CNT2417C Cybersecurity Operations Syllabus

FALL 2023

Download PDF:



Division of Engineering, Computer Programming, and Technology Department of Cybersecurity and Network Engineering Technology West Campus Building 9, Room 140 | (407) 582-1902/1903 West Campus Building 11, Classrooms 261, 262, and 264



Valencia College is a <u>National Center of Academic Excellence in Information Assurance Education</u> Since 2018, Valencia College has been a CAE-CD (CAE in Cyber Defense) <u>https://www.nsa.gov/Academics/Centers-of-Academic-Excellence/</u>



CNT2417C Cybersecurity Operations (3 Credits)

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1. Course Information

This course aims to provide an introductory overview to identity management and security by presenting working definitions of Personal Identifiable Information (PII); identity management and security challenges and best practices; and the combined people, processes, policies, and technology required to manage and secure PII for a number of different market sectors. The course will culminate with practical applications of information security and its relationship to identity management.

Prerequisites

CET 2486C Local Area Networks

Class Time and Location

Class Time: Mondays @ 6:30PM EST to 8:00PM EST Location: ZOOM ZOOM Dates:

- 08/21/2023
- 08/28/2023
- 09/04/2023

ZOOM Link:

Please Note

We will be using Microsoft Teams and Zoom for class communication.

Class Communication (TEAMs and ZOOM)

Learning Outcomes

- Identity for people, organizations, and devices
- Identity for people, organization
 Identity risk, control, and value
- Laws, Regulations, and Public Policy on Identity Management
- · Identity Management and Cybersecurity
- · Evolution of Information Security in the Context of Computing, Networking, and the Internet
- Information Transmission and Management over Computer Networks
- · IT Solutions for Identity Management and Security
- Identity Management & Proofing Case Studies

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2. Course Materials and Resources

This section outlines the course materials you will need for this class. Materials can include software, hardware, and textbooks. Make sure to doublecheck the information listed in this section so that you get everything you need to be successful in this class.

Textbook Information

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Networking Academy

Course Materials Information

Cisco Networking Academy (NetAcad), CyberOps Associate

Publisher: Cisco Networking Academy

Please Note

You will be enrolled in the Cisco Networking Academy by your instructor. Once you are able to log into the site, you will see the course on your dashboard. Check out the ****Cisco Networking Academy and PowerPoint Resources** for help accessing NetAcad.

Hardware Requirements

Minimum Hardware Recommended for the CYNET Program: Windows 10 PC/Laptop with at least 16 GB RAM; i5 or better processor; and a headset. MAC computers are NOT supported for this class.

Please Note

Any support provided for hardware/software outside of the requirements is done on a best-effort-only basis. You are responsible for your equipment meeting requirements. Please ask your instructor or the lab team if you have any questions.

Required Software

- Microsoft Office
- Virtual Box (6.1 preferred)
- VMWare Workstation 17
- Cisco Packet Tracer
- TEAMs (Web App --or-- Desktop App)

Please Note

We will go through some software installation in the first few weeks of class. So, if you do not have one or more of the required pieces of software, do not panic. We will get to it during the first few weeks.

Optional Course Materials

Items in this section are optional and are not required for this class.

- External Hard Drive (Minimum Recommended size is: 500GB)
- Cisco Certified CyberOps Associate 200-201 Certification Guide: Learn blue teaming strategies and incident response techniques to mitigate cybersecurity incidents By: Glen D. Singh Publisher: Packt Publishing (can be accessed via a Packt Subscription)
- Cisco CyberOps Associate CBROPS 200-201 Official Cert Guide (Certification Guide) 1st Edition By: Omar Santos Publisher: Cisco Press

Required Software and Downloads

The following software or files are needed to complete your lab setup. Guides and videos are located on the Classroom Setup pages.

NetAcad Lab Setup

- VirtualBox:
 - Windows: https://download.virtualbox.org/virtualbox/7.0.4/VirtualBox-7.0.4-154605-Win.exe
 - Linux: https://www.virtualbox.org/wiki/Linux_Downloads
- Mac OS: <u>https://download.virtualbox.org/virtualbox/7.0.4/VirtualBox-7.0.4-154605-OSX.dmg</u>
 OVA (Prebuilt Machines) Links:
- CyberOps Workstation: <u>CyberOps Workstation OVA</u>
- Security Onion: <u>Security Onion OVA</u>

Windows 10 Lab Setup

- VMware Workstation 17:
 - <u>VMWare license key page</u>
 - Download VMWare Workstation for Windows
 - Download VMWare Workstation for Linux
 - Download VMWare Fusion for MacIntosh
 - Download VMWare vSphere 6.7 Enterprise Plus
- Windows 10 ISO Link:
 - Image Link: <u>Download File Here</u>

Lab Setup Guides

The following document(s) contain information that may help set up your lab environment. The Lab Setup Guide.pdf is based on information from Cisco Networking Academy.

Lab Setup Guide_CNT2417C Cybersecurity Operations.pdf

Library Resources

Additional resources for the engineering program can be found at: http://libguides.valenciacollege.edu/engineering

Open Lab/Tutoring

https://valenciacollege.edu/academics/departments/engineering/lab-hours.php

Learning Support Statement

Learning Support Services provides students with academic support through distance tutoring, face to face tutoring at the campuses, writing consultations, library services, and resources. Tutoring is offered in most academic disciplines including math, science, foreign languages, English for academic purposes (EAP), computer programming and writing assistance for any course. Assistance with library research can be accessed online through Atlas or the tutoring LibGuide. For more information on how to access tutoring and library research assistance, please visit the college-wide Learning Support Services LibGuide at: <u>https://libguides.valenciacollege.edu/distancetutoring</u>

Please Note

Brainfuse is our new 24/7 online tutoring and learning hub, which is available to all of Valencia's students. This service is best used as a back-up to Valencia's Distance Tutoring service, not as a replacement. Brainfuse is accessible through Canvas or by visiting <u>https://valenciacollege.edu/students/learning-support/</u>

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3. Professor Information

Dr. Gerri Roberts, Full-Time Faculty, Network Engineering Technology



Faculty Frontdoor: https://frontdoor.valenciacollege.edu/faculty.cfm?uid=groberts21

Contact Information

Contact Information		
Method of Contact	Contact Information	
Office:	West Campus, 11-253	
Email:	groberts21@valenciacollege.edu	
TEAMs (Chat):	groberts21@valenciacollege.edu	
Office Number:	407-582-5854 (You can call or leave a voice mail at this number - I will get the voice mail in my email)	
Appointment Link:	<u>Microsoft Bookings Link</u> ⊟	
ZOOM Meeting (time and day):	Mondays @ 6:30PM EST to 8:00PM EST	

Office Hours

I hold office hours virtually and on campus. You also may make an appointment with me for a TEAMs meeting using the link in the Appointments section.

Appointments:

Nake an appointment with me using Microsoft Bookings at: <u>https://outlook.office365.com/owa/calendar/InstructorMeeting@valenciacollege.edu/bookings/</u> ⊟

Available Hours:

Available Hours

Day of the Week	Time	Mode
Mondays	12 PM to 3 PM EST	Virtual
Tuesdays	3 PM to 4 PM EST	Campus/Virtual (Check Schedule)
Wednesdays	12 PM to 3 PM EST	Virtual
Thursdays	12 PM to 3 PM EST	Virtual
Fridays	12 PM to 2 PM EST	Virtual

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4. Grading Information

Due dates are not provided on the syllabus as they vary from week to week depending on the activities of that week. The <u>Course Summary</u> after the syllabus content provides a break down of the due dates and assignments that are due (as well as includes reading and video lessons). Please double-check all due dates each week to ensure that you are turning in assignments on time. Late assignments will not be accepted unless previous arrangements have been made. Assignments may lock after the due date and you may not be able to turn in assignments after the due date (see the Grading Policy for further information about due dates and late credit).

Assignment Schedule

Please Note

the provided schedule is tentative and can change. Please pay attention to communication from your professor as if the schedule changes, your professor will let you know. Schedule changes can occur due to issues such as hurricanes and school closures.

Assignment Schedule				
Week	Dates	Activities		
1	08/21/2023 to 08/27/2023	 Module 0: Setup and Introductions Classroom Setup: Step 1: Downloading and Installing Virtual Box Classroom Setup: Step 2: Downloading and Saving the OVA Files Classroom Setup: Step 3: Using VirtualBox to Import your Virtual Machines Classroom Setup: Step 4: Installing Packet Tracer 		
2	08/28/2023 to 09/03/2023	 <u>Module 1: The Danger</u> <u>Classroom Setup: Step 5: The Windows Virtual Machine</u> <u>Classroom Setup: Step 5B: VMWare License from BrightSpace</u> <u>Activity: 1.0.6 Top Hacker Shows Us How it is Done</u> <u>Chapter Quizzes: Module 1: The Danger Quiz</u> 		
3	09/04/2023 to 09/10/2023	 <u>Module 2: Fighters in the War Against Crime</u> <u>Lab Assignment: 2.2.5 Lab - Becoming a Defender</u> <u>Lab Assignment: Analyzing Cybersecurity Attacks</u> <u>Lab Assignment: Download and Install a Password Management Application</u> <u>Chapter Quizzes: Module 2: Fighters in the War Against Cybercrime Quiz</u> <u>Chapter Quizzes: Modules 1 - 2: Threat Actors and Defenders Group Exam</u> 		
4	09/11/2023 to 09/17/2023	 Module 3: The Windows Operating System Lab Assignment: 3.2.11 Lab - Exploring Processes, Threads, Handles, and Windows Registry Lab Assignment: 3.3.10 Lab - Create User Accounts Lab Assignment: 3.3.11 Lab - Using Windows PowerShell Lab Assignment: 3.3.12 Lab - Windows Task Manager Lab Assignment: 3.3.13 Lab - Monitor and Manage System Resources in Windows Chapter Quizzes: Module 3: The Windows Operating System 		
5	09/18/2023 to 09/24/2023	 Module 4: Linux Overview Lab Assignment: 4.2.6 Lab - Working with Test Files in the CLI Lab Assignment: 4.2.7 Lab - Getting Familiar with the Linux Shell Lab Assignment: 4.3.4. Lab - Linux Servers Lab Assignment: 4.4.4 Lab - Locating Log Files Lab Assignment: Auditing Linux to secure environment Lab Assignment: 4.5.4 Lab - Navigating the Linux Filesystem and Permission Settings Chapter Quizzes: Module 4: Linux Basics Quiz Chapter Quizzes: Modules 3 - 4: Operating System Overview Group Exam 		
6	09/25/2023 to 10/01/2023	 Introduction to NICE Lab Assignment: NICE Challenge - Protect & Defend - Configuration Management Gone Awry. Module 5: Network Protocols Lab Assignment: NICE Challenge - Packet Analysis Lab Assignment: 5.1.5 Lab - Tracing a Route Lab Assignment: 5.3.7 Lab - Introduction to Wireshark Chapter Quizzes: Module 5: Network Protocols Module 6: Ethernet and Internet Protocol (IP) Lab Assignment: IPv4 Addressing Worksheet Chapter Quizzes: Module 6: Ethernet and Internet Protocol (IP) 		
7	10/02/2023 to 10/08/2023	 Module 7: Connectivity Verification Lab Assignment: 7.2.8 Packet Tracer - Verifying IPv4 and IPv6 Addressing Lab Assignment: Command Line Utilities for Network Connectivity Verification Chapter Quizzes: Module 7: Connectivity Verification 		
8	10/09/2023 to 10/15/2023	 <u>Module 8: Address Resolution Protocol</u> <u>Lab Assignment: 8.2.8 Lab - Using Wireshark to Examine Ethernet Frames</u> <u>Lab Assignment: OUI Lookup</u> <u>Chapter Quizzes: Module 8: Address Resolution Protocol</u> 		

9	10/16/2023 to 10/22/2023	 Module 9: The Transport Layer Lab Assignment: 9.2.6 Lab - Using Wireshark to Examine the TCP 3-Way Handshake Lab Assignment: 9.3.8 Lab - Exploring NMAP Chapter Quizzes: Module 9: The Transport Layer
10	10/23/2023 to 10/29/2023	 Module 10: Network Services Lab Assignment: 10.2.7 Lab - Using Wireshark to Examine a UDP DNS Capture Lab Assignment: 10.4.3 Lab - Using Wireshark to Examine TCP and UDP Captures Lab Assignment: 10.6.7 Lab - Using Wireshark to Examine HTTP and HTTPS Traffic Chapter Quizzes: Module 10: Network Services Chapter Quizzes: Modules 5 - 10: Network Fundamentals Group Exam
11	10/30/2023 to 11/05/2023	 <u>Module 11: Network Communication Devices</u> <u>Lab Assignment: NMAP Lab</u> <u>Lab Assignment: Examine a Wireless PCAP</u> <u>Chapter Quizzes: Module 11: Network Communication Devices</u>
12	11/06/2023 to 11/12/2023	 Module 12: Network Security Infrastructure Lab Assignment: 12.1.9 Lab - Identify Packet Flow Lab Assignment: pfSense Firewall Chapter Quizzes: Module 12: Network Security Infrastructure Chapter Quizzes: Modules 11 - 12: Network Infrastructure Security Group Exam
13	11/13/2023 to 11/19/2023	 Lab Assignment: Extract an Executable from a PCAP Chapter Quizzes: Module 13: Attackers and Their Tools Module 14: Common Threats and Attacks Lab Assignment: 14.1.11 Lab - Anatomy of Malware Lab Assignment: 14.2.8 Lab - Social Engineering Chapter Quizzes: Module 14: Common Threats and Attacks
14	11/20/2023 to 11/26/2023	11/22 to 11/26 THANKSGIVING BREAK
15	11/27/2023 to 12/03/2023	Final Exam Week
16	12/04/2023 to 12/10/2023	 Final Exam Week Final Exam: PicoCTF Challenge: Wireshark doo dooo do doo Final Exam: PicoCTF Challenge: Information Final Exam: PicoCTF Challenge: Lookey Here Final Exam: Fun with Passwords Final Exam: OSINT Exercise Final Exam: Social Engineering Final Exam: Scanning with NMap
	12/08/2023	CUT OFF DATE

*** Cutoff Date is 12/08/2023. Any work after this will not be accepted. ***

Assignment Percentages

The following section outlines assignment percentages based on assignment type.

Lab Assignments

Lab Assignments are labs that are based out of the Cisco Networking Academy and labs written by the instructor. These labs will vary from lesson to lesson - but often there are multiple activities in each lab.

35%

Chapter Quizzes

Each module has a Module Quiz, and each set of Modules has a Group Exam that covers the modules in that group.

	25%					
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Final Exam

The final exam will consist of a series of tasks designed to test the knowledge you gained throughout the course.

25%

Classroom Setup

These assignments consist of getting your course materials and your lab environment setup

Letter Grade/Percentage Conversion

Letter Grade/Percentage Conversion			
Letter Grade	Percentage		
A	90%-100%		
В	80%-89%		
С	70%-79%		
D	60%-69%		
F	Below 60%		

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5. Policies and Procedures

Office of Policy and General Council: https://valenciacollege.edu/about/general-counsel/

Campus Security: https://valenciacollege.edu/students/security/ @

Quality Expectations, Late Work, Missed Deadlines Policy

As students in the Cybersecurity & Network Engineering Technology program, you are all future networking or security professionals, and your work in this course is a direct reflection of you as a professional. To ensure that you are prepared for success in your field, the following policies are in place:

- 1. Quality Expectations: Quality work is essential in this course. Your assignments should demonstrate a strong understanding of the material, attention to detail, and critical thinking skills. Clear and concise communication is also important, as well as proper use of tools and techniques relevant to the course material.
- 2. Late Work: I understand that real-life circumstances may interfere with your ability to submit assignments on time. Therefore, one late assignment will be accepted with a 50% deduction in points. However, any late assignment after the first one will not be accepted for grading. Failure to upload an assignment correctly is considered the same as being late. Please note that midterm and final exams cannot be submitted late.
- 3. *Missed Deadlines:* I expect all assignments to be submitted on time. Failure to submit an assignment by the deadline will result in a grade of zero for that assignment. Exceptions to this policy will be considered on a case-by-case basis, and only under exceptional circumstances.
- 4. *Extra Credit:* There is no extra credit anticipated in this course. All assignments are designed to ensure that you thoroughly understand the course material and are prepared for success in your field.

By adhering to these policies, you will be able to produce high-quality work, meet deadlines, and demonstrate your preparedness for success as a networking or security professional.

Class Policies

- Any student who misses 2 assignments/classes in a row will be dropped by the instructor UNLESS prior arrangements are made OR if there are
 extenuating circumstances
- No make-up assignments or exams will be allowed UNLESS prior arrangements are made
- Cheating or any act of academic dishonesty is prohibited. For any student caught cheating, the instructor has the right to withdraw the student from the class or provide a failing grade
- Any cheating or blatantly copied work will result in a 0
- It is your responsibility to withdraw from the class please do so before the deadline, or a withdrawal may result in a WF, or it may not be granted by
 the school
- Please keep track of your grades I will be grading and posting grades the days following the assignment due date if you are missing grades, please let me know immediately
- · Please ask questions if you need assistance
- Due to FERPA regulations, grades cannot be discussed over email and phone unless you are notifying me of a missing grade or an incorrectly entered grade
- Disruptive Behavior: Any student engaging in disruptive behavior will be advised on the first offense and will be dropped from the course on the second offense.

Assignment Policy

- Assignments open the Friday before the assignment week
- Assignments will be closed after the due date and will remain closed
- · Assignments are to be turned in on time to qualify for full credit
- Any assignment that is late or missing will be given an automatic 0
- Failure to complete the Midterm Examination, the Final Project, and/or the Final Exam will result in an automatic F
- One exception may be made on a case-by-case basis per student for late work. This exception will receive a 50% deduction for being late.
- It is your responsibility to contact the instructor if any extenuating circumstances arise

Netiquette

From "Internet Netiquette":

"Netiquette" refers to the standards for appropriate interaction in an online environment. Students are expected to display proper netiquette in their communications with their instructor and with other students. This includes being polite, disagreeing agreeably when necessary, including your name and other necessary identifiers on any communication, and practicing collegiality and mutual respect. We're not here to troll or flame, but to learn and be in a community. If an email or discussion post ever concerns you, please notify me privately and we'll work towards a resolution.

Academic Integrity

From the official school policy (https://valenciacollege.edu/students/disputes/academic-integrity.php 2):

"All forms of academic dishonesty are prohibited at Valencia College. Academic dishonesty includes, but is not limited to, acts or attempted acts of plagiarism, cheating, furnishing false information, forgery, alteration or misuse of documents, misconduct during a testing situation, facilitating academic dishonesty, and misuse of identification with intent to defraud or deceive.

Students may be subject to both the Student Code of Conduct and academic sanctions as determined in the academic judgment of the professor in cases where there is a combination of alleged violations of academic and non-academic regulations.

Any student determined by the professor to have been responsible for engaging in an act of academic dishonesty shall be subject to a range of academic penalties (apart from any sanctions that may be imposed pursuant to the Code) as determined by the professor which may include, but not be limited to, one or more of the following: loss of credit for an assignment, examination, or project; a reduction in the course grade; or a grade of "F" in the course."

Student Core Competencies

The faculty of Valencia College has established four Core Competencies that describe the learning outcomes for a Valencia graduate. They are: THINK, VALUE, COMMUNICATE, and ACT. These general competencies can be applied in many contexts and must be developed over a lifetime. They specify how learning can be expressed and assessed in practice. They enable students and faculty to set learning goals and assess learning within and across the many disciplines of human inquiry. Use the descriptions and examples of academic work for each to measure your own learning outcomes. Samples of the academic work are great additions to your Learning Portfolio. For further information on student core competencies please go to https://valenciacollege.edu/academics/competencies/

Expected Student Conduct

Valencia College is dedicated not only to the advancement of knowledge and learning but is concerned with the development of responsible personal and social conduct. By enrolling at Valencia College, a student assumes the responsibility for becoming familiar with and abiding by the general rules of conduct. The primary responsibility for managing the classroom environment rests with the faculty. Students who engage in any prohibited or unlawful acts that result in the disruption of a class may be directed by the faculty member to leave the class. Violation of any classroom or Valencia's rules may lead to disciplinary action up to and including expulsion from Valencia. Disciplinary action could include being withdrawn from the class, disciplinary warning, probation, suspension, expulsion, or other appropriate and authorized actions. You will find the Student Code of Conduct in the current Valencia Student Handbook or at: https://catalog.valenciacollege.edu/academicpoliciesprocedures/studentcodeofconduct/

Students with Disabilities

Students who qualify for academic accommodations must provide a letter from the Office for Students with Disabilities (OSD) and discuss specific needs with the professor, preferably during the first two weeks of class. The Office for Students with Disabilities determines accommodations based on appropriate documentation of disabilities (West Campus SSB 102, ext. 1523).

OSD: https://valenciacollege.edu/students/office-for-students-with-disabilities/

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6. Important Dates

The following section outlines important semester dates.

Academic Calendar: https://valenciacollege.edu/academics/calendar/

Important Dates		
Date	Event	
08/21/2023	First Day Fall 2023 Full Term	
08/28/2023	Drop/Refund Deadline	
08/30/2023 to 09/08/2023	No Show Reporting Period	
09/04/2023	Labor Day (Campus Closed)	
10/27/2023	Withdrawal Deadline	
11/10/2023	Veterans Day (Observed) (Campus Closed)	

Date	Event
11/22/2023 to 11/26/2023	Thanksgiving Holiday (Campus Closed)
12/04/2023 to 12/10/2023	Finals Week
12/08/2023	Last Day to turn in work in this class
12/10/2023	Last Day in the Term
12/12/2023	Grades Posted in Atlas
01/08/2023	Spring 2024 Term Begins

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7. Conflict Resolution

While Conflicts are rare, they do happen. Please try to reach out to your professor first. If this does not work or you are in fear of retaliation, you should contact the Department Chair. For our department, that is Joan Alexander (jalexander@valenciacollege.edu). If this does not correct the issue, or if you have further questions, you may contact an Ombudsman or your Academic Advisor for assistance (Academic Advisor). Advising: https://valenciacollege.edu/students/students/student-services/

The following section outlines information about the Ombudsman program.

Student Academic Dispute

Valencia College offers students the opportunity to express concerns privately with an Ombudsman. An Ombudsman provides a safe and comfortable environment for students to discuss complaints, concerns or problems privately. When appropriate, the office will initiate an informal intervention with the goal of facilitating a resolution that is acceptable to all parties involved. The ombudsman acts as an independent, impartial resource. If a matter cannot be resolved through this office, a referral will be made. When appropriate, the office can make recommendations regarding policy review and change.

Student Administrative Complaint Resolution

Valencia front line learning leaders are a resource for students seeking assistance in resolving issues with non-academic matters. Click here for a complete list of college-wide leaders who can assist with designated issues. Students may follow the progression of staff assistance in an administrative area, starting with the first response level, to bring resolution to the issue.

Student Code of Conduct

Once a complaint is filed, the Dean of Students or designee will review the complaint and consult with relevant parties regarding the incident. The Dean of Students or designee will then follow-up with the Student Conduct Review Process as outlined in the Student Code of Conduct.

Resources

- Website: Student Dispute Resolution
- Website: Ombudsman Program
- Website: <u>https://catalog.valenciacollege.edu/academicpoliciesprocedures/studentcodeofconduct/</u>

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8. Tips for Success

Here are some tips for success in an online college class:

- 1. Set up a designated study space: Creating a dedicated study space can help you focus and stay organized. Make sure the space is comfortable, quiet, and free from distractions.
- 2. Create a schedule: Make a schedule that includes specific times for studying, attending online lectures, and completing assignments. Stick to the schedule as much as possible.
- 3. Actively participate in class: Participate in online discussions, ask questions, and engage with your classmates and professors. This can help you stay engaged and motivated throughout the course.
- 4. Stay organized: Keep track of important deadlines and assignments by using a planner or digital calendar. This can help you stay on top of your work and avoid last-minute stress.
- 5. Communicate with your professor: If you have questions or concerns, don't hesitate to reach out to your professor. They can provide guidance and support to help you succeed in the class.
- 6. Take breaks: It's important to take breaks and give yourself time to recharge. Make sure to take breaks throughout the day and take care of your mental and physical health.
- 7. Manage your time effectively: Online classes can be flexible, but it's important to manage your time effectively. Avoid procrastination and make sure to prioritize your assignments and studying.

By following these tips, you can set yourself up for success in an online college class.

Here are some time management resources/methods to help you with your class(es):

- Time Chunking: <u>https://www.ninety.io/blog/time-chunking</u>
 Pomodoro Method: <u>https://www.techtarget.com/whatis/definition/pomodoro-technique</u>
 Eisenhower Matrix: <u>https://asana.com/resources/eisenhower-matrix</u>
 Time Management Strategies: <u>https://www.upwork.com/resources/time-management-strategies</u>

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Course Summary:

Date	Details	Due
	Classroom Setup: Step 1: Downloading and Installing Virtual Box	due by 9pm
Tue Aug 29, 2023	Classroom Setup: Step 2: Downloading and Saving the OVA Files	due by 9pm
	Classroom Setup: Step 3: Using VirtualBox to Import your Virtual Machines	due by 9pm
	Classroom Setup: Step 4: Installing Packet Tracer	due by 9pm
	Activity: 1.0.6 Top Hacker Shows Us How it is Done	due by 9pm
	Chapter Quizzes: Module 1: The Danger Quiz	due by 9pm
Tue Sep 5, 2023	Classroom Setup: Step 5: The Windows Virtual Machine	due by 9pm
	Classroom Setup: Step 5B: VMWare License from BrightSpace	due by 9pm
Tue Sep 12, 2023	Chapter Quizzes: Module 2: Fighters in the War Against Cybercrime Quiz	due by 9pm
	Chapter Quizzes: Modules 1 - 2: Threat Actors and Defenders Group Exam	due by 9pm
	Lab Assignment: 2.2.5 Lab - Becoming a Defender	due by 9pm
	Lab Assignment: Analyzing Cybersecurity Attacks	due by 9pm
	Lab Assignment: Download and Install a Password Management Application	due by 9pm
	Chapter Quizzes: Module 3: The Windows Operating System	due by 9pm
Tue Sep 19, 2023	Lab Assignment: 3.2.11 Lab - Exploring Processes, Threads, Handles, and Windows Registry	due by 9pm
	Lab Assignment: 3.3.10 Lab - Create User Accounts	due by 9pm
	Lab Assignment: 3.3.11 Lab - Using Windows PowerShell	due by 9pm
	Lab Assignment: 3.3.12 Lab - Windows Task Manager	due by 9pm
	Lab Assignment: 3.3.13 Lab - Monitor and Manage System Resources in Windows	due by 9pm
Tue Sep 26, 2023	Chapter Quizzes: Module 4: Linux Basics Quiz	due by 9pm

Date	Details	Due
	Chapter Quizzes: Modules 3 - 4: Operating System Overview Group Exam	due by 9pm
	Lab Assignment: 4.2.6 Lab - Working with Test Files in the CLI	due by 9pm
	Lab Assignment: 4.2.7 Lab - Getting Familiar with the Linux Shell	due by 9pm
	Lab Assignment: 4.3.4. Lab - Linux Servers	due by 9pm
	Lab Assignment: 4.4.4 Lab - Locating Log Files	due by 9pm
	Lab Assignment: 4.5.4 Lab - Navigating the Linux Filesystem and Permission Settings	due by 9pm
	Lab Assignment: Auditing Linux to secure environment	due by 9pm
	Chapter Quizzes: Module 5: Network Protocols	due by 9pm
	Chapter Quizzes: Module 6: Ethernet and Internet Protocol (IP)	due by 9pm
	Lab Assignment: 5.1.5 Lab - Tracing a Route	due by 9pm
Tue Oct 3, 2023	<u>Lab Assignment: 5.3.7 Lab - Introduction to</u> <u>Wireshark</u>	due by 9pm
	Lab Assignment: IPv4 Addressing Worksheet	due by 9pm
	Lab Assignment: NICE Challenge - Packet Analysis	due by 9pm
	Lab Assignment: NICE Challenge - Protect & Defend - Configuration Management Gone Awry	due by 9pm
	Chapter Quizzes: Module 7: Connectivity Verification	due by 9pm
Tue Oct 10, 2023	Lab Assignment: 7.2.8 Packet Tracer - Verifying IPv4 and IPv6 Addressing	due by 9pm
	Lab Assignment: Command Line Utilities for Network Connectivity Verification	due by 9pm
Tue Oct 17, 2023	Chapter Quizzes: Module 8: Address Resolution Protocol	due by 9pm
	Lab Assignment: 8.2.8 Lab - Using Wireshark to Examine Ethernet Frames	due by 9pm
	Lab Assignment: OUI Lookup	due by 9pm
Tue Oct 24, 2023	Chapter Quizzes: Module 9: The Transport Layer	due by 9pm
	Lab Assignment: 9.2.6 Lab - Using Wireshark to Examine the TCP 3-Way Handshake	due by 9pm
	Lab Assignment: 9.3.8 Lab - Exploring NMAP	due by 9pm
Tue Oct 31, 2023	Chapter Quizzes: Module 10: Network Services	due by 9pm
	Chapter Quizzes: Modules 5 - 10: Network	due by 9pm

Date	Details	Due
	Fundamentals Group Exam	
	Lab Assignment: 10.2.7 Lab - Using Wireshark to Examine a UDP DNS Capture	due by 9pm
	Lab Assignment: 10.4.3 Lab - Using Wireshark to Examine TCP and UDP Captures	due by 9pm
	Lab Assignment: 10.6.7 Lab - Using Wireshark to Examine HTTP and HTTPS Traffic	due by 9pm
	Chapter Quizzes: Module 11: Network Communication Devices	due by 9pm
Tue Nov 7, 2023	Lab Assignment: Examine a Wireless PCAP	due by 9pm
	Lab Assignment: NMAP Lab	due by 9pm
	Chapter Quizzes: Module 12: Network Security Infrastructure	due by 9pm
Tue Nov 14, 2023	Chapter Quizzes: Modules 11 - 12: Network Infrastructure Security Group Exam	due by 9pm
	Lab Assignment: 12.1.9 Lab - Identify Packet Flow	due by 9pm
	Lab Assignment: pfSense Firewall	due by 9pm
Tue Nov 21, 2023	Chapter Quizzes: Module 13: Attackers and Their Tools	due by 9pm
	Chapter Quizzes: Module 14: Common Threats and Attacks	due by 9pm
	Lab Assignment: 14.1.11 Lab - Anatomy of Malware	due by 9pm
	Lab Assignment: 14.2.8 Lab - Social Engineering	due by 9pm
	Lab Assignment: Extract an Executable from a PCAP	due by 9pm
	Final Exam: Fun with Passwords	due by 9pm
	Final Exam: OSINT Exercise	due by 9pm
	Final Exam: PicoCTF Challenge: Information	due by 9pm
	Final Exam: PicoCTF Challenge: Lookey Here	due by 9pm
	<u>Final Exam: PicoCTF Challenge: Wireshark doo dooo</u> <u>do doo</u>	due by 9pm
	Final Exam: Scanning with NMap	due by 9pm
	Final Exam: Social Engineering	due by 9pm