Course: EEGR 480 – Introduction to Cybersecurity

Faculty Name: Dr. Otily Toutsop

Term: Fall 2026

Introduction to Cybersecurity

Syllabus

Otily Toutsop, Ph.D.

Office Hours:

Wednesday, 2 PM – 3:00 PM, or by appt.

Description:

This course provides an introduction to cybersecurity (3-hour credits course). Topics include hacking, social networks, privacy, cryptography, legal aspects, social implications, password management, digital forensics, computer networking, wireless security, and ethical issues. The course focuses on individual users and their role in protecting themselves from various cybersecurity threats. No technical experience needed.

Prerequisites:

None.

Holiday(s):

There will be no class on this Holidays.

Student Learning Goals:

Upon successful completion of the course, students should be able to:

- Describe the basic components of computer networking.
- Examine the concept of privacy and its legal protections.
- Explain the primary concepts involving encryption.
- Perform basic computer forensics.
- Develop and execute a password management plan.
- Describe the social implications of cybersecurity.
- Understand the risks and benefits of social networks.
- Conduct various ethical hacking procedures (e.g., password cracking, Wi-Fi cracking).
- Describe the basic ethical considerations related to cybersecurity.

Student Learning Objectives that this course contributes to

- *Global Perspective:* Students will develop an awareness of the interrelationships among personal, local, and global entities, as well as gain understanding of issues of well-being and sustainability. Students will also learn about the importance of the social, cultural, economic, scientific, and environmental differences that mark world regions.
- *Inquiry and Critical Thinking*: Students will acquire skills and familiarity with modes of inquiry and examination from diverse disciplinary perspectives, enabling them to access, interpret, analyze, quantitatively reason, and synthesize information critically.
- *Civic Engagement*: Students will define their roles and responsibilities as members of a broader community and develop an understanding of how they can contribute to that community for the greater good.
- *Communication/Self-Expression*: Students will gain experience with oral, written, symbolic and artistic forms of communication and the ability to communicate with diverse audiences. They will also have the opportunity to increase their understanding of communication through collaboration with others to solve problems or advance knowledge.

Textbook:

No Book: I will post the resources

Topics Covered

1. Computer Networking
2. Cryptography
3. Password Management
4. Hacking
5. Wireless security
6. Social Networks
7. Privacy
8. Legal Aspects
9. Social Implications
10. Digital Forensics
11. Ethical issues as it relates to cybersecurity

Week	Main Topic(s) Covered	Key Integrated CAE-CD Knowledge Units	Major Assignments & Deliverables
1	Course Introduction & Cybersecurity Fundamentals	**CSF** (full), **CSP** (intro), basic principles & threat landscape	Quiz/Activity 1
2	Computer Networking	**OSC** (awareness), CSP, data security in transmission	Lab/Assignment 1
3	Cryptography	**CSF** (Applications of Cryptography & PKI), CSP, **LLP**	Quiz 3, Team Project Deliverable 1: Research
4	Password Management	**CSF, CSP** (Least Privilege, Authentication, AAA)	Lab/Assignment 2
5	Hacking & Ethical Hacking Procedures	**PTT** (introductory), **CSF** (attacks, vulnerabilities, defenses), **CSP**, **LLP**	Midterm Exam, Team Project Deliverable 2: Development
6	Wireless Security	**PTT, LLP**, OSC (wireless hardening), CSF	Lab/Assignment 3
7	Privacy & Legal Aspects	**CSF** (Legal issues, Privacy, Key laws: GDPR, HIPAA, etc.), **CSP**	Lab/Assignment 4
8	Social Networks & Social Implications	**CSF** (awareness, current events, social engineering), **CSP**	Lab/Assignment 5
9	Digital Forensics	**OSC** (intro), CSF, **PTT** (evidence handling), **LLP** (awareness)	Team Project Deliverable 3: Draft of Final Product
10	Ethical Issues, Best Practices & Course Review	All KUs (synthesis), **CSP** (Ethics), **CSF** (best practices)	Lab/Assignment 6, Team Project Deliverable 4: Presentation, Final Exam
11	Final Team Project Presentations & Wrap-up	All KUs (reflection & application)	Team Project Deliverable 5: Final Project

Assignments for the Course

Quizzes / Activities: There will be quizzes / activities. The quizzes will cover the material for the week, including the assigned reading(s). These quizzes are individual closed-book and closed-note efforts. When an activity is done in lieu of a quiz, you will be graded based on your participation in the activity and any deliverable(s) associated with the activity. Your two lowest scores will be dropped from your overall grade.

Labs / Assignments: There will be a total of labs / assignments throughout the semester. You will be asked to apply the knowledge you have recently acquired to a scenario, set of tasks, a specific problem, etc., so that you may better understand the concepts of this course.

Professional Presentation: You will be required to give a 3-5 minute presentation on a cybersecurity topic of your choosing. You may choose to use PowerPoint slides if you like, but no more than 100 words total. Those that are over the limit cannot be used. This total does not include your introductory slide and closing slide. The slides must be emailed to the instructor by midnight the day before you present.

Team Project: You will work in a team of 3 individuals. The course-long project will result in five deliverables that address a specific cybersecurity topic. It is important that you involve yourself in each deliverable so that you have a solid foundation for applying the knowledge and skills you will acquire in this project to your own life.

Midterm and Final: There will be a comprehensive midterm and final. Each exam will consist of a combination of multiple choice and short answer questions.

Course Grading

Assignment	Week(s)	Points	Percentage
Quizzes / Activities	**1-10**	**240**	**24%**
Labs / Assignments		**300**	**30%**
Lab / Assignment 1	2	50	5%
Lab / Assignment 2	4	50	5%
Lab / Assignment 3	6	50	5%
Lab / Assignment 4	7	50	5%
Lab / Assignment 5	8	50	5%
Lab / Assignment 6	10	50	5%
Professional Presentation	**2-9**	**50**	**5%**
Team Project Deliverables		**250**	**25%**
Deliverable 1: Research	3	50	5%
Deliverable 2: Development	5	50	5%
Deliverable 3: Draft of Final Product	9	50	5%
Deliverable 4: Presentation	10	50	5%
Deliverable 5: Final Product	11	50	5%
Comprehensive Exams		**160**	**16%**
Midterm	5	80	8%
Final	10	80	8%
TOTAL		**1000**	**100%**

General Criteria for Written Assignments:

Your work will be graded based on its clarity, organization, balance, amount of pertinent detail included, depth and clarity of evaluative and analytical comments, and preparation. It will also be graded on the extent to which a good understanding of the material presented in the course is shown and on the extent to which directions are followed. If evaluative or analytical comments are required, they should be supported by factual evidence, either from readings or other documents. Other aspects of individual assignments may also be included in the grading.

Work that shows a lack of understanding of subject matter, is unclear or poorly organized, contains few or irrelevant details, does not follow directions, contains little or unsubstantiated evaluative commentary, or is poorly written or prepared (e.g., typos, grammatical errors) will receive low grades.

General Criteria for Presentations:

Your class presentation will be graded primarily on the following:

- Statement of goals and objectives
- Presentation of ideas
- Review of main concepts
- Selection of information level appropriate to audience
- Use of supporting materials or examples

Selection of exercises or practice

- Level of participation from audience solicited
- Eye contact
- Voice quality
- Poise/pacing
- Enthusiasm/interes

Good presentations will have:

- A brief statement of goals and objectives
- Clear, organized presentation of ideas and concepts
- Brief review of main concepts
- Selection of information level appropriate to the audience
- Use of well-selected supporting materials or examples

Course Conduct

ATTENDANCE:

STUDENTS ARE EXPECTED TO ATTEND ***ALL*** CLASSES, **PREPARED TO PARTICIPATE IN THAT DAY'S ACTIVITIES.**

TIME:

Class meets once per week.

PARTICIPATION:

As stated in the syllabus, class participation is important. Please read the assignments *before* coming to class. Both the instructor and the other students will presume you have done so, and discussions will focus on the assigned areas.

ASSIGNMENTS:

Assignments are due the date indicated in the syllabus, unless otherwise stated by the instructor. Penalty of 5 percentage points deduction per day late for late assignments. For example, if you earned a score of 85% on an assignment, but it was 3 days late then the final score would be 70%. Assignments over a week late not accepted. No exceptions, unless absence approved in advance.

SUCCESS:

Maintain the pace of the class

COMPUTER ACCESS:

Students are expected to have access to a computer (i.e., lab or personal computer)

Overall Course Grading Criteria

Letter Grade	Numeric Grade	Percentage	Quality of Performance
A	4.0	99.0 – 100.0	Superior performance in all aspects of the course with work exemplifying the highest quality. Unquestionably prepared for subsequent courses in field.
	3.9	97.0 – 98.99	
A-	3.8	95.0 – 96.99	Superior performance in most aspects of the course; high quality work in the remainder. Unquestionably prepared for subsequent courses in field.
	3.7	93.0 – 94.99	
	3.6	91.0 – 92.99	
	3.5	89.0 – 90.99	
B+	3.4	87.0 – 88.99	High quality performance in all or most aspects of the course. Very good chance of success in subsequent courses in field.
	3.3	85.0 – 86.99	
	3.2	83.0 – 84.99	
B	3.1	81.0 – 82.99	High quality performance in some of the course; satisfactory performance in the remainder. Good chance of success in subsequent courses in field.
	3.0	80.0 – 81.99	
	2.9	79.0 - 79.99	
B-	2.8	78.0 - 78.99	Satisfactory performance in the course. Evidence of sufficient learning to succeed in subsequent courses in field.
	2.7	77.0 - 77.99	
	2.6	76.0 - 76.99	
	2.5	75.0 - 75.99	
C+	2.4	74.0 - 74.99	Satisfactory performance in most of the course, with the remainder being somewhat substandard. Evidence of sufficient learning to succeed in subsequent courses in field with effort.
	2.3	73.0 - 73.99	
	2.2	72.0 - 72.99	
C	2.1	71.0 - 71.99	Evidence of some learning but generally marginal performance. Marginal chance of success in subsequent courses in field.
	2.0	70.0 - 70.99	
	1.9	69.0 - 69.99	
C-	1.8	68.0 - 68.99	Minimal learning and substandard performance throughout the course. Doubtful chance of success in subsequent courses.
	1.7	67.0 - 67.99	
	1.6	66.0 - 66.99	
	1.5	65.0 - 65.99	
D+	1.4	64.0 - 64.99	Minimal learning and low quality performance throughout the course. Doubtful chance of success in subsequent courses.
	1.3	63.0 - 63.99	
	1.2	62.0 - 62.99	
D	1.1	61.0 - 61.99	Very minimal learning and very low quality performance in all aspects of the course. Highly doubtful chance of success in subsequent courses in field.
	1.0	60.0 - 60.99	
	0.9	59.0 - 59.99	
D-	0.8	58.0 - 58.99	Little evidence of learning. Poor performance in all aspects of the course. Almost totally unprepared for subsequent courses in field.
	0.7	57.0 - 57.99	

E	< 0.7	< 57.0	Complete absence of evidence of learning. Totally unprepared for subsequent courses in field.

Privacy:

To support an academic environment of rigorous discussion and open expression of personal thoughts and feelings, we, as members of the academic community, must be committed to the inviolate right of privacy of our student and instructor colleagues. As a result, we must forego sharing personally identifiable information about any member of our community including information about the ideas they express, their families, lifestyles and their political and social affiliations. If you have any questions regarding whether a disclosure you wish to make regarding anyone in this course or in the MSU community violates that person's privacy interests, please feel free to ask the instructor for guidance.