Curriculum of the Study Programme 2024/2025 ac.year

Master study programme "Computer Systems" 120 ECTS, full time studies, duration - 2 years

Study Course	Name of the responsible academic staff member	Block	ECTS	Planning				
				1st year			2nd year	
				Semester				
				0	0	1	2	3
Study courses, providing the in-depth understanding of the latest achievements in the industry's theory and practic								
Compulsory study courses			*45*	*30*	*30*	*15*		
Mathematics for System Analysts	E.Liepa	P	6	6				
Security and Privacy Compliance	A.Berežnojs	P	9	9				
System Approach to Computer System Design	R.Kopitovs	P	6	6				
Programming for Data Science	J.Čaiko	P	9	9				
Machine Learning Algorithms	A.Bondarenko	A	6			6		
NoSQL Database Technologies	J.Čaiko	A	6			6		
Latvian for Foreigners/ Business English	S.Plota/ T.Lapaine	A	3			3		
Professional traineeship	V.Gopejenko	T	30		30			
Elective study courses		B	*15*			*15*		
Big Data Architectures	J.Čaiko	B	6					
Data Warehouses	A.Bondarenko	B	6					
Cloud computing	J.Čaiko	B	3					
Blockchain Technology	V.Gopejenko	B	3					
Introduction to Quantum Computing	J.R.Kalniņš	B	3					
Study courses on research work, innovation work, project work and management								
Compulsory study courses			*9*				*9*	
Computer Experiments and Modelling Technologies	V.Gopejenko	A	6					
Philosophy of Science Development and Approaches to Research	O.Pozdņakova	A	3					
Elective study courses								
Professional specialization study courses		C	*12*				*12*	
Information Security Management								
Computer Security Principles and Technologies	A.Berežnojs	C1	3					
WEB Application Security Fundamentals	A.Berežnojs	C1	3					
Security of Computer Networks	A.Berežnojs	C1	3					
Secure Development and DevSecOps	A.Berežnojs	C1	3					
Data Engineering								
Databases and SQL	J.Čaiko	C2	3					
Business Intelligence	V.Gopejenko	C2	3					
Data Engineering	A.Bondarenko	C2	3					
Scalable and Reliable Systems Design	R.Djakons	C2	3					
Machine Learning Engineering								
Data Analysis	V.Gopejenko	C3	3					
Natural Language Processing using Deep Learning	A.Bondarenko	C3	3					
Image Analysis Using Deep Learning	R.Djakons	C3	3					
Advanced Topics in Deep Learning	A.Bondarenko	C3	3					
Elective study courses C (Without Specialization)								
Project Quality Management	A.Mrochko	C0	6					
High-level analytics and knowledge technologies	V.Gopejenko	C0	6					
Software Risk Analysis	A.Mrochko	C0	6					
Business Management*	V.Riashchenko	*	9					
Environment, Labour and Civil Protection*	V.Djakona	*	3					
Qualification traineeship	V.Gopejenko	T	*9*					9
Master's thesis		M	*30*				9	21
		Total:	*120*	*30*		*30*	*30*	*30*

*if this study course has not been mastered at previous levels