



Course name: **Cisco Academy**

Number of hours: 60

Course duration: 1 semester

ECTS: 20

Course description:

**1. Introduction to Networks**

*Networking Today*

*Basic Switch and End Device Configuration*

*Protocols and Models*

*Physical Layer*

*Number Systems*

*Data Link Layer*

*Ethernet Switching*

*Network Layer*

*Address Resolution*

*Basic Router Configuration*

*IPv4 Addressing*

*IPv6 Addressing*

*ICMP*

*Transport Layer*

*Application Layer*

*Network Security Fundamentals*

*Build a Small Network*

*Final exam*



## **2. Enterprise Networking, Security, and Automation**

*Basic Device Configuration*

*Switching Concepts*

*VLANs*

*Inter-VLAN Routing*

*STP Concepts*

*EtherChannel*

*DHCPv4*

*SLAAC and DHCPv6*

*FHRP Concepts*

*LAN Security Concepts*

*Switch Security Configuration*

*WLAN Concepts*

*WLAN Configuration*

*Routing Concepts*

*IP Static Routing*

*Troubleshoot Static and Default Routes*

*Final exam*

Learning outcomes:

Student after finishing the course has a firm knowledge in the area of networking and is prepared to administer networks from small to mid-size. The classes prepare also for taking certification exam CCNA. If student can follow the classes in the second semester the whole desired material is covered.

Literature:

eLearning materials accessed at [www.netacad.com](http://www.netacad.com)

Wpis do Rejestru Uczelni Niepublicznych i Związków Uczelni Niepublicznych pod nr 55



Books:

CCNA Routing and Switching Portable Command Guide (ICND1 100-105, ICND2 200-105, and CCNA 200-125) 8 Jun 2016, by Scott Empson

Course type:

Lectures with labs

Assessment method:

on-line tests on Cisco Networking Academy portal; practice tasks in emulation software and on real hardware.

Prerequisites:

none, but knowledge in networking should help

Lecturer: Prof. WSZiB dr inż. Tomasz Wojdyński