



North Central State College
MASTER SYLLABUS
2019-2020

- A. Academic Division: Business, Industry, and Technology
- B. Discipline: Information Technology - Cybersecurity
- C. Course Number and Title: ITEC2420 - Advanced Network Security
- D. Course Coordinator: Mohamed Ghonimy
Assistant Dean: Toni Johnson, PhD

Instructor Information:

- Name: [Click here to enter text.](#)
- Office Location: [Click here to enter text.](#)
- Office Hours: [Click here to enter text.](#)
- Phone Number: [Click here to enter text.](#)
- E-Mail Address: [Click here to enter text.](#)

- E. Credit Hours: 3
Lecture: 2 hours
Laboratory: 2 hours
- F. Prerequisites: ITEC1430c (minimum grade of C-), ITEC1690 (minimum grade of C-)
- G. Syllabus Effective Date: Fall, 2019
- H. Textbook(s) Title:

Network Security, Firewall, and VPN.

- Authors: Stewart, James M.
- Copyright Year: 2014
- Edition: 2nd
- ISBN: 978-1284031676

- I. Workbook(s) and/or Lab Manual: An external USB 3.0 hard drive, 500 gigabytes or larger is required.
- J. Course Description: This course offers an introduction to virtual private networks (VPNs) and firewalls for securing a network. Various network security-related issues are introduced and examined. Different types of VPNs for securing data in an organizational setup are discussed as well as the benefits and architecture of a VPN and how to implement a VPN. Other topics include the utility of firewalls in tackling security problems and the limitations of a firewall. In addition, instruction is also given on how to construct, configure, and administer a firewall and the functionality of a firewall.

K. College-Wide Learning Outcomes:

College-Wide Learning Outcome	Assessments - - How it is met & When it is met
Communication – Written	
Communication – Speech	
Intercultural Knowledge and Competence	
Critical Thinking	
Information Literacy	
Quantitative Literacy	

L. Course Outcomes and Assessment Methods:

Upon successful completion of this course, the student shall:

Outcomes	Assessments – How it is met & when it is met
Explain the fundamental concepts of network security.	Weeks 1,9 tests, labs, midterm/final exam, final project
Describe the fundamental functions performed by firewalls.	Weeks 1,2,7-9 tests, labs, midterm/final exam, final project
Describe the foundational concepts of VPNs.	Weeks 3-5, 15 tests, labs, midterm/final exam, final project
Recognize the impact that malicious exploits and attacks have on network security.	Weeks 5-6 tests, labs, midterm/final exam, final project
Describe network security implementation strategies and the roles each can play within the security life cycle.	Weeks 2,5-7 tests, labs, final exam, final project
Manage and monitor firewalls, and understand their limitations.	Weeks 5-9,15 tests, labs, final exam, final project
Assess firewall design strategies.	Weeks 7-9,15 tests, labs, final exam, final project
Apply firewall management best practices.	Weeks 7-10,16 tests, labs, final exam, final project

M. Topical Timeline (Subject to Change):

- Week 1, Section 1: Fundamentals of Network Security
- Week 2, Section 2: Firewall Fundamentals
- Week 3, Section 3: VPN Fundamentals
- Week 4, Section 4: Network Threats and Issues
- Week 5, Section 5: Network Security Implementation
- Week 6, Section 6: Network Security Management
- Week 7, Section 7: Firewall Basics
- Week 8, Section 8: Firewall Deployment Consideration
- Week 9, Section 9: Firewall Management and Security Concerns
- Week 10, Section 10: Using Common Firewalls
- Week 11, Section 11: VPN Management
- Week 12, Section 12: VPN Technologies
- Week 13, Section 13: Firewall Implementation
- Week 14, section 14: Real-World VPNs
- Week 15, Section 15: Perspectives, Resources, and the Future

Week 16 Section 16: Course Review and Final Examination

N. Course Assignments:

1. Labs
2. Practice Questions
3. Tests
4. Midterm Exam
5. Final Exam

O. Recommended Grading Scale:

NUMERIC	GRADE	POINTS	DEFINITION
93–100	A	4.00	Superior
90–92	A-	3.67	Superior
87–89	B+	3.33	Above Average
83–86	B	3.00	Above Average
80–82	B-	2.67	Above Average
77–79	C+	2.33	Average
73–76	C	2.00	Average
70-72	C-	1.67	Below Average
67–69	D+	1.33	Below Average
63-66	D	1.00	Below Average
60-62	D-	0.67	Poor
00--59	F	0.00	Failure

P. Grading and Testing Guidelines:

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Q. Examination Policy:

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R. Class Attendance and Homework Make-Up Policy:

Click here to enter text.

S. Classroom Expectations:

Click here to enter text.

T. College Procedures/Policies:

Important information regarding College Procedures and Policies can be found on the [syllabus supplement](#) located at <https://sharept.ncstatecollege.edu/committees/1/curriculum/SiteAssets/SitePages/Home/SYLLABUS%20SUPPLEMENT.pdf>

The information can also be found Choose an item.