Course Syllabus

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CSCE4930 / Topics: Practical Cybersecurity

Instructor Information

Name: Dr. Jacob Hochstetler (he/him)

Office Location: VIA ZOOM

Office Hours: TBD (please email before to let me know you will be in the Zoom meeting)

Email: Jacob.Hochstetler@unt.edu (mailto:Jacob.Hochstetler@unt.edu)

Course Description, Structure, and Objectives

This course is designed to provide a hands-on, real-world approach to cybersecurity. It emphasizes experiential learning, allowing students to apply cybersecurity concepts and practices directly in organizational settings.

Course Structure

This course takes place face-to-face. The course is structured into the following two phases:

- Phase 1 equips students with the technical and business skills of an entry-level cybersecurity analyst.
- Phase 2 partners students, in supervised teams, with a small business, public sector organization, or nonprofit to render pro bono cybersecurity services.

Course Outcomes

Upon successful completion of this course, learners will be able to:

1. Conduct detailed security policy reviews and assess compliance with industry standards.
2. Design and implement a temporary event monitoring system for various organizational scenarios.
3. Perform risk management and threat detection using contemporary tools and techniques.
4. Generate comprehensive reports that communicate findings and recommendations effectively.
5. Apply experiential learning to real-world cybersecurity challenges.

How to Succeed in this Course

Netiquette

Netiquette, or online etiquette, refers to the way students are expected to interact with each other and with their instructors online. Here are some general guidelines:

- Treat your instructor and classmates with respect in email or any other communication.
- Remember that all college level communication should have correct spelling and grammar (this includes discussion boards).
- Avoid slang terms such as "totes magotes" and abbreviations such as "u" instead of "you."
- Humor and sarcasm are highly encouraged. People who take the world seriously are in for a rough journey.
- Don't lead your emails off with your social security and bank account numbers, password manager master password, home address, credit score, and dental record jpegs. 3 of those will suffice.
- No extra credit will be given for mentioning my **kitten** ⤷ **(https://knowyourmeme.com/memes/orange-cat-behavior)** .

See these **Netiquette Guidelines** ⤷ **(https://digitalstrategy.unt.edu/clear/online-communication-tips.html)** for more information.

Communication Expectations

Please send all communication as email via your official student UNT email (my.unt.edu).

Just like you, I receive a virtual ton of spam to my email address, and if it has *[EXT]* in the subject line, there's a ~95% chance I'm just deleting it. Additionally, I cannot discuss any student issues through external email due to FERPA, i.e. I cannot confirm that I *know* it's *you* I'm conversing with.

I have a 48 hour reply policy on all emails, excepting weekends and holidays. All grades will be posted promptly after grading has been completed.

Please come to me with any issues. Sending an email is free and if I can't resolve it, we can move the issue up the chain.

In your emails please include:

Subject	the course (e.g. CSCE5520) that you are emailing about and a few words (aka, *the Subject)*
Body	a signature with your email with your name and UNT ID number.

This helps me not only help you, but if there are multiple issues with the course (i.e. a module is broken for instance), I can quickly collate the issue. I flag these emails with my preferred **color** ⤷ **(https://en.wikipedia.org/wiki/Red)** .

Academic Accommodations

The University of North Texas makes reasonable academic accommodation for students with disabilities. Students seeking reasonable accommodation must first register with the Office of Disability Access (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with a reasonable accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request reasonable accommodations at any time; however, ODA notices of reasonable accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of reasonable accommodation for every semester and must meet with each faculty member prior to implementation in each class. Students are strongly encouraged to deliver letters of reasonable accommodation during faculty office hours or by appointment. Faculty members have the authority to ask students to discuss such letters during their designated office hours to protect the privacy of the student. For additional information, refer to the **Office of Disability Access** ⇗ **(https://studentaffairs.unt.edu/office-disability-access)** website. You may also contact ODA by phone at (940) 565-4323.

Academic Success Resources

UNT strives to offer you a high-quality education and a supportive environment, so you learn and grow. As a faculty member, I am committed to helping you be successful as a student. To learn more about campus resources and information on how you can be successful at UNT, go to **unt.edu/success** ⇗ **(https://www.unt.edu/success/)** and explore **unt.edu/wellness** ⇗ **(https://wellness.unt.edu/)** . To get all your enrollment and student financial-related questions answered, go to **scrappysays.unt.edu** ⇗ **(http://scrappysays.unt.edu/)** .

Supporting Your Success and Creating an Inclusive Learning Environment

Every student in this class should have the right to learn and engage within an environment of respect and courtesy from others. We will discuss our classroom's habits of engagement and I also encourage you to review UNT's student code of conduct so that we can all start with the same baseline civility understanding (**Code of Student Conduct** ⇗ **(https://policy.unt.edu/policy/07-012)**)

Required/Recommended Materials

Recommended Textbooks

- Kim and M.G. Solomon, "Fundamentals of Information Systems Security", 4th Edition, Jones & Bartlett Learning, 2023.
- Easttom, "Digital Forensics, Investigation, and Response", 4th Edition, Jones & Bartlett Learning, 2022.

Course Requirements/Schedule

Phase	Module	Topic
1	1	Introduction
1	2	Security policy analysis. Assets inventory. Threat modeling. Risk assessment.
1	3	Event monitoring. Threat detection. Incident response.
1	4	Vulnerability analysis. Pentesting. Vulnerability patching.
1	5	Network security. Wireless security. Endpoiont and mobile security.
1	6	Managing authentication and authorization.
2	7	Basics of client engagement and preparation of client reports.
2	8	Client engagement and security policy analyis.
2	9	Event monitoring and initial risk assessment.
2	10	Threat detection and vulnerability analysis.
2	11	Initial client report and client's feedback.
2	12	Finanl risk assessment and client report.
2	13	Final presentations.
2	14	After-action review.
2	15	Professor and course evaluation.

Please see the Canvas schedule for specific dates for modules and due dates for assignments.

Students will be notified by Eagle Alert if there is a campus closing that will impact a class and describe that the calendar is subject to change, citing the **Campus Closures Policy** ⇨ **(https://policy.unt.edu/policy/15-006)**

Assessing Your Work

Assignment percentages

Type	Percentage
Client deliverables	50%
Feedback from Client	10%
360º performance review	10%
Final presentation	10%
Participation	20%

Grading scale

Final Grade	Letter
90 - 100	A
80 - 89	B
70 –79	C
60 –69	D
< 60	F

Grading scale

Final Grade **Letter**

Grades are rounded to the nearest whole integer.

There is no curving of grades, nor "extra" credit, as it is unfair to the other students.

Grades are based on mastery of the content. I encourage you to find opportunities to learn with and through others. Explore **Navigate's Study Buddy** ⤴ **(https://navigate.unt.edu/)** tool to join study groups. Maximize your learning with our coaching staff at the Learning Center. Focus on areas where you are struggling in this course by attending scheduled study group sessions with me the week before each exam. Forward together!

Attendance and Participation

I have great respect for students who are balancing the demands of their coursework with the responsibilities of caring for family members. If you run into challenges that require you to miss a class, please contact me or my TA. There may be some flexibility we can offer to support your academic success.

Course Evaluation

Student Perceptions of Teaching (SPOT) is the student evaluation system for UNT and allows students the ability to confidentially provide constructive feedback to their instructor and department to improve the quality of student experiences in the course.

Assignment Policies

Submittal Policy

All assignments are posted to Canvas and should be submitted to Canvas. Assignments cannot be accepted through email.

Late Work Policy

No late submissions will be accepted for any reason. Please start work on assignments and quizzes well before the deadline and on a stable Internet connection to avoid any submission delays due to technical

difficulties.

AI (Artificial Intelligence) with AI (Academic Integrity) Policy

I expect you to use AI (GitHub Copilot, Cody, Ghostwriter, ChatGPT, etc.), in this class. Learning to use AI is an emerging skill, and I am happy to meet and help with these tools during office hours or after class.

Be aware of the limits of AI-based code generators:

- If you provide minimum effort prompts, you will get low quality results. You will need to refine your prompts to produce good outcomes. This will take work.
- Don't trust anything it says. If it gives you a number or fact, assume it is wrong unless you either know the answer or can check in with another source. You will be responsible for any errors or omissions provided by the tool. It works best for topics you understand.
- AI is a tool, but one that you need to acknowledge using. Please include a paragraph at the end of any assignment that uses AI explaining what you used the AI for and what prompts you used to get the results. **Failure to do so is in violation of academic honesty policies**.

Be thoughtful about when this tool is useful. Don't use it if it isn't appropriate for the case or circumstance.

Screenshot Submission Policy

Many assignments will have you submit screenshots to show you completed the work. There are three components to a good screenshot:

1. Do not take a photo with your phone.
   - Take a **native screenshot** ⬀ **(https://www.take-a-screenshot.org/)** with your operating system (https://www.take-a-screenshot.org/).
2. This screenshot should show identifying information.
   - No need to overthink this. The easiest way is just to open a Notepad.exe (Windows) or Stickies (macOS) and enter your EUID, then take the screenshot of the assignment. Or you can open your university webmail in a browser tab and have your profile open in the screenshot.
3. Only screenshot what you need for the assignment.
   - If you have a 48" wide monitor, and the assignment only takes up 10% of your screen, please crop down the screenshot to only what is needed and no more.

Canvas File Upload Policy

Assignments may require multiple file uploads. Do no archive/compress/zip these into one file: Attach them individually.

The only acceptable file type for upload is what can be previewed automatically by DocViewer in Canvas (**https://community.canvaslms.com/t5/Instructor-Guide/What-types-of-files-can-be-previewed-in-**

Canvas/ta-p/607 ⬈ **(https://community.canvaslms.com/t5/Instructor-Guide/What-types-of-files-can-be-previewed-in-%20Canvas/ta-p/607)**).

Technical Assistance

Part of working in the online environment involves dealing with the inconveniences and frustration that can arise when technology breaks down or does not perform as expected. Here at UNT we have a Student Help Desk that you can contact for help with Canvas or other technology issues.

UNT Help Desk ⬈ **(https://it.unt.edu/helpdesk)**

Call: 940-565-2324 (tel:940-565-2324)

Telephone Availability:

- Monday–Thursday: 8am – 9pm
- Friday: 8am- 5pm
- Saturday: 11am- 3pm

Email: helpdesk@unt.edu (mailto:helpdesk@unt.edu)

Walk-in: Sage Hall, Room 330

Walk-in Hours: Monday–Friday: 8am - 5pm

For additional support, visit **Canvas Technical Help** ⬈ **(https://community.canvaslms.com/docs/DOC-10554-4212710328)**

The following library service desks provide **laptop checkouts** ⬈ **(https://library.unt.edu/services/laptop-checkout/)** during **hours of operation** ⬈ **(https://calendar.library.unt.edu/hours)**. MacBooks are only available at Willis Library.

- **Willis Library: The Spark** ⬈ **(https://guides.library.unt.edu/spark)**, First Floor
- **Sycamore Library: Sycamore Service Desk** ⬈ **(https://library.unt.edu/sycamore/service-desk/)**
- **Discovery Park: Library Service Desk** ⬈ **(https://library.unt.edu/discovery-park/service-desk/)**, Room B112

Student Support Services

- **Registrar** ⬈ **(https://registrar.unt.edu/registration)**
- **Financial Aid** ⬈ **(https://financialaid.unt.edu/)**
- **Student Legal Services** ⬈ **(https://studentaffairs.unt.edu/student-legal-services)**
- **Career Center** ⬈ **(https://studentaffairs.unt.edu/career-center)**
- **Counseling and Testing Services** ⬈ **(https://studentaffairs.unt.edu/counseling-and-testing-services)**
- **Student Affairs Care Team** ⬈ **(https://studentaffairs.unt.edu/care)**
- **Student Health and Wellness Center** ⬈ **(https://studentaffairs.unt.edu/student-health-and-wellness-center)**

Academic Support Services

- **Academic Resource Center** ▭ **(https://clear.unt.edu/canvas/student-resources)**
- **Academic Success Center** ▭ **(https://success.unt.edu/asc)**
- **UNT Libraries** ▭ **(https://library.unt.edu/)**
- **Writing Lab** ▭ **(http://writingcenter.unt.edu/)**
- **MathLab** ▭ **(https://math.unt.edu/undergraduate/math-lab.html)**

Course Summary:

Date	Details	Due