

STUDY PROGRAM

Major: **COMPUTER ENGINEERING**

level of study: **first degree (engineering degree)**

profile: **practical**

study form: **full-time**

specializations: **Computer Networks and Cybersecurity, Software Engineering**

academic year: **2024/2025, 2025/2026, 2026/2027, 2027/2028**

Subject group	Subject
SEMESTER 1	
University-wide courses	Occupational health and safety
	Polish/German/Spanish/English
	Academic life
	Office manager tools
Major courses	Logic and Set Theory
	Mathematical Analysis
	Algorithms and Data Structures
	Introduction to programming
	Programming Languages and Paradigms
SEMESTER 2	
University-wide courses	Polish/German/Spanish/English
	Physical Education
Major courses	Physics
	Linear algebra with geometry
	Computer Architecture
	Operating Systems
	Practical Aspects of Electronics and Electrical Engineering
	Introduction to Software Engineering
SEMESTER 3	
University-wide courses	Entrepreneurship/ Fundamentals of management
	Intellectual property protection
	Communication/Sociology
Major courses	Discrete mathematics
	Databases
	WWW Applications
	Object Oriented Programming
	Basics of Digital Technology
	English language in IT
	Introduction to Computer Networks
SEMESTER 4	
University-wide courses	Physical Education
	Integrative Design I
Major courses	Embedded Systems
	Probabilistic Methods and Statistics
	LINUX class server systems
	Computer Graphics
	Cybersecurity
	Advanced programming language
	Elective course 1

SEMESTER 5	
Major courses	Professional ethics
In the field	Elective course 2
	Elective course 3
	Elective course 4
SEMESTER 6	
Major courses	Artificial Intelligence
Dissertation	Engineering project I
Internship	Internship
SEMESTER 7	
Major courses	Multimedia/Audio processing and music production
University-wide courses	Integrative Design II
Dissertation	Engineering project II
In the field	Information technologies in business/IT systems in organization
	Elective course 5
	Elective course 6
	Elective course 7

Specialization courses:

Computer Networks and Cybersecurity	Software Engineering
Modern telecommunication systems	C# Programming
Network technologies and architectures	Advanced programming in Java
Network operating systems	Software testing
Advanced network techniques	IT project management (Agile, Scrum)
Virtual private networks	Software engineering in the cloud
Security of computer systems	Mobile technologies
Security of computer networks	Game programming