

Cybersecurity – CPS 493

Fall 2025 (3 Credits)

INSTRUCTOR INFORMATION

Instructor: Kaitlin Hoffmann
Email: hoffmank4@newpaltz.edu
Lecture Location: Lecture Center (LC) 113
Lecture Hours: Monday and Thursday 3:30 PM - 4:45 PM
Office Hours: Mondays 1:15 - 3:15PM. Tuesdays 2:45 - 4:45PM.
Office Location: SH 243 (If I'm not in there, check SH 260, the glass room)

COURSE DESCRIPTION

This course is meant as a survey course in cybersecurity, covering a wide array of topics. The course will be heavy in lab work with both in-class and at-home exercises. Students will be introduced into core concepts including the threat landscape, social engineering, and the psychology of cybersecurity, as well as major vulnerability categories including software, network and system security.

Students will work on exploiting vulnerabilities using the lab exercises. Students will be exposed to offensive security techniques for the purpose of avoiding such mistakes in their own code, for analyzing or auditing other code to identify such vulnerabilities, or for the purposes of penetration testing on authorized targets.

COURSE OBJECTIVES & STUDENT LEARNING OUTCOMES

- To prepare students with the technical knowledge and skills needed to protect and defend computer systems and networks
 - To prepare students who can plan, implement, and monitor cyber security mechanisms to help ensure the protection of information technology assets.
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E-MAIL AND BRIGHTSPACE

E-mail and Brightspace are primary means of communication between the instructor and the students. Receiving and reading course email, as well as periodically checking Brightspace, is ***your responsibility***.

E-mails will be answered within 24 hours Monday thru Friday. Emails will not be answered Saturday and Sunday. Please do not re-send the same, or variation of the same, email expecting me to respond faster. **The best time to reach me is Monday thru Thursday.**

TEXTBOOK (Optional) and REQUIRED RESOURCES

The textbook below is not required, but I do encourage you purchase it if you are someone who likes to read a textbook with their course.

Textbook: *Computer Security: A Hands-On Approach*, by Dr. Wenliang Du, 2022, 3rd edition (ISBN: 978-17330039-4-0). The course will use the SEED (Security Education) Labs associated with the text.

TryHackMe: <https://tryhackme.com/> A free online platform for learning cyber security, using hands-on exercises and labs.

Laptops: A laptop (Windows, Linux, Mac) is required for the course. You'll use it for lab exercises in class and at home.

VirtualBox or VMware Fusion: An open source virtualization software package which you will run on your own laptop or desktop. More on this later.

EVALUATION PROCEDURES AND CRITERIA

Progress in the course will be reflected in assignment, project, and exam grades covering the subject areas of the course. Attendance in classes is expected.

- Assignments: 25%
- Research Project: 15%
- Test 1: 20% **Thursday 10/02**
- Test 2: 20% **Thursday 11/13**
- Final Exam: 20% **Monday December 15 2:45 PM - 4:45 PM**

Grade Scale (by percentage)

A	100 – 93	A-	92.9 – 90
B+	89.9 – 87.5	B	87.4 – 82.6
B-	82.5 – 80	C+	79.9 – 77.5
C	77.4 – 72.6	C-	72.5 – 70
D+	69.9 – 67.5	D	67.4 – 62.6
D-	62.5 – 60	F	Below 60

Last day to DROP a course without "W" grade or fee for Fall 2025 is 09/07. Last day to request Course Withdrawal is 11/14.

ASSIGNMENTS/LABS

Assignments are assigned each week and due the following week before the next lecture. All assignments can be found and submitted on Brightspace under the **Assignments** tab under the appropriate modules.

RESEARCH PROJECT

You will each be assigned a cybersecurity topic that you will have to research (you may change the topic to something that interests you with my permission). Your submission will be due **12/04**. Everything **MUST** be cited, and any blatant copying from online sources or AI will result in an automatic 0. More detailed information and a rubric will be posted after the midpoint of the semester.

EXAMS

There will be three exams: two tests and a final exam. Exams will be a combination of multiple choice, fill in the blank, and short answer. Exams are **closed** notebook and computer. **You may bring one 8x11 handwritten sheet of paper containing any notes you would like, front and back to each exam.** Phones **MUST** be facedown under your desk during the exams.

DUE DATES & LATE POLICY

Unless due to an emergency, assignments are due as indicated on Brightspace and will **not be accepted** after the due date.

CAMPUS-WIDE POLICY STATEMENTS

Academic integrity policy statement: Students are expected to maintain the highest standards of honesty in their college work. Cheating, forgery, and plagiarism are serious offenses, and students found guilty of any form of academic dishonesty are subject to disciplinary action. New Paltz's policy on academic integrity is found at www.newpaltz.edu/ugc/policies/policies_integrity.html, and several excellent resources to help with avoiding plagiarism are available on the Sojourner Truth Library's website: lib.newpaltz.edu/assistance/plag.html.

Reasonable accommodation of individuals with disabilities statement: Students needing classroom and/or testing accommodations related to a disability should contact the Disability Resource Center (Student Union, Room 210, 845-257-3020) as close as possible to the beginning of the semester. The DRC will then provide students' instructors with an Accommodation Memo verifying the need for accommodations. Specific questions about services and accommodations may be directed to Deanna Knapp, Assistant Director (knappd@newpaltz.edu) or Jean Vizvary, Director (vizvaryj@newpaltz.edu).

Veteran & Military Services statement: New Paltz's Office of Veteran & Military Services (OVMS) is committed to serving the needs of veterans, service members and their dependents during their transition from military life to student life. Student veterans, service members or their dependents who need assistance while attending SUNY New Paltz may refer to www.newpaltz.edu/veterans; call 845- 257-3120,

-3124 or -3074; e-mail np-vms@newpaltz.edu; or stop by the Student Union, Room 100 South.

Computer and network policies statement: Users of New Paltz's computer resources and network facilities are required to comply with the institutional policies outlined in the Acceptable Uses and Privacy Policy, available at www.newpaltz.edu/itpolicy/.

Identity verification policy statement for online courses: New Paltz's Online Identity Verification Policy is designed to verify that students enrolled in our online courses and/or programs are the ones who take the courses, complete the programs, and receive the academic credit.

See www.newpaltz.edu/ugc/policies/policies_onlineverification.html for the complete policy.

STUDENT EVALUATION OF INSTRUCTION

You are responsible for completing the Student Evaluation of Instruction (SEI) for this course and for all your courses with an enrollment of five (5) or more students. I value your feedback and use it to improve my teaching and planning.

Cybersecurity

Fall 2025 Outline

Date	Topics
Week 1 08/25	<ul style="list-style-type: none">• Syllabus• Introduction• People and Cybersecurity
Week 2 09/01 - NO CLASS MONDAY (Labor Day)	Linux Security Basics
Week 3 09/08	Set-UID Programs
Week 4 09/15	Environment Variables and Attack
Week 5 09/22	Buffer Overflow Attack
Week 6 09/29 - Test 1 Thursday (10/02)	Buffer Overflow Attack Continued
Week 7 10/06	Web Security Basics
Week 8 10/13 - NO CLASS MONDAY (Indigenous People Day)	Cross Site Request Forgery
Week 9 10/20	Cross Site Request Forgery continued
Week 10 10/27	Cross-Site Scripting Attack
Week 11 11/03	SQL Injection Attack
Week 12 11/10 - Test 2 on Thursday (11/13)	Network Security Basics

Date	Topics
Week 13 11/17	Attacks in Networking
Week 14 11/24 - NO CLASS THURSDAY (Thanksgiving Break)	Reconnaissance
Week 15 12/01 - RESEARCH PROJECT DUE THURSDAY 12/04	Firewalls
Week 16 12/08 - LAST CLASS MONDAY!	Review
Week 17 12/15	FINAL EXAM: Monday, December 15th, 2:45 - 4:45 PM

*****Syllabus and Course Outline subject to change at instructor's discretion. You will be notified and held accountable for any changes to the syllabus.**