Ziko Rizk
CIS153 – Enterprise Networking, Security, and Automation
Spring 2022 Syllabus

Email: rizkz@linnbenton.edu	**Classroom:** Virtual
Office: MKH-110	**Class Day/Time:** Mon-Wed @ 9:00 am
	Office Hours: Online (request meeting)

Course Description and Objectives:

Large enterprises depend heavily on the smooth operation of their network infrastructures. This final course in the CCNA series describes the architectures and considerations related to designing, securing, operating, and troubleshooting enterprise networks. It covers wide area network (WAN) technologies and quality of service (QoS) mechanisms used for secure remote access along with the introduction of Software-Defined Networking (SDN), virtualization, and automation concepts that support the digitalization of networks. After completing all three CCNA courses, you are ready to take the CCNA Certification (optional).

Prerequisite:

CIS 152 Introduction to Networking, with a minimum "C" grade

Required Course Materials {same textbook for all network course}:

1) CCNA Routing and Switching Portable Command Guide, 4th edition.
    a. by Scott Empson
    b. published by Cisco Press, 2016
    c. ISBN978-1-58720-588-0

Learner Outcomes:

1) Work with routers and switches using OSPF in point-to-point and multiaccess networks.
2) Mitigate threats and enhance network security using Access Control Lists (ACLs) and security best practices.
3) Develop critical thinking and problem-solving skills using ~~real equipment~~ and Cisco Packet Tracer.
4) Understand virtualization, SDN, and how APIs and configuration management tools enable network automation.

Grades Table:

Quizzes/Assignments/Exams	Weight
Module Labs	45%
Modules Exams	20%
Skilled Based Assessment (SBA)	10%
Final Exam {must pass to pass course}	25%

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TOTAL	100%
Grades: **IMPORTANT:** A grade of "C" or higher is considered passing. **IMPORTANT:** If you fail the first final exam attempt, you can take a second time. If you score over 70% on the second attempt, the grade will be limited C.	A: 90-100% B: 80-89% C: 70-79% D: 60-69% F: < 60% P: >= 70% NP: < 70%

Instructor and Student Responsibilities:

Instructor	Students
I commit to starting all classes on time.	You agree to attend all classes and to comply with college code of conduct.
I commit to showing up to class prepared.	You agree to actively participate in class discussions and exercises.
I commit to balancing class time between lecture and hands-on exercises.	You agree to spend an average of 5-6 hours per week on readings and assignments outside of class (see Moodle for details).
I commit to responding to your email within 24 hours (no voice mail please).	You agree to complete all readings and course assignments on time (due on Sunday night).
I commit to grading assignments within 3 days (after due date).	You agree to collaborate professionally with fellow students on the class project.
If I'm unable to come to a class, I commit to doing my best to find a substitute instructor while keeping you up-to-date.	

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Academic Honesty:
Helping, or being helped by, another student during an exam will be considered a breach of academic honesty and is grounds for receiving a zero grade and/or failing the course among other possible remedies.

LBCC Center for Accessibility Resources:
Students who may need accommodations due to documented disabilities, or who have medical information which the instructor should know, or who need special arrangements in an emergency, should speak with the instructor during the first week of class. If you believe you may need accommodations, but are not yet registered with CFAR, please go to http://linnbenton.edu/cfar for steps on how to apply for services or call 541-917-4789.

LBCC Comprehensive Statement of Nondiscrimination:
LBCC prohibits unlawful discrimination based on race, color, religion, ethnicity, use of native language, national origin, sex, sexual orientation, marital status, disability, veteran status, age, or any other status protected under applicable federal, state, or local laws.

LBCC Statement of Inclusion:
The LBCC community is enriched by diversity. Each individual has worth and makes contributions to create that diversity at the college. Everyone has the right to think, learn, and work together in an environment of respect, tolerance, and goodwill (related to Board Policy #1015).

Basic Needs:
Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their performance in the course, is urged to contact the Roadrunner Resource Center for support (resources@linnbenton.edu , or visit us on the web www.linnbenton.edu/RRC under Student Support for Current Students). Our office can help students get connected to resources to help. Furthermore, please notify the professor if you are comfortable in doing so. This will enable them to provide any resources that they may possess.

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Week	Activity	Due
Week-1 Mar 28	➢ Welcome, introductions, scope & set clear expectations. ➢ Week-1 scope = Ziko's introduction to Network and Module-1 (OSPF Concept). ➢ Study module-1 (including Text, Videos, Check Your Understanding, and quiz) ➢ Module-1 labs	Apr 3 @ 11:55 pm
Week-2 Apr 4	➢ Week-2 scope = Module-2 (OSPF Configuration). ➢ Study module-2 (including Text, Videos, Check Your Understanding, and quizzes) ➢ Module-2 labs ➢ **Modules 1-2 Exam**	Apr 10 @ 11:55 pm
Week-3 Apr 11	➢ Week-3 scope = Module-3 (Network Security Concepts). ➢ Study module-3 (including Text, Videos, Check Your Understanding, and quiz) ➢ Module-3 labs	Apr 17 @ 11:55 pm
Week-4 Apr 18	➢ Week-4 scope = Module-4 (ACL Concepts) and Module-5 (ACL Configuration). ➢ Study module-4 and module-5 (including Text, Videos, Check Your Understanding, and quizzes) ➢ Module-4 and Module-5 labs ➢ **Modules 3-4-5 exam**	Apr 24 @ 11:55 pm
Week-5 Apr 25	➢ Week-5 scope = Module-6 (NAT for IPv4), Module-7 (WAN Concepts). ➢ Study module-6 and module-7 (including Text, Videos, Check Your Understanding, and quizzes) ➢ Module-6 and Module-7 labs	May 1 @ 11:55 pm
Week-6 May 2	➢ Week-6 scope = Module-8 (VPN & IPSec Concepts). ➢ Study module-8 (including Text, Videos, Check Your Understanding, and quizzes) ➢ Module-8 labs ➢ **Modules 6-7-8 exam**	May 8 @ 11:55 pm
Week-7 May 9	➢ Week-7 scope = Module-9 (QoS Concepts) and Module-10 (Network Management). ➢ Study module-9 and Module-10 (including Text, Videos, Check Your Understanding, and quizzes) ➢ Module-9 and Module-10 labs	May 15 @ 11:55 pm

Week-8 May 16	➤ Week-8 scope = Module-11 (Network Design) and Module-12 (Network troubleshooting). ➤ Study module-11 and Module-12 (including Text, Videos, Check Your Understanding, and quiz) ➤ Module-11 and Module-12 labs ➤ **Modules 9-12 exam**	May 22 @ 11:55 pm
Week-9 May 23	➤ Week-9 scope = Module-13 (Network Virtualization) and Module-14 (Network Automation). ➤ Study module-13 and module-14 (including Text, Videos, Check Your Understanding, and quizzes) ➤ Modules-13 and Module-14 labs ➤ **Modules 13-14 exam**	May 29 @ 11:55 pm
Week-10 May 30	*** Monday, May 30 is Memorial Day = Holiday *** ➤ Week-10 scope = wrap-up Skill-Based Assessment (SBA). ➤ Practice SBA ➤ SBA	June 5 @ 11:55 pm
Week-11 June 6	➢ Week-11 scope = Final exam and grades. ➢ **Final exam (must pass to pass course – see "Grades Table" in syllabus):** ➢ **Wed June 8 at 10:00 am** ➢ LBCC Final Exam Schedule https://www.linnbenton.edu/calendars/finals-schedule.php	