



**Course List for the Bachelor's Degree Program
in Informatics
Engineering Studies – Practical Profile
applicable from the 2025/2026 Academic Year**

A. Core Module

1. Mathematical Analysis and Linear Algebra
2. Probabilistic Methods and Statistics
3. Discrete Mathematics
4. Physics
5. Introduction to Electrical and Electronic Engineering
6. Electronic Circuits and Measurement Techniques

B. Major-Specific Module

1. Programming
2. Algorithms and Complexity
3. Computer Systems Architecture
4. Operating Systems
5. Network Technologies
6. Programming Languages and Paradigms
7. Computer Graphics and Human-Computer Interaction
8. Artificial Intelligence
9. Databases
10. Software Engineering
11. Embedded Systems
12. Social and Professional Issues in IT
13. IT Projects
14. Python Programming
15. Basics of Ergonomics and Occupational Health & Safety



C1. Interdisciplinary and Student-Selected Module

1. Physical Education (in-person study only)
2. Philosophy in the Age of Intelligent Machines
3. Ethical Dilemmas in the Age of AI
4. Intellectual Property Protection
5. General University Training: OHS Training
6. General University Training: Library Resources Training
7. Student Internship
8. English Language
9. Second Foreign Language
10. Student-Selected Course no. 1
11. Student-Selected Course no. 2
12. Student-Selected Course no. 3
13. Student-Selected Course no. 4
14. Student-Selected Course no. 5
15. Student-Selected Course no. 6
16. Student-Selected Course no. 7

C2. Specialization and Diploma Seminar Module

1. Specialization Courses
2. Diploma Seminar and Final Project



**Course List for the Specialization
in Network Technologies
within the Bachelor's Degree Program
in Informatics
Engineering Studies – Practical Profile
applicable from the 2025/2026 Academic Year**

1. Design and Configuration of Computer Networks (LANs, WANs, and Wireless)
2. Scripting Languages Programming
3. Computer Systems Security
4. Administration of Local and Wide Area Networks
5. Mobile Information Systems
6. Mobile Technologies
7. Mobile Systems Design

**Course List for the Specialization
in Systems Engineering
within the Bachelor's Degree Program
in Informatics
Engineering Studies – Practical Profile
applicable from the 2025/2026 Academic Year**

1. Object-Oriented Analysis and Design
2. Efficient Software Design
3. Software Testing
4. Decision Support Systems
5. Real-Time Systems
6. Mobile Technologies
7. Information Security



**Course List for the Specialization
in Web Systems
within the Bachelor's Degree Program
in Informatics
Engineering Studies – Practical Profile
applicable from the 2025/2026 Academic Year**

1. Internet Technologies
2. Web Systems Design
3. Scripting Languages Programming
4. Modern Trends: Big Data, Internet of Things, and Sensors
5. Application of Web Systems in Information Systems
6. Mobile Technologies
7. Information Security

**Course List for the Specialization
in Databases
within the Bachelor's Degree Program
in Informatics
Engineering Studies – Practical Profile
applicable from the 2025/2026 Academic Year**

1. Design and Programming of SQL and NoSQL Databases
2. Database Administration and Optimization
3. Development of Web-Based and Local Database Applications
4. Use of Databases in Information Systems
5. Data Warehousing, Big Data, and Business Intelligence Systems
6. Information Security
7. Mobile Systems Design