

<b>Course title: Transport Networks</b>
Course code: 41051
ECTS credits: 5
Requirements: None
<b>Basic information</b>
Level of studies: Undergraduate applied studies
Year of study: 2
Trimester: 6
Goal: Acquisition of system knowledge about the functioning of telecommunication transport networks and their properties, depending on the technology, organizational structure, characteristics of functional parts of the network and standard communication protocols.
Outcome: Upon completion of this course, the student will be able to define and describe existing transport networks. The student will be able to recognize, analyze and evaluate existing architectures and protocols, as well as to actively monitor and learn new technologies, devices, concepts and protocols in this field. The student will also be able to describe the architecture of the MPLS network and work with labels, and to understand the importance of service quality and traffic management mechanisms in IP / MPLS networks.
<b>Contents of the course</b>
Theoretical instruction
1. Classification of communication networks according to different parameters.
2. Telecommunication line for signal transmission.
3. Existing telecommunication networks
4. NGN
5. Common Channel Signaling System - SS7
6. SIP
7. SDH
8. MPLS
9. Integration of IP and optical WDM networks.
Practical instruction (Problem solving sessions/Lab work/Practical training)
<b>Textbooks and References</b>

1. J. Guichard, I. Pepelnjak, MPLS and VPN architectures, Cisco Press, 2000.
2. Hu Hanrahan, Network convergence: services, applications, transport, and operations support, John Wiley & Sons Ltd, 2007
3. B. Чорак, Увод у SDH Мреже, VF-TEL. d.o.o., 1995
4. D. Pevac "Telekomunikacione mreže", Visoka ICT škola
5. M. Stojanović, V. Aćimović-Raspopović, SAVREMENE IP MREŽE: ARHITEKTURE, TEHNOLOGIJE I PROTOKOLI, Akademska Misao, Beograd, 2012.
<b>Number of active classes (weekly)</b>
Lectures: 4
Practical classes: 0
Other types of classes: 1
<b>Grading (maximum number of points: 100)</b>
<b>Pre-exam obligations: Points</b>
Activities during lectures: 0
Activities on practical exercises: 0
Seminary work: 10
Colloquium: 2*30
<b>Final exam: Points</b>
Written exam: 30
Oral exam: 0
<b>Lecturer:</b>
Natalija Vugdelija, MSc
<b>Associate:</b>