



<b>The Faculty of:</b>	Faculty of Electrical and Computer Engineering
<b>Field of study:</b>	Energetics
<b>Speciality:</b>	
<b>Study degree (BSc, MSc):</b>	First circle full time studies

### COURSE UNIT DESCRIPTION

<b>Course title:</b>	Computer networks
<b>Lecturer responsible for course: dr inż. Tomasz Rak</b> <b>Contacts: phone: 48178651767</b> <span style="float: right;"><b>e-mail: trak@prz-rzeszow.pl</b></span>	
<b>Department : Department of Computer and Control Engineering</b>	

Semester	Weekly load	Type of classes				Number of ECTS credits
		L Lectures	C Theoretical Classes	Lb Laboratory	P Project	
3						

Course description
<p><b>Lecture:</b> LAN and WAN networks. OSI and TCP/IP models. OSI layers.</p> <p>TCP/IP protocol - version 4: IP v.4 datagram structure, IP addresses and ARP protocol, UDP and TCP segment structure, application layers protocol.</p> <p>Static and dynamic routing.</p> <p>TCP/IP protocol - version 6: IP v.6 datagram structure, datagram segmentation, addressing system, transmission stream reservation mechanism, quality of service.</p> <p>Selected network operating systems - installation and configuration.</p> <p>Connections and addressing. Network configurations.</p> <p>Security in computer networks.</p> <p>Planning, implementation and using computer network.</p>
<b>Classes:</b>
<b>Laboratory:</b> Configuration and tests of selected Ethernet switches.

Introduction to routing problems.  
IP addresses and ARP protocol.  
Static routing.  
Dynamic routing.  
Network services installation and configuration.  
Credit - test.

**Project:**

### **Objectives of the course**

Student should obtain theoretical knowledge and practical understanding of subject and skill of maintaining computer networks.

### **Examination method**

Final examination, oral or written test on each laboratory, credit test from laboratory.

### **Bibliography**

Lammle T: CCNA: Cisco Certified Network Associate Study Guide, Third Edition, Sybex Inc, 1998; Sportack M., Northrup A.: Networking Essentials Unleashed, Sams Publishing, 2006.

<b>Lecturer signature</b>	
<b>Head of Department signature</b>	
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