

## Guidelines for PV234 course, academic year 2023/2024, spring semester - CCNAv7: Enterprise Networking, Security, and Automation (ENSA)

### Brief notes

- Use Packet Tracer, Version 8.2.1 (as of 12 Feb 2024), older versions may not work with new assignments. You can download it from the Netacad site.
- See the “Study Materials” in the IS (Masaryk University Information System) for assignments planned for lab exercises with real hardware (Muni-Labs-2024-Spring.zip).
- In the “Study Materials” you can also find the textual description for the Packet Tracer assignments (ENSA\_v7\_Student\_Packet\_Tracer\_Source\_Files.zip).
  - You will need the full exercise assignments executable for the Packet Tracer (in .pka format), they are located in the curriculum, the assignment number corresponds to the chapter number (you can also find the above textual assignment nearby).
- Save the solved lab exercises (i.e. result configuration files) to the "Homework vaults" in the IS.

**Table 1: Timetable of topics covered and dates of the final examination**

Day	Study week	Topic - chapter (module)	Labs	Packet Tracer Labs ENSA_v7_Student_Packet_Tracer_Source_Files. zip
20. 2.	1.	1) Single-Area OSPFv2 Concepts 2) Single-Area OSPFv2 Configuration	01-02.7.2 Lab - Configure Single-Area OSPFv2 02-08.3.3.6 Lab - Configuring Basic Single-Area OSPFv3	02.3.11 Packet Tracer - Determine the DR and BDR
27. 2.	2.	Multiarea OSPF	03-09.2.2.8 Lab - Configuring Multi-area OSPFv2 04-09.2.2.9 Lab - Configuring Multi-area OSPFv3	02.5.3 Packet Tracer - Propagate a Default Route in OSPFv2
5. 3.	3.	3) Network Security Concepts Wireshark	05-Lab - Attack CDP_DHCP-EN 06-Lab - Attack MAC_flooding-EN	
12. 3.	4.	4) ACL Concepts 5) ACLs for IPv4 Configuration ACLs for IPv6 Configuration	07-07.2.2.6 Lab - Configuring and Modifying Standard IPv4 ACLs 08-05.5.2 Lab - Configure and Verify Extended IPv4 ACLs 09-04.3.2.7 Lab - Configuring and Verifying IPv6 ACLs	05.1.9 Packet Tracer - Configure Named Standard IPv4 ACLs
19. 3.	5.	6) NAT for IPv4	10-06.8.2 Lab - Configure NAT for IPv4 11-09.2.2.6 Lab - Configuring Dynamic and Static NAT	06.2.7 Packet Tracer - Investigate NAT Operation
26. 3.	6.	7) WAN Concepts	12-Lab - PPPoE-EN 12a-Lab - VRF Lite CZ	07.6.1 Packet Tracer - WAN Concepts
2. 4.	7.	8) VPN and IPsec Concepts 9) QoS Concepts	13-03.4.2.6 Lab - Configuring a Point-to-Point GRE VPN Tunnel 14-08.2.1.5 Lab - Configure IP SLA ICMP Echo	
9. 4.	8.	IPSec Cofiguration	15-08.4.1.3 Lab -Configure Site-to-Site VPN using CLI (TBD)	
16. 4.	9.	10) Network Management	16-10.6.11 Lab - Use Tera Term to Manage Router Configuration Files 17-10.6.12 Lab - Use TFTP, Flash, and USB to Manage Configuration Files 18-10.6.13 Lab - Research Password Recovery Procedures	10.7.6 Packet Tracer - Use a TFTP Server to Upgrade a Cisco IOS Image
23. 4.	10.	Network Management	19-10.8.2 Lab - Configure CDP, LLDP, and NTP 20-05.2.2.6 Lab - Configuring SNMP	
30. 4.	11.	11) Network Design 12) Network Troubleshooting	21-CCNA7_ENSA_mod_11_12	11.5.1 Packet Tracer - Compare Layer 2 and Layer 3 Devices 12.5.13 Packet Tracer - Troubleshoot Enterprise Networks

7. 5.	12.	13) Network Virtualization 14) Network Automation	22-CCNA7_ENSA_final	
<b>14. 5.</b>	<b>13.</b>	<b>Final skill exam</b>		
<b>21. 5.</b>	<b>14.</b>	<b>Final test</b>		