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| Discipline „Network Administration”, code: 40 |
| Annotation: The course aims to introduce students’ knowledge for the methods of administration and protection of local and global computer networks. Questions related to the use of network features, protocols, and tools of Linux, Windows Server and Cisco IOS operating systems to build, configure, and maintain local and Internet networks are presented. Particular attention is paid to the problems associated with network attacks and the protection of network communications. Cloud computing, service, and security issues are also considered. |
| Main issues of the syllabus content:* Network infrastructures and administration. Stages of design, construction, commissioning and evaluation of network performance.
* Remote administration of computer networks. Protocol SNMPv2 and SNMPv3.
* Control of access to services.
* Access rights to files and directories (Linux, Windows Server).
* Authentication, Authorization and Accounting (AAA). RADIUS and TACACS protocols.
* Network security. Network Attacks. Types of attacks. Traffic monitoring and analysis.
* Intrusion Detection Systems and Intrusion Prevention Systems.
* Traffic control. Firewall architectures.
* Firewall building tools (iptables under Linux, Cisco ACL, Windows Server ACL).
* Sharing network resources. Protocols LDA, NBT, SMB.
* Active Directory architecture. Domain Controllers. Authentication strategies.
* Integrating Linux and MS Active Directory. Samba.
* Administration of cloud services.
* Cloud Computing Security. Windows Azure Access Control Service.
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