

Course title: Computer Network Security
Course code: 50047
ECTS credits: 6
Requirements: None
Basic information
Level of studies: Undergraduate applied studies
Year of study: 3
Trimester: 8
Goal: Introducing the fundamentals of computer network security. Training students to independently configure network devices to improve security and solve complex problems in computer network maintenance.
Outcome: Students should be able to protect and control devices in computer networks, independently recognize and assess various types of attacks and decide on the appropriate network device configuration to improve security.
Contents of the course
Theoretical instruction
1. Basic security problems of modern computer networks
2. Trends in access protection, potential attacks, methods of defense, protection technologies, SNMP
3. AAA services
4. Layer 2 security
5. Security controls and traffic filtering in computer networks
6. Firewall technologies
7. IPS / IDS systems
8. Cisco ASA devices
9. Advanced access lists
10. Implementation of an Information Security Management System (ISMS) in organizations based on ISO / IEC 27001: 2005 (revised ISO / IEC 27002: 2013) international standard

Practical instruction (Problem solving sessions/Lab work/Practical training)
1. Commands of the operating system of routers, switches and ASA devices
2. Configuring AAA on routers
3. Configuring Layer 2 security on switches
4. Configuring zone-based firewall features on routers
5. Configuring IPS features on routers
6. Configuring advanced access lists on routers
7. Configuring Cisco ASA
8. Troubleshooting security issues in computer networks
Textbooks and References
1. ISO/IEC 27002:2013 Information technology -- Security techniques -- Code of practice for information security controls
2. K. Barker, S. Morris, "CCNA Security 640-554 Official Cert Guide", Cisco Press, 2013, ISBN: 1-58720-446-0
3. O. Santos, J. Stuppi, "CCNA Security 210-260 Official Cert Guide", Cisco Press, 2015, ISBN-13: 978-1-58720-566-8, ISBN-10: 1-58720-566-1
4. W. Stallings, "Основе безбедности мрежа, апликације и стандарди - превод 5. издања", CET Computer Equipment and Trade, Београд, 2014, ISBN: 978-86-7991-376-0
Number of active classes (weekly)
Lectures: 3
Practical classes: 3
Other types of classes: 1
Grading (maximum number of points: 100)
Pre-exam obligations: Points
Activities during lectures: 0
Activities on practical exercises: 60
Seminary work: 0
Colloquium: 10
Final exam: Points
Written exam: 30
Oral exam: 0
Lecturer: Marija Zajeganović, MSc

Associate: Nikola Kurbalija