

<b>Course: Computer networks (advanced course)</b>				
<b>Course code</b>	<b>Course status</b>	<b>Semester</b>	<b>No. of ECTS credits</b>	<b>No. of classes per week</b>
	<b>Mandatory</b>	<b>VII</b>	<b>6</b>	<b>3Lectures+1Exercises</b>

**The study program:**  
The graduate studies of computer engineering, lasting 2 years, with the total number of 120 credits (after finished basic studies, lasting 3 years, with the total number of 180 credits)

**The conditionality of other courses:** No conditions.

**The goals of the course:**  
The students will be introduced with the principles of computer networks. The basic concepts of the TCP/IP architecture, starting with the application layer and finishing with the network layer, will be studied.

**The lecturer:**  
**Doc.dr Igor Radusinović (lectures) i Maja Ilić (exercises)**

**The course consists of:** Lectures, auditory exercises, consultations.

**The course overview:**

Preparing week	Preparation and semester enrollment
I week	Introduction in the computer networks. The principles of the Application layer protocols.
II week	HTTP. FTP. SMTP. DNS
III week	The principles of the Transport layer protocol. Connectionless transport layer service (UDP)
IV week	Connection-oriented transport service (TCP).
V week	TCP congestion control
VI week	<b>I colloquium</b>
VII week	Free week
VIII week	Network layer and routing
IX week	Connectionless network layer service (IP)
X week	Routing on the Internet
XI week	<b>II colloquium</b>
XII week	Data link layer and local computer networks.
XIII week	Ethernet
XIV week	Wireless computer networks
XV week	Semester project
XVI week	<b>The final exam</b>
Final week	Attestation of the semester and exam mark inscription
XVIII-XXI week	Additional lectures and the second exam term

<b>The number of students working hours</b>	
<u>Weekly</u>	<u>During the semester</u>
6 credits x 40/30 = 8 h	<b>Lectures and final exam:</b> (8 h) x 16 = <b>128 h</b>
<b>Struktura:</b> 3 h for lectures	<b>Preparation before the beginning of semester</b> (administration, enrollment, etc)
1 h auditory exercises	2 x (8 h) = <b>16 h</b>
4 h individual students work, including consultations	<b>The total number of working hours for the course 6,0x30 = 180 h</b>
	<b>The additional work for exams preparing</b> , including the hours for exam from <u>0 to 36 h</u>
	<b>The structure:</b> 128 h (lectures)+16 h (Preparation)+ 36 h (Additional work/lectures).

The students are obliged to attend the lectures, to submit the homeworks, to pass the colloquiums and final exam

**Literature:** Basic: J. F. Kurose and K.W. Ross. Computer Networking, 3.rd edition, Addison-Wesley, 2005  
N.Olifer, V.Olifer: "Computer networks", John Wiley & Sons, 2006.

**Grading policy:**

- 5 homeworks provide 5 points in total (1 point for each homework),
- Two colloquiums – each provide 20 points (40 points in total)
- The final exam 55 points.

Minimum points for passing the course- 51 points.

**The special note for the course:** The groups of 100 students are planned for lectures The course could be organized in English language if is required.

**Name and Surname of the lecturer: Doc.dr Igor Radusinović**

**Note:**