

Course title: Wireless Networks
Course code: 41087
ECTS credits: 6
Requirements: None
Basic information
Level of studies: Master applied studies
Year of study: 1
Trimester: 2
Goal: Students acquire basic knowledge of wireless networks, learn principles of wireless transmissions, multiple access methods, spread spectrum communications. They familiarize themselves with standards in the field of wireless networks, and specifically IEEE 802.11 series of standards.
Outcome: After completion of the course, students should be able to convert power from dBm to W and vice versa. They will be able to explain the terms: BSSID, SSID, hidden node. They will understand the medium access technique in IEEE 802.11 networks. They will be able to spot differences between several network topologies. They will be able to configure basic parameters of wireless networks, including security, i.e. encryption.
Contents of the course
Theoretical instruction
1. Introduction to wireless networks
2. Wireless local area networks - WLAN
3. IEEE 802.11 series of standards
Practical instruction (Problem solving sessions/Lab work/Practical training)
1. Basics of wireless computer networks. Wireless network eavesdropping
2. Checking security of wireless networks. Vulnerability of WEP encryption.
3. Vulnerability of WPA and WPA-2 encryption methods when using weak passphrases.
Textbooks and References
1. D. S. Vujic M. L. Dukic, WiFi i WiMAX, tehnologije i primene, TELFOR 2006, Beograd
S. Haykin, M. Moher, Modern Wireless Communications, Pearson Prentice Hall, 2005
D. D. Coleman, D. A. Westcott, Certified Wireless Network Administrator, John Wiley & Sons, 2014

Number of active classes (weekly)
Lectures: 4
Practical classes: 2
Other types of classes:
Grading (maximum number of points: 100)
Pre-exam obligations: Points
Activities during lectures:
Activities on practical exercises:
Seminary work: 20
Colloquium: 30
Final exam: Points
Written exam: 50
Oral exam:
Lecturer
Miroslav Đorđević, PhD
Associate