

# CS 480 – Ethical Hacking Spring 2023

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**Office Hours:** MTuWTh 10:00-11:00 AM  
Or by appointment

**Lectures:** Tu 3:00-4:00 PM Halsey 309

**Labs:** Th 3:00-4:00 PM Halsey 101A – Linux Lab

**Prerequisites:** A grade of C or better in CS 262

## **Textbook:**

1. *Ethical Hacking: Techniques, Tools, and Countermeasures*, Solomon, Michael, Oriyano, Sean-Philip, Fourth Edition, Jones & Bartlett Learning
2. *Navigate 2 Lab Access for Hacker Techniques, Tools, and Incident Handling*, Third Edition (Thomas - 767792); Course ID: 767792. **Please note that you must purchase this lab component for our course as our labs are based on it.**

**Course Website:** UWO Canvas

## **Course Description**

A course on hacking techniques for ethical purposes, and penetration testing. Topics include reconnaissance, footprinting tools and techniques, port scanning, enumeration, password cracking, sniffers, session hijacking, denial of service attacks, evasion of IDS, firewalls, and honeypots, and social engineering attacks.

## **Course Outcomes**

1. Explain the history and current state of hacking and penetration testing, including ethical and legal implications.
2. Describe fundamental TCP/IP concepts and technologies related to networking.
3. Describe key concepts in cryptology.
4. Identify common information-gathering tools and techniques.
5. Perform basic system hacking, and web and database attacks.
6. Analyze vulnerabilities exploited by hackers.
7. Identify common types of malware and the threats they pose.
8. Perform network traffic analysis and sniffing by using appropriate tools.
9. Perform incident handling by using appropriate methods.
10. Identify security controls and defensive technologies.

## **Course Grading Policy**

Your final grade for this course will be based on three components, namely exams, assignments, and review problems. Your overall numerical grade for the course will be computed as the weighted sum of the component grades using the following weights:

Component	Weight
Exams (3)	55%
Labs	25%
Homework	20%

Tentative Exam Dates are as follows:

- **Exam 1 - Thursday, 3/02**
- **Exam 2 - Thursday, 4/06**
- **Exam 3 - Thursday, 5/11**

Your letter grade for the course will be completed as follows:

Numerical Score	Grade	Numerical Score	Grade
>=92	A	72-78	C
90-92	A-	70-72	C-
88-90	B+	68-70	D+
82-88	B	62-68	D
80-82	B-	60-62	D-
78-80	C+	<60	F

While this overall grading scheme is fixed, I will be happy to discuss any issue you may have with individual grades. If you notice a mistake or have a question regarding a specific grade, please come and talk to me *as soon as possible*. Do not wait until the end of the semester to bring up grading issues.

### Homework/Lab Deadlines

Each homework and lab will come with a deadline (day and time) by which they must be submitted. Late submissions will NOT be accepted.

### Attendance Policy:

I do not require attendance for this course, but I do encourage you to attend and hope it will be beneficial to you. When attending class, please do come prepared for, and participate actively, in it. Material may be discussed during the lectures that is not available on Canvas. If you miss class, it is your responsibility to make sure you catch up on anything you may have missed.

### Extensions and Makeups:

Extensions on deadlines may be granted at the discretion of the instructor if you provide a valid justification (in the form of a written excuse from a medical doctor or the Dean of Students Office) **before** the due date.

### Collaborating versus Cheating:

Unless otherwise stated in the assignment or project, all submissions must be entirely your own work. While it is acceptable to discuss the homework and assignments at a high level (for example, at the design level) with others, you must submit your own work. **You may not “borrow” any piece of code or design of any length from someone else, the internet, or any other source, unless you can live with a zero and the other potential academic sanctions of cheating** (see [UWO Student Discipline Code 2007](#), Chapter UWS 14).

**Accommodations:**

The University of Wisconsin Oshkosh supports the right of all enrolled students to a full and equal educational opportunity. It is the University's policy to provide reasonable accommodations to students who have documented disabilities that may affect their ability to participate in course activities or to meet course requirements.

Students are expected to inform instructors of the need for accommodations as soon as possible by presenting an Accommodation Plan from either the Accessibility Center, Project Success, or both. Reasonable accommodations for students with disabilities is a shared instructor and student responsibility.

The Accessibility Center is part of the Dean of Students Office and is located in 125 Dempsey Hall. For more information, email [accessibilitycenter@uwosh.edu](mailto:accessibilitycenter@uwosh.edu), call 920-424-3100, or visit the Accessibility Center Website.

**Statement Regarding Diversity, Equity & Inclusion:**

Diversity drives innovation, creativity, and progress. At the University of Wisconsin Oshkosh, the culture, identities, life experiences, unique abilities, and talents of every individual contribute to the foundation of our success. Creating and maintaining an inclusive and equitable environment is of paramount importance to us. This pursuit prepares all of us to be global citizens who will contribute to the betterment of the world. We are committed to a university culture that provides everyone with the opportunity to thrive.

**Required Disclosure Statement:**

Students are advised to see the following URL for disclosures about essential consumer protection items required by the Students Right to Know Act of 1990:

<https://uwosh.edu/financialaid/consumer-information/>