

Graduate programme - INFORMATION TECHNOLOGY 4 semester - study mode: full-time  
applicable from academic year 2022/2023

no	Course name	code	hrs.		sem2 spring	sem3 winter	sem4 spring	ECTS	profile* courses and selective courses scheme							
			lect.	class					A	B	D	E				
S	Database Management	ZBD	26	26	EZ			5	X							
S	Introduction to Big Data	WPBD	26	26	EZ			5				X				
S	Digital Signal and Image Processing	PSO	26	26	EZ			5					X			
S	Cloud Platforms and Technologies	TPC	26	26	EZ			5		X						
2	Data Integration and Data Warehouses	IDH	26	26	EZ			5	(2 elective courses to choose)							
...	Linguistic Engineering	INL	26	26	EZ			5								
...	Data Exploration and Visualization	EWD	26	26	EZ			5								
3	Programming for Data Science	PAD	26	26	Z			5								
4	Puzzle Based Learning (online course)	PUZ	0	int	Z			2								
5	Diploma Seminar	SEM1	26	0	Z			4	(2 elective courses to choose)							
6	block course	/	20		Z			2								
7	Foreign Language	LEK	0	26	Z			3								
8	Setting-up IT Startups	TSI	26	26		Z		4								
S	Introduction to Machine Learning	WUM	26	26		EZ		5							X	X
S	Business Process Modeling and Management	MZP	26	26		EZ		5	X	X		X				
S	Big Data - Modeling, Management, Processing and Integration	BGD	26	26		EZ		5			X					
S	Mobile Wireless Systems	SMB	26	26		EZ		5		X						
S	NoSQL Databases	NBD	26	26		EZ		5	X							
11	Project Management	ZPRO	26	26		EZ		5	(2 elective courses to choose)							
...	Advanced Modeling and Analysis of Information Systems	ZMA	26	26		EZ		5								
12	Data Protection in Big Data Environments	BZBD	26+16int	26		EZ		5								
13	Diploma Seminar	SEM2	26	13		Z		3								
14	block course	/	20			Z		2								
15	Foreign Language	LEK	0	26		Z		3	(1 elective course to choose)							
16	AI Ethics	ESI	26int	0			Z	5								
S	Advanced Methods in Computer Security	ZMI	26	26			EZ	5					X	X		
S	Applications of Machine Learning	ZUM	26	26			EZ	5							X	X
`	Analysis of Large Data Sets	ADD	26	26			EZ	5								
..	Graphs and Their Applications	GIZ	26	26			EZ	5	(1 elective course to choose)							
19	Diploma Seminar	SEM3	26	26			Z	15								
20	block course	/	20				Z	2								
21	Foreign Language	LEK	0	26			Z	3								
<b>Block courses</b>								<b>ECTS required:</b>					<b>93</b>			
1	Service-Oriented Network Systems	SSU	20	0		Z		2								
2	Software Engineering	INN	20	0		Z		2								
3	Advanced Multimedia Techniques	ZTM	4	16		Z		2								
4	Neural Computing	MKR	20	0		Z		2								
5	Knowledge Systems	SWI	20	0		Z		2								
6	Digital Image Processing: Algorithms and Applications	CPO	20	0		Z		2								
7	Wavelet Analysis: Theory and Applications	AFA	20	0		Z		2								

\* STUDY PROFILES:

A = Engineering of Software, Business Processes and Databases  
*area - Databases*  
*field - Software Engineering*  
*area - Project Management*  
*area - Business Applications Programming*  
 B = Technologies for Mobile and Cloud Computing  
 D = Data Science  
 E = Interactive Multimedia

Other markings:

S = profile-specific course (see the assignment matrix on the right)  
 int = part of the course using Internet-based material  
 no = the numbering in this column totals to the number of courses required to complete the programme