

COURSE: COMPUTER SCIENCE ENGINEERING DEGREE STUDY PROGRAMME: PRACTICAL COURSE-SPECIFIC SUBJECTS		
YEAR I	ECTS	ASSESSMENT METHOD
Mathematical Analysis and Linear Algebra	5	exam / pass
Occupational Safety and Health with Elements of Ergonomics	1	pass
Communication and Relationship Building	1	pass
Discrete Mathematics	7	exam / pass
Numerical Methods in Computer Science	6	exam / pass
Fundamentals of Source Code Versioning	1	pass
Algorithms and Data Structures	4	exam / pass
ELECTIVE: Computer Systems Architecture / Functionality, Organization, and Implementation of Computer Systems	3	exam / pass
Foreign Language	4	pass
Intellectual Property Protection	1	pass
ELECTIVE: Fundamentals of Philosophy / History of Philosophy	3	pass
Basics of programming 1	6	pass
Basics of programming 2	6	pass
Computer networks	1	pass
ELECTIVE: Operating Systems / Computer Hardware and Application Management Systems	6	exam / pass
ELECTIVE: Theoretical Foundations of Computer Science / Information Processing Technologies	5	exam / pass
TOTAL	60	
YEAR II	ECTS	ASSESSMENT METHOD
Negotiation and conflict resolution	1	pass
Fundamentals of Computer Graphics	5	exam / pass
Internships	12	pass
Probability and Statistics	3	exam / pass
Software Development Management Systems	1	pass
Foreign Language	4	exam / pass
ELECTIVE: SQL / Database Management Systems	5	exam / pass
ELECTIVE: Data protection / Data security	3	pass
ELECTIVE: Fundamentals of Management Information Systems / Information Management Methodology	3	exam / pass
Object-oriented programming 1	5	pass
Database systems	5	exam / pass
TOTAL	47	
YEAR III	ECTS	ASSESSMENT METHOD
Software Engineering (Team Engineering Project)	3	pass
Internship	14	pass
Object-Oriented Programming 2	6	pass
Software Engineering (Team Engineering Project)	5	exam / pass
Thesis Seminar	2	pass
ELECTIVE: Web Application Programming / Web Application Framework	5	pass
Distributed systems	2	pass
ELECTIVE: Embedded systems / Design of special-purpose systems	6	exam / pass

TOTAL	43	
YEAR IV	ECTS	ASSESSMENT METHOD
Cloud Architecture and DevOps	3	pass
Cybersecurity	4	exam / pass
Diploma Seminar 2	3	pass
Rapid prototyping and design	3	pass
Selected Issues in Marketing and Advertising	4	exam / pass
ELECTIVE: Data Warehouses / Special-Purpose Databases	4	exam / pass
TOTAL	21	

Specialization: Cybersecurity and cloud infrastructure specialization		
YEAR II	ECTS	ASSESSMENT METHOD
Hybrid network architecture	2	exam / pass
Wireless LANs	2	pass
Ethernet and Virtual Local Area Networks (VLAN)	3	pass
Fundamentals of Cybersecurity in Networks	1	pass
Switching and routing in IP networks	2	pass
Wireless networks: Wi-Fi, Bluetooth, LoRaWAN, ZigBee	1	pass
Computer Networks 1	1	exam
Computer Networks 2	1	exam
TOTAL	13	
YEAR III	ECTS	ASSESSMENT METHOD
Firewall, IDS / IPS, VPN - configuration and applications	2	pass
Measurements and Quality Analysis in Packet Networks	2	exam / pass
Design and Sizing of Campus-Class Networks	3	pass
Data transport networks	1	pass
Data transmission in cellular networks	2	pass
Virtual Private Networks (VPN)	1	pass
Cloud Network Infrastructure Management	1	exam / pass
Network programming	1	pass
TOTAL	17	
YEAR IV	ECTS	ASSESSMENT METHOD
AI and machine learning in network traffic analysis	3	pass
Infrastructure as Code (IaC) and containerization in the cloud	2	pass
5G technology	3	exam / pass
VoIP and multimedia in networks (QoS, SIP, RTP)	1	pass
TOTAL	9	

Specialization: Artificial intelligence		
YEAR II	ECTS	ASSESSMENT METHOD
Frameworks for AI	4	pass
Deep learning	3	exam / pass
Machine Learning I	4	exam / pass
Introduction to Artificial Intelligence	2	exam
TOTAL	13	
YEAR III	ECTS	ASSESSMENT METHOD
Programming with LLM	5	exam / pass
Natural Language Processing	3	pass
Machine Learning II	2	exam / pass
Reinforcement Learning	3	exam / pass
Computer Vision	4	exam / pass
TOTAL	17	

YEAR IV	ECTS	ASSESSMENT METHOD
AI Ethics	2	exam
Advanced AI Algorithms	3	exam / pass
AI Applications and Case Studies	4	pass
TOTAL	9	

Specialization: Programming technologies		
YEAR II	ECTS	ASSESSMENT METHOD
System analysis	2	exam / pass
Web applications	3	pass
Fundamentals of Programming 3	4	exam / pass
Fundamentals of Unit Testing	2	pass
Web technologies	2	pass
TOTAL	13	
YEAR III	ECTS	ASSESSMENT METHOD
Online databases	3	pass
IT Project Management	3	exam / pass
Electronic transaction systems	3	exam / pass
Web application testing	3	exam / pass
Web Development with CI / CD elements	5	exam / pass
TOTAL	17	
YEAR IV	ECTS	ASSESSMENT METHOD
Human-computer interaction	2	pass
Computer game programming	4	exam / pass
Artificial intelligence	3	pass
TOTAL	9	