**Course Syllabus**

Academic year: 2020-2021

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| Institution | University of Petroşani |
| Faculty | Mechanical and Electrical Engineering Faculty |
| Field of study | Computers and Information Technology |
| Level | Bachelor |
| Program of study | Computers Engineering |

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| Course | **Computer Networks Design** |
| Code | 2CC8OS52 |
| Year of study (semester) | IV (II) |
| Number of hours | 70 |
| Number of credits | 5 |
| Professor | Lecturer eng. Simona Rîurean, Ph.D. |

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| **No.** | **Topic** |
|  | Overview on networking terminology, common physical and logical topologies, networking architectures and protocols, network connections, and the Open Systems Interconnection (OSI) model. |
|  | Network devices and adapters for internetworking (routers, firewalls, and layer3 switches).Wireless medium, cables and connectors used in networks. |
|  | Ethernet architecture, specifications, and details about connecting network device. |
|  | Network implementation (IP addressing, assigning IP addresses, mapping logical host names to IP addresses, routing, and accessing the Internet, IPv6 and multicasting, basics of using Voice over IP). |
|  | Radio frequency wireless network to connect to hosts. basics of networking architecture, infrastructure, and wireless standards (802.11, Infrared, and Bluetooth). security implementation on a wireless network, a wireless network configuration. |
|  | Network configuration management documentation, SNMP, remote management, network monitoring tools, and elements to optimize the performance of the network. |
|  | Netwok design and simmulation with Cisco Packet Tracer. |