								30		3	1,7			3	
	M. Sc. Diploma Preparation Class 1	420-IS2-2PM1-22CS	2		3	15				15								15				2	1,5			2	

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	M. Sc. Diploma Preparation Class 2	420-IS2-2PM2-22CS	20		4	45				45											45	20	5		20	
<b>TOTAL</b>			<b>28</b>			<b>120</b>				<b>60</b>	<b>60</b>								<b>45</b>	<b>75</b>	<b>28</b>	<b>9,9</b>		<b>28</b>		
<b>TOTAL</b>			<b>122</b>			<b>1080</b>	<b>390</b>	<b>60</b>		<b>510</b>	<b>60</b>	<b>60</b>		<b>115</b>	<b>180</b>	<b>135</b>	<b>210</b>	<b>115</b>	<b>195</b>	<b>25</b>	<b>105</b>	<b>47</b>	<b>62,5</b>	<b>5</b>	<b>97</b>	

 checksum 1 **1080**

 checksum 2 **1080**

a number of ex./cred.

1	8	2	7	4	5	1	3
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\* a number of ECTS points a student must obtain during classes from the area of humanities and social sciences, at least 5 ECTS points – with regard to the fields of study assigned to the disciplines in the areas other than humanities or social sciences respectively.

Proportional (%) share of ECTS points in each discipline the field of study is assigned to, in a number of ECTS points necessary to complete the study, and indicating the prevailing discipline.	computer science- 89%, mathematics- 3%, linguistics - 3%, law - 1%, culture and religion science - 2%, economics and finance - 2%
Proportional (%) share of ECTS points obtained during elective classes in a number of ECTS points necessary to complete the study, at least 30% of ECTS points necessary to complete the study.	38,52%
Proportional (%) share of ECTS points obtained during classes with direct participation of academic teachers or other persons conducting classes and students in a number of ECTS points necessary to complete the study, at least 50% of ECTS points necessary to complete the study.	51,23%
For the study of a general academic profile – proportional (%) share of ECTS points obtained during classes connected with scientific activity carried out at the university in the discipline or disciplines the field of study is assigned to, in a number of ECTS points necessary to complete the study, more than 50% of ECTS points necessary to complete the study.	79,51%
For the study of a practical profile – proportional (%) share of ECTS points obtained during classes developing practical skills in a number of ECTS points necessary to complete the study, more than 50% of ECTS points necessary to complete the study.	