VALENCIACOLLEGE

School of Computer Science, Engineering, Logistics, and Applied Sciences
Cybersecurity and Network Engineering Technology

Summer 2024

This syllabus is an agreement between the student and the instructor. By enrolling in and then attending this course, the student agrees to and accepts the terms and conditions of this agreement. It is the responsibility of the student to carefully read this syllabus/agreement in its entirety and to adhere to all policies and procedures within the syllabus.

Course Title & credit hours: Information Security**,** CET2830C (hybrid); 3 credit hours

Catalog Course Description: Prerequisite: CET 2660C and CET 2792C. This course provides an overview of information security. This is a hands-on course designed to prepare students for the challenges facing network security. Students will learn information security terminology, principles of security, and basic types of intrusions. Students are also introduced to various ways to secure systems that store, process, and transport information.

Class Time and Location: All coursework will be done online.

Required Material:
- **TestOut Security Pro v7.0** (ISBN: 978-1-935080-44-2) subscription.
- You must have access to a computer with reliable internet connection.

Professor's Information:
   Name: Soheyla Nakhai
   Email: snakhai@valenciacollege.edu
   Phone: (407) 582-1476

Student Engagement Hours:

Day	Time and Location
Monday	3:00 – 5:00 Microsoft Teams
Tuesday	3:00 – 5:00 Microsoft Teams
Wednesday	3:00 – 5:00 Microsoft Teams
Thursday	3:00 – 5:00 Microsoft Teams
Friday	3:00 – 5:00 Microsoft Teams

ASSESSMENT METHODS AND EVALUATION:

Section Quizzes[1] --- 40%
Lab Assignments[2] --- 30%
Threaded Discussions[2 (on Canvas)] ------------------------ 5%
Final Exam[3] --- 25%

     A 90-100; B 80-89; C 70-79; D 60-69; F < 60

[1] **No make-up** quizzes/exams will be given.

[2] To get the full credit, you must submit your lab assignments within the week assigned. I will accept late assignment/discussion responses **up to 3 days past due date, however I'll deduct 20% from the grade.** Please note that 3 days past due date the link will disappear, and you will no longer be able to submit the assignment.

    Threaded Discussions – must be submitted through Canvas before midnight on the due date! Please check the Canvas regularly to review the responses of your classmates, posting follow-up comments and contributing to a rich discussion.

[3] **Final Exam** is _**cumulative.**_

Note: students must complete all coursework, or they will be assigned a grade of 0 for any work not submitted, unless it is an optional assignment.

You are strongly encouraged to start on your assignment as early as possible to accommodate unforeseen circumstances such as computer problems, Internet problems, or power outages. If any of those problems persists, please use the on-campus NET laboratory to complete and submit your assignments.

NO-SHOW PROCEDURE:

    Mixed-mode/face-to-face classes: Any student who does not attend class by the drop/refund deadline for this part of term will be withdrawn by the professor as a no-show. This will count as an attempt in the class, and students will be liable for tuition. If your plans have changed and you will not be attending this class, please drop yourself through your Atlas account by the drop deadline.

    Online classes: Students who do not submit the academically related activity or assignment by the scheduled due date will be withdrawn by the instructor at the end of the first week as a no show.

    If you are withdrawn as a "no show," you will be financially responsible for the class and a final grade of "WN" will appear on your transcript for the course."

Important Dates

    http://valenciacollege.edu/calendar/

Monday, May 6	Summer term begins…
Monday, May 13	Drop/Refund Deadline
Monday, May 27	Memorial Day - College Closed
Friday, May 31	Graduation Application Deadline
Friday, June 28	Student-Initiated Withdrawal deadline to receive grade "W"

Thursday, July 4   Independence Day- College Closed

CLASS SCHEDULE:
Disclaimer: The following is a tentative schedule. Course content, labs, and assignments are subject to change at any time at the instructor's discretion. If you are absent, it is your responsibility to find out what if any, announcements, or changes have been made.

Week of (12)	Material to be covered	Assignments are Due on Wednesdays
Wk1 5/6	Watch course orientation video Chapter 1-Introduction Chapter 2 - Threats, Attacks, and Vulnerabilities	"Introduction" Discussion due by 5/11** Chapter 1: All Sections; No lab Chapter 2: All Sections; No lab
Wk2 5/13	Chapter 3 - Physical Chapter 4 - Networks and Hosts Design and Diagnosis	Chapter 3: All sections; No lab Chapter 4: All Sections; No lab
Wk3 5/20	Chapter 5 - Devices and Infrastructure	Chapter 5: All Sections Lab: 5.1.7-Configure a Security Appliance Lab: 5.6.3 Configure URL Blocking
Wk4 5/27	Chapter 6 - Identity, Access, and Account Management	Chapter 6: Section 6.1 through 6.3; Sections 6.6, 6.9, and 6.10 Lab: None
Wk5 6/3	Chapter 7 – Cryptography and PKI	Chapter 7: All Sections Lab: 7.1.11 Hide Files with OpenStego Career in Cybersecurity Discussion
Wk6 6/10	Chapter 8 – Wireless Threats Chapter 9 – Virtualization, Cloud Security, and Securing Mobile Devices	Chapter 8: All sections Lab: 8.1.5 Configure a Wireless Network Chapter 9: All sections; No lab
Wk7 6/17	Chapter 10 – Securing Data and Applications	Chapter 10: All sections Lab: None
Wk8 6/24	Chapter 11– Security Assessments	Chapter 11: All sections Lab: 11.3.5 Implement Intrusion Prevention Lab: 11.6.4 Poison ARP and Analyze with Wireshark Lab: 11.7.4 Crack Password with Rainbow Tables
Wk9 7/1	Chapter 12– Incident Response, Forensics, and Recovery	Chapter 12: All sections Lab: None
Wk10 7/8	Chapter 13– Risk Management Chapter 14 - Governance & Compliance	Chapter 13: All sections Chapter 14: All sections Lab: None
Wk11 7/15	Review & prepare for exam	
7/19	Final Exam	

** Please refer to the "No Show" policy below.

COURSE OUTCOMES:

Student will be able to:
- Assess the need for penetration testing

- Perform network enumeration
- Perform host reconnaissance and vulnerability scanning
- Protect network by disabling nonessential systems and hardening operating systems
- Secure the network infrastructure and protect communication devices
- Perform network attack
- Explain how to use cryptography and how to manage keys
- Describe Security Management and physical security

Student Core Competencies

Think—Critical thinking is a vital skill for IT professionals. You need to think clearly, critically, and creatively in workplace settings. You need to be able to:
- Analyze data, integrate, and evaluate information quickly and correctly to be able to meet the needs of your clients and the profession
- Draw well-supported conclusions
- Revise conclusions consistent with new observations, interpretations, or reasons

Value-- Making reasoned value judgments and responsible commitments are a part of being a network engineer professional. You need to:
- Recognize values as expressed in attitudes, choices, and commitments
- Distinguish among personal, ethical, aesthetic, cultural, and scientific values
- Employ values and standards of judgment from different disciplines
- Evaluate your own and others' values from individual, cultural, and global perspectives
- Articulate a considered and self-determined set of values

Communicate--The ability to accurately receive and relay information is another important skill for IT professionals. You need to:
- Identify own strengths and need for improvement as a communicator
- Employ methods of communication appropriate to audience and purpose
- Evaluate the effectiveness of own and others' communication

Act—IT professionals must use all their technical skills and knowledge in order to act purposefully, reflectively, and responsibly:
- Apply disciplinary knowledge, skills, and values to the workplace and beyond
- Implement effective problem-solving, decision-making, and goal setting strategies
- Act effectively and appropriately in personal and professional settings
- Assess the effectiveness of personal behavior choices
- Respond appropriately to changing circumstances

Tips for Success:
- ✓ Check the course web site and your email regularly.
- ✓ Set aside specific time each week to complete class activities.
- ✓ Expect electronic glitches/power outages and plan ahead. Do not wait until the last minute to submit your work.
- ✓ Keep backup copies of all your coursework.

What Makes a Good Discussion Post?

- It should be thoughtful, original, and relevant
- It should be thought provoking
- It should be posted early to give other students time to respond

CLASSROOM POLICIES ON RECORDING LECTURES:
Students may record video or audio of class lectures for their own personal educational use. A class lecture is defined as a planned presentation by a college faculty member or instructor, during a scheduled class, delivered for the purpose of transmitting knowledge or information that is reasonably related to the pedagogical objective of the course in which the student is enrolled. Recording class activities other than class lectures, including but not limited to class discussions, student presentations, labs, academic exercises involving student participation, and private conversations, is prohibited. Recordings may not include the image or voice of other students in the class, may not be used as a substitute for class participation and class attendance, and may not be published or shared without the written consent of the faculty member. Failure to adhere to these requirements may constitute a violation of the College's Student Code of Conduct.

For Help:
- You can contact me through email (snakhai@valenciacollege.edu) or through MS Teams. I will return emails within 24 hours.

- For Canvas technical support, contact the Valencia Online Support Center at: 407 582-5600.

- **To access our online tutoring as well as getting help during open lab, use the following link:** Network Engineering Technology Virtual Lab in Microsoft Teams

Department of
Cybersecurity & Network Engineering Technology
Rules and Comments

- Absolutely no food or drinks are allowed in the classrooms or laboratories.

- You must use a computer with reliable internet access because excuses or failure to complete course work due to computer error will not be permitted.

- Final exam is comprehensive.

- It is the student's responsibility to withdraw from the course.

- Missing weekly assignment (lab assignment/chapter quiz) will count as an absence from class. **Missing more than three assignments/quizzes will count as 3 absences and could result in grade F or withdrawal from the course.**

- It is the student's responsibility to withdraw from the course.

- Cellular phones must be turned off or put on silent mode during the class periods.

- No make-up labs, Homework, or exams are permitted unless prior arrangement with the instructor has been made.

- If the student is absent or has missed any part of the class, then it is the student's responsibility to obtain the missed information from the instructor or other students.

- If you are unable to participate in the course due to illness, family emergency, etc., please communicate with me as soon as possible in order to create a plan to complete any missed assignments so that your learning can progress in your course. In the case of a prolonged online absence, please communicate with me as soon as possible in order to create a plan for the best course of action.

- No surfing the net, checking e-mail, or chat room is permitted during the class/lab periods. The instructor has the right to dismiss the student from the class or course.

- Computer use is remotely monitored; any student using computers inappropriately may be subject to dismissal from class or banishment from the lab. Subsequent offense may be sent to the campus administration for further disciplinary action.

WITHDRAWAL:
Per Valencia Policy 4-07 (Academic Progress, Course Attendance and Grades, and Withdrawals), a student who withdraws from class before the established deadline for a particular term will receive a grade of "W". A student is not permitted to withdraw after the withdrawal deadline. **See Important Dates for the Withdrawal Deadline for the part of term of this course.** A student who is withdrawn by faculty for violation of the class attendance policy will receive a grade of "W". Any student who withdraws or is withdrawn from a class during a third or subsequent attempt in the same course will be assigned a grade of "F".   For a complete policy and procedure overview on Valencia Policy 6Hx28:4-07, please go to: College Policies .

NOTE: Before choosing to withdraw, students should speak first with your professor regarding your progress in the course and with an Academic Advisor to discuss the impact of the W on your academic progress, future fees, and financial aid.

NOTE TO INTERNATIONAL STUDENTS (F-1 OR J-1 VISA):
Please be advised that withdrawal from this course due to attendance may result in the termination of your visa status if you fall below the full-time enrollment requirement of 12 credit hours. Consult the International Student Services office for more information.

MAKE-UP POLICY:
There will be no makeup exams. Expired exams will not be reactivated.

ACADEMIC HONESTY:
Each student is required to follow Valencia policy regarding academic honesty. All work submitted by students is expected to be the result of the student's individual thoughts, research, and self-expression unless the assignment specifically states, "group project." Any act of academic dishonesty will be handled in accordance with Valencia policy as set forth in the Student Handbook and Catalog.

COLLEGE POLICIES:
A full description of all College policies can be found in College Catalog and at College Policies .

STANDARDS OF CLASSROOM CONDUCT:

Valencia College is dedicated to the advancement of knowledge and learning and to 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 as listed in 6Hx28: 8-03 and the Student Handbook. Even though Faculty manage the classroom environment, the primary responsibility for maintaining a respectful and civil learning environment rests with the students. Students who violate the Student Code of Conduct may be referred to the Dean of Student's Office for disciplinary action, which may result in a sanction up to and including expulsion. College Policies

This course will be presented objectively and is not presented to espouse, promote, advance, inculcate, or compel any individual to adopt as a belief any of the subjects of the discussion that may be construed as concepts constituting discrimination based on race, color, sex, or national origin as provided by Florida law. Please note that I do not endorse such concepts but present them for academic discussion and consideration. The law does not prohibit discussion of such concepts in an objective manner and without endorsement. Should a student feel uncomfortable with how course content is presented or discussed, please contact the instructor for further conversation.

STUDENT ASSISTANCE PROGRAM:

Valencia College is interested in making sure all our students have a rewarding and successful college experience. To that purpose, Valencia students can get immediate help with issues dealing with stress, anxiety, depression, adjustment difficulties, substance abuse, time management as well as relationship problems dealing with school, home, or work. BayCare Behavioral Health Student Assistance Program (SAP) services are free to all Valencia students and available 24 hours a day by calling (800) 878-5470. Free face-to-face counseling is also available.

Any student who has difficulty accessing sufficient food to eat, or who lacks a safe and stable place to live and believes this may affect his or her performance in the course, is urged to meet with a Counselor in the Advising Center for information about resources that may be available from the college or community.

OFFICE OF STUDENTS WITH DISABILITIES INFORMATION:

Students with disabilities who qualify for academic accommodations must provide a Notification to Instructor (NTI) form 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.

> East Campus Bldg. 5, Rm. 216 Ph: 407-582-2229 Fax: 407-582-8908 TTY: 407-582-1222
> West Campus SSB, Rm. 102 Ph: 407-582-1523 Fax: 407-582-1326 TTY: 407-582-1222
> Osceola Campus Bldg. 1, Rm. 140A Ph: 407-582-4167 Fax: 407-582-4804 TTY: 407-582-1222
> Winter Park Campus Bldg. 1, Rm. 212 Ph: 407-582-6887 Fax: 407-582-6841 TTY: 407-582-1222

Student Feedback on Instruction:

Near the end of the term, students will receive an invitation through their Valencia ATLAS email account asking them to complete the Student Feedback on Instruction (SFI). This survey provides Valencia College professors with feedback on students' experiences in courses and helps them to continually improve their courses. The results are released only *after* grades are submitted and students' names are *not* included in the results - all responses will be anonymous.