Course Syllabus

Jump to Today ✎ Edit

MIAMI UNIVERSITY

CYB 134 Introduction to Cybersecurity

Department of Computer Science and Software Engineering

Course Information:

- **Instructor**: Dr. Suman Bhunia
  - E-mail: bhunias@miamioh.edu
  - Office: 205-A Benton Hall
  - Phone: (513) 529 0339
  - Office hours: Tuesday and Thursday, 11:15 am – 12:15 pm. If you can't make it to my office during hours, meet me after the class or email me to schedule a meeting.
- **Class Interaction:** Tuesdays & Thursdays 10:15 – 11:15 am over Zoom.
- **Zoom Link** for the course:
- **Course Site**: Canvas
- **TA help sessions**: Nick Perry (perryna4@miamioh.edu) Tuesday and Thursdays 5-6 PM.
- **Required Materials:**
  - **Textbook:** Cybersecurity for Beginners by Raef Meeuwisse (Available on Amazon)
  - **Reference Book:**
    - Computer Security: Principles and Practice by William Stallings and Lawrie Brown
    - Computer Networking: A Top-Down Approach by James Kurose and Keith Ross
    - Security Awareness: Applying Practical Cybersecurity in Your World by Mark Ciampa

Important dates:

- Tuesday, May 16: First day of class.
- Thursday, May 25 : Midterm exam at 10:15 am to 11:15 am.
- Thursday, June 8: Endterm exam at 10:15 am to 11:15 am.

Course Description

Overview:

This course focuses on the Societal Security knowledge area of cybersecurity. Cybercrime, law, ethics, policy, privacy and their relation to each other are the key concepts of this knowledge area. The threat of cybercrime across the global society is incredibly serious and growing. Laws, ethics and policies are vital to the security of corporate and government secrets and assets, as well as to the protection of individual privacy and identity.

Prerequisites:

- None

Student Learning Objectives:

1. Describe typical threats to modern digital systems, and to outline methods of defending or responding to these threats.
2. Understand and use basic cryptography techniques.
3. Describe information security standards, guidelines, compliance, and policy.
4. Interpret professional and ethical responsibility and best practices of cybersecurity.

5. Identify the spectrum of security activities, cybersecurity laws, methods, methodologies, and procedures.
6. Identify and use basic security tools and practices.

Tentative schedule

1. Week-1
   - Cybersecurity Introduction
   - Unix and Command Line
   - Discipline within Cybersecurity
2. Week-2
   - Ethics
   - Internet
   - Cybersecurity and Human
3. Week-3
   - Cryptography
   - Defensive Cybersecurity
   - Public Key Infrastructure
4. Week-4
   - Authentication
   - Risk and backup
   - Digital Forensics

Course Grading

Measures of Evaluation

Deliverable	Weightage
Midterm exam	25%
Final Exam	25%
Labs	25%
Quizzes	25%
Total	100%

Exams: There will be one midterm exam and one final exam. All exams are cumulative, closed-book. **No make-ups for missed exams.** If you are absent on an exam, your grade for that exam will be zero.

Labs: The content covered will be applied through guided lab/ project assignments.

Quizzes: Online quizzes are given using the course website.

Assignment Submission Policies:

- All assignments must be submitted through Canvas only. Submissions sent by e-mail and so on will not be accepted.
- **Late Submission:** One-day late submission will result in a 10% grade reduction; two-day late submissions will result in a 25% grade reduction. No submission will be accepted two days after the due date.
- **Always back up your electronic work!** Computer/network failures are a fact of life and are not justification for an extension. WRITE YOUR ANSWERS ALONE…learn to help one another without sharing any code.
- If you submit a scanned copy of a handwritten page, please scan it properly and make sure all the contents are readable.

Letter Grading Conversion:

Grade	Percentage Range	Grade	Percentage Range	Grade	Percentage Range
A+	97-100%	A	94-96.9%	A-	90-93.9%
B+	87-89.9%	B	84-86.9%	B-	80-83.9%

C+	77-79.9%	C	74-76.9%	C-	70-73.9%
D+	67-69.9%	D	64-66.9%	D-	60-63.9%
F	Less than 60%				

Class Policies

Class Attendance Policy

Unexcused absences are not allowed in this course. In case of an absence, inform the instructor beforehand, if possible, and submit any work due on time. For more information, refer to Chapter 9 of the *Student Handbook.* Should a student become ill, it is the responsibility of the student to contact the instructor and keep the instructor appraised of the situation.

Taking notes

- You will sometimes be provided with electronic presentations to give you basic information. These are not a substitute for taking notes.
- Take notes during videos and activities.
- Lab activities often depend on using what you wrote in your notes.
- "Good notes" does not mean "Write everything". Be selective.
- Focus on writing sample code, diagrams, "notes to self".

Course Webpage & Communication

All course content (slides, videos, announcements, handouts, assignments, etc.) will be posted on the Canvas page for this course. We will use Canvas for all assignment submissions, as well as for the use of discussion boards, grading, and other means of communication. **You should ensure that your settings enable you to receive course announcements directly to your Miami email address so that you are immediately notified of any updates.**

Lecture Capture

Please be aware that classes might be recorded and shared only with students in this class. Students are not allowed to reshare the course lecture recordings.

Copyright Disclaimer

Course materials provided to you, including presentations, tests, outlines, and similar materials, are copyright protected by the faculty member(s) teaching this course. You may make copies of course materials solely for your **own use**. You may not copy, reproduce, or electronically transmit any course materials to any person or company for commercial or other purposes without the faculty member's express permission. Violation of this prohibition may subject the student to discipline/suspension/dismissal under Miami's Code of Student Conduct or Academic Integrity Policy.

Student Resources

Support for Students

As an instructor, I have a **duty to report** (https://www.miamioh.edu/policy-library/employees/general-employment/non-discrimination/duty-to-report.html). This means I am required to promptly report to the Deputy Title IX Coordinator (**titleix@miamioh.edu** (mailto:titleix@miamioh.edu)) any information a student shares with me regarding harassment, discrimination, sexual misconduct and interpersonal violence, or retaliation. **A report does not initiate an investigation. It engages a discussion of your resources, supportive measures, and options available.** If students want to speak with someone confidentially, the following resources are available on and off campus:

- Student Health Services, (513) 529-3000
- Student Counseling Services, (513) 529-4634
- Women Helping Women (WHW) Sexual and Interpersonal Violence Support Specialists are available to support all students and can be contacted by emailing mu@womenhelpingwomen.org. As well as calling/texting 513-846-8402 between 9AM-5PM. The 24-hour hotline is 513-381-5610. WHW supports ALL survivors of dating/domestic violence, sexual assault, and stalking, regardless of gender identity or sexual orientation.

Speaking with a confidential resource person does not preclude students from making a formal report to the University if and when they are ready.

https://miamioh.edu/diversity-inclusion/programs-resources/report-incident/index.html

For more information, please visit https://miamioh.edu/campus-safety/sexual-assault/ and https://www.miamioh.edu/diversity-inclusion/oeeo/index.html.

Accessibility Statement

Students with disabilities are encouraged to request reasonable accommodations. Student Disability Services (SDS) registration should be completed before the provision of accommodations. Please visit the Student Disability Services Website for more information. You can also contact SDS at 513-529-1541 or sds@miamioh.edu.
If you are eligible to receive accommodations, please schedule an office hours appointment at the beginning of the semester to discuss accommodation plans.

Mental Health Services

If you are a student experiencing mental or emotional distress, you are encouraged to call Student Counseling Service (513-529-4634). The Community and Counseling and Crisis Center (844-427-4747) has a 24-hour hotline for emergencies outside of business hours.

Academic Support

The following resources are available for you as a student:

- **Rinella Learning Center Academic Support. (https://miamioh.edu/student-life/rinella-learning-center/academic-support/index.html)**
- **Howe Center for Writing Excellence. (http://miamioh.edu/hcwe/)**
- **International Student Resources. (https://miamioh.edu/academics/intl-student-resources/index.html)**
- **Student Success Center. (https://miamioh.edu/emss/offices/student-success-center/about/index.html)**

Academic Integrity Information

You must read and understand the CSE department expectations for Academic Integrity,
http://miamioh.edu/cec/academics/departments/cse/academics/academic-integrity/index.html

The policy is copied below:

The Department of Computer Science and Software Engineering is committed to maintaining strict standards of academic integrity. The department expects each student to understand and comply with the **University's Policy on Academic Integrity (http://www.miamioh.edu/integrity/)** and the undergraduate student handbook and graduate student handbook. Students may direct questions regarding academic integrity expectations to their instructor or to the department chair. All work submitted must be original for that class. Submitting the same project for two different classes is grounds for charging a student with academic misconduct unless prior written permission is received from both instructors.

"Problem Solving Assignments" are assignments that involve programming, math, proofs, derivations, and puzzles.

The purpose of a problem solving assignment is for you to develop the skills necessary to solve similar problems in the future. \To learn to solve problems you must solve the problems and write your solutions independently.

It is worth reiterating that the important aspect of the assignment is that you actually create the solution from start to finish; simply copying a solution and then understanding it after the fact is not a substitute for actually developing the solution.

The notion of academic integrity can be confusing in courses with substantial problem solving because certain forms of collaboration and investigation are permitted, but you are still required to complete your assignment independently. The following scenarios are meant to help distinguish between acceptable and unacceptable levels of collaboration and research, but are not all-inclusive:

ACCEPTABLE:

- Consulting solutions from the current course textbook, but not from other published sources.
- Seeking help on how to use the programming environment such as the editor, the compiler, or other tools.
- Seeking help on how to fix a program syntax error or how a certain language feature works.
- Discussing strategies with a fellow student on how to approach a particular problem. This discussion should not include significant sections of completed work or source code (including printouts, email, viewing on a monitor). Discussions should begin with a clean sheet of paper and end with conceptual drawings and/or pseudo-code.

UNACCEPTABLE:

- Looking at another solution including those written by current students, past students, or outside sources such as code or solutions found on the Web or in publications other than the current class textbook.
- Using another solution as a starting point and then modifying the code or text as your own work.
- Providing a copy of your solution or a portion of your solution, in any form (electronic, hard copy, allowing another student to view your code on a monitor), to another student.
- Giving or receiving code fragments to fix a problem in a program.