Course title: Practicum in Computer Networks 2
Course code: 50052
ECTS credits: 3
Requirements: None
Basic information
Level of studies: Undergraduate applied studies
Year of study: 3
Trimester: 9
Goal: Introducing specific hardware (RouterBoard) and software (RouterOS) licensed by MikroTik, a leading manufacturer and distributor of network equipment.
Outcome: Students should be able to work independently in MikroTik network environment.
Contents of the course
Theoretical instruction
Practical instruction (Problem solving sessions/Lab work/Practical training)
1. Introduction to MikroTik, network basics, OSI model, subnetting, access to MikroTik router, Winbox
2. Basic settings of boundary parameters (IP address, gateway, DHCP, NAT, DNS)
3. Additional settings: identity, NTP, admin password, upgrade / downgrade, backup conf, restore backup, create new user and add specific policies
4. Static routing. Routing table overview
5. Dynamic routes. Routing flags
6. Setting a wireless card, radio parameters, nv2 and wireless security
7. Creating a bridge (logical interface), adding ports to a bridge, WDS, additional settings
8. Setting a queue. Bandwidth testing
9. Using Torch. Setting a firewall filter rule, chain, Src-Dst NAT
10. Tunneling. PPPoE, PPTP, L2TP, SSTP, EoIP
Textbooks and References

1. MTCNA training materials
2. Stephen Discher, RouterOS by Example
3. wiki.mikrotik.com
Number of active classes (weekly)
Lectures: 0
Practical classes: 3
Other types of classes: 0
Grading (maximum number of points: 100)
Pre-exam obligations: Points
Activities during lectures: 10
Activities on practical exercises: 40
Seminary work: 0
Colloquium: 20
Final exam: Points
Written exam: 30
Oral exam: 0
Lecturer: Marija Zajeganović, MSc
Associate: Milan Jovanović