

**DESCRIPTION OF STUDY MODULE\***

**Study programme** Applied Informatics and Programming

**Study module** CONNECTING NETWORKS **Credits in total** 4

<b>Learning outcomes</b>
<ul style="list-style-type: none"> <li>- Able to configure, diagnose and eliminate the problems of global networks.</li> <li>- Defines NAT methods of translation.</li> <li>- Able to configure VPN according to the requirements.</li> <li>- Able to find a suitable command to configure network equipment.</li> <li>- Able to use network monitoring methods.</li> <li>- Identifies network faults and removes it.</li> <li>- Self-study using Netacad environment.</li> </ul>
<b>Aims of study module</b>
Aim of the course – learn to troubleshoot links, configure PAP and CHAP, PPP, Frame Relay, find out principle of NAT, configure static and dynamic NAT, configure the VPN.
<b>Annotation of a study module</b>
This course provides students with theoretical and practical knowledge configuring global networks. Delves into the internal LAN connection to the external WAN networks. Learning to configure PPP, Frame Relay, ANT, VPN. Different methods of NAT broadcasting are tested. Learning to troubleshoot Serial Links
<b>Topics of the subject</b>
<ol style="list-style-type: none"> <li>1. Global Networks</li> <li>2. WAN Technology</li> <li>3. Hierarchical Network Design</li> <li>4. Connect to WAN</li> <li>5. Point to point connection</li> <li>6. Frame retransmission</li> <li>7. The network address translation IPv4</li> <li>8. Broadband Solutions</li> <li>9. Securing site to site links</li> <li>10. Network Monitoring</li> <li>11. Network Troubleshooting</li> </ol>
<b>Procedure for assessment of knowledge and competences</b>
Applicable criterion-ten-point scale, and the cumulative assessment scheme: control works consist of 0.15, laboratory work - 0.1 and exam 0.5 of evaluation score, which is calculated by the weighted average method. Subject absorption final rating is calculated only if all self-employment (individual homework) assignments and control work is handed over and evaluated positive. $F = C1*0.15+C2*0.15+L1*0.1+L1*0.1+E*0.5$
<b>Main literature</b>
<ol style="list-style-type: none"> <li>1. A. Balchunas (2013) Cisco CCNA Study Guide. 304 p.</li> <li>2. Cisco material in NETACAD system.</li> <li>3. T. Lammle (2013) CCNA Routing and Switching Study Guide. 1178 p.</li> </ol>

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\* Short form