Applied Cybersecurity Community Clinic
Applied Cybersecurity Clinic Practicum
I 320 – Fall 2024 – 27455

Contact Info
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Office hours: Monday 12:00-2:00 PM, Wednesday 1:30-3:30 PM by appointment only

Class Overview
The Applied Cybersecurity Community Clinic is a two-semester sequence that first equips students with the technical and business skills of an entry-level cybersecurity analyst (semester 1) and then partners them in (supervised) teams with a small business, public sector organization, or nonprofit to render pro bono cybersecurity services (semester 2). During the first semester, students learn key cybersecurity defense concepts and skills, such as risk assessment, network configuration and security, access controls, responding to a cyberattack, business planning, and penetration testing. Students also learn how to form an effective cybersecurity consulting team and communicate with organization leaders and employees about essential cybersecurity controls and functions. During the second semester, students work within their assigned teams to assess, design, and render a cybersecurity improvement project plan for their assigned clinic client organization, building cybersecurity capacity and bolstering the client's ability to manage its cyber risk and recover from cyber incidents long-term.

Learning Objectives
Students will:
- Provide supervised hands-on cybersecurity services on a day-to-day basis to a small business, public sector organization, or nonprofit in the State of Texas
- Assess, prioritize, and mitigate cyber risks to client organizations through design and implementation of a customized cybersecurity improvement project plan which may include but is not limited to: configuring access and authorization controls, installing endpoint and network monitoring tools, drafting cybersecurity plans and policies, conducting security awareness training, etc.
- Communicate cybersecurity risks, suggested mitigations, and project status with client organization leaders, assigned mentors, and clinic instructor on a regular basis, keeping all stakeholders apprised of progress and challenges throughout the semester
- Submit an initial proposed project plan and final clinic service engagement summary report, providing evergreen, actionable deliverables to the client organization and thoroughly documenting all improvements and changes made by the team during the semester

Grading and Assessment Methods
This course will use plus/minus grades.

As stated in the Cybersecurity Clinic Student Code of Conduct, regular, punctual attendance and communication is required for you to be a successful cyber clinic team member. Therefore, communication and participation in biweekly Zoom check-ins with the clinic instructor will count for **30% of your grade**. **Your camera must be on during these meetings to be counted for credit.**

I will excuse ONE absence from a biweekly meeting if your absence is communicated to me at least 8 hours in advance. For example, if you are set to meet with your team and the instructor at 4:45pm on Tuesday, I

will excuse your absence if I am notified by or before 8:45am on Tuesday. Additionally, attending any portion of each meeting will result in full credit, as I understand you may have classes or conflicts on either end.

360-degree leadership is a philosophy developed by John C. Maxwell describing how employees should lead not just "down" to employees under their direct supervision, but also "up" to their supervisors and "across" to their peers, influencing all parties to work as a holistic team for the betterment of the organization and in furtherance of shared values. In the spirit of 360-degree leadership, **30% of your grade** for the Practicum course will result from surveys completed by your fellow team members (10%), your industry expert mentors (10%), and your client organization representative(s) (10%) concerning your personal contributions to the semester. These surveys will serve as a holistic way of grading your performance on the overall engagement, your teamwork ability, and your impact on your client organization, not unlike how an annual evaluation functions in a real work environment.

A rubric is provided on Canvas. Metrics to be judged include: your consistent, timely, and professional communication, contribution to the project plan/scope of work agreed to by the client, research and comprehension of cybersecurity problems and solutions, collaboration with your teammates and client employees, and successful and on-time completion of your assigned tasks.

The remaining **40% of your grade** will result from your on-time and complete submission of the below assignments, which act as benchmarks for keeping your team on track to successfully render a cybersecurity solution and perform high-value, meaningful cybersecurity improvements for your client in the weeks allotted. Concerns about your team meeting the below deadlines will be considered, but only if they are communicated to the clinic instructor **before** the assignment due date/time, not after.

- **Assignment #1 (due Sunday, September 8th by 11:59pm):** Submit written report of initial meeting with client, including the following items. Only one team member needs to submit on behalf of your team via Canvas Assignment #1.
    - Date of meeting:
    - Time of meeting:
    - Location of meeting:
    - Meeting summary (2-3 sentences):
    - Team next steps:
    - Anticipated challenges, if any:

- **Assignment #2 (due Sunday, September 29th by 11:59pm):** Submit UT Box link to PDF copy of your team's Approved Cyber Clinic Project Plan, meaning it has already been reviewed and agreed to by your client organization representatives.
    - This should include this semester's tasks, assignments, timeline, controls, etc. outlined to the best of your team's ability; as a reminder, there is a template available here.
    - Keep in mind this will be a foundation to guide your progress and update regularly over the course of the semester. It other words: it does not have to be perfect by this point!
    - Only one team member needs to submit on behalf of your team via Canvas Assignment #2.

- **Assignment #3 (due Sunday, October 20th by 11:59pm):** Complete midterm self-assessment questionnaire of your team-client engagement on Canvas. Every student must complete this assignment in the Quizzes section of Canvas.

- **Assignment #4 (due Friday, December 6th by 11:59pm):** Submit UT Box link to Word document draft of your team's Final Cyber Clinic Engagement Report. This report should summarize the full scope of your team's work over the semester and detail your team's final completion of all tasks, assignments, policy drafts, etc. requested and approved by your client organization. If necessary,

include timeline for future cybersecurity improvements, resources/guides for managing installed software tools, and/or instructions for requesting future cyber services or assistance.
- o Only one team member needs to submit on behalf of your team via Canvas Assignment #4.
- o I will provide feedback and edits on the report to your team by **Monday, December 9th**.
- o The final report must be shared with the client for their records and uploaded into your team's UT Box folder by **11:59pm on Tuesday, December 10th.**

- **Assignment #5 (due Monday, December 9th by 11:59pm):** Complete the assigned survey evaluating the performance of your other team members. Every student must complete this assignment in the Quizzes section of Canvas. The score assigned to you by your fellow team members will then be averaged make up 10% of your final grade, as described above.

Assigned Materials

Owing to the nature of this course as an experiential learning course, there are no formal assigned materials. However, some resources are included below for your reference and use during your client engagement:

- Resources for Service Engagement (also available on Canvas):
  - o ACCC Resource Guide
  - o Sample Client Questionnaires
  - o Cybersecurity Controls and Resources Lists
  - o Security Policy Templates
  - o Sample Security Awareness and Training Presentations
  - o Cybersecurity Tool Suggestions

- Clinic Policies:
  - o Student Code of Conduct
  - o Clinic Privacy and Data Storage Policy
  - o Clinic-Client MOU Sample

Generative AI Policy

Students are invited to use AI platforms like ChatGPT to help prepare for assignments and projects (e.g., to help with brainstorming training ideas or to outline a draft information security policy). I also welcome you to use AI tools to help revise and edit non-sensitive portions of your work (e.g., to help standardize report formatting, spot confusing or underdeveloped paragraphs, or to fix citations).

However, UT-Austin policy is that "ChatGPT or similar AI Tools must not be used to generate output that would be considered non-public." This means your work products for your client organizations may not be derived *wholly* from Generative AI tools.

Further—and most importantly—because AI outputs are shareable and retrievable, you may not input any sensitive, private, or identifying information about your client into these tools: "Any use of ChatGPT or similar AI Tools cannot use any personal, confidential, proprietary, or otherwise sensitive information…any other information classified as Confidential or Controlled university data must not be used with AI Tools."

If you have a question about this policy, please ask during our regular meetings or via email any time.

Accommodations

The university is committed to creating an accessible and inclusive learning environment consistent with university policy and federal and state law. Please let me know if you experience any barriers to learning so I can work with you to ensure you have equal opportunity to participate fully in this course. If you are a student with a disability, or think you may have a disability, and need accommodations please contact Disability &

Access (D&A). Please refer to the D&A website for more information: http://diversity.utexas.edu/disability. If you are already registered with D&A, please deliver your Accommodation Letter to me as early as possible in the semester so we can discuss your approved accommodations and needs in this course.

Course Sequence and Assignments
Subject to change at instructor's discretion. Updates will be announced on Canvas and new versions of the syllabus will be located on the course Canvas site.

Week 1: August 26th-30th
- Team meetings with Professor Lockhart via Zoom
- Set initial meeting time with your client organization to introduce yourselves, visit their office (if applicable), and assess their desired scope of work, cybersecurity concerns, and goals for this semester
- Review your client's pre-engagement questionnaire responses prior to meeting them to guide your further questions and fact-finding (responses available in UT Box folder for service engagement)
- Set regular schedule for engaging with client organization, team, and assigned mentors (as needed), committing approx. 6-9 hours per week

Week 2: September 3rd-September 6th
- Team meetings with Professor Lockhart via Zoom
- Begin initial risk assessment and project planning for client organization

Week 3: September 9th-September 13th
- Team meetings with Professor Lockhart via Zoom

Week 4: September 16th-20th
- Team meetings with Professor Lockhart via Zoom

Week 5: September 23rd-27th
- Team meetings with Professor Lockhart via Zoom

Week 6: September 30th-October 4th
- Team meetings with Professor Lockhart via Zoom

Week 7: October 4th-7th
- Team meetings with Professor Lockhart via Zoom

Week 8: October 7th-11th
- Team meetings with Professor Lockhart via Zoom

Week 9: October 14th-18th
- Team meetings with Professor Lockhart via Zoom

Week 10: October 21st-25th
- Team meetings with Professor Lockhart via Zoom

Week 11: October 28th-November 1st
- Team meetings with Professor Lockhart via Zoom

Week 12: November 4th-8th
- Team meetings with Professor Lockhart via Zoom

Week 13: November 11th-15th
- Team meetings with Professor Lockhart via Zoom

Week 14: November 18th-22nd
- Team meetings with Professor Lockhart via Zoom

Week 15: November 25th-29th
Fall Break – No Class

Week 16: December 2nd-6th
- Link to Final Clinic Engagement Report draft due by **11:59pm on Friday, December 6th**
- Team meetings with Professor Lockhart via Zoom
  - **All Teams:** Friday at 3:30-4:30pm (Zoom "office hours")

Week 17: December 9th
- Complete Team Member Evaluation Quiz in Canvas by **11:59pm on Monday, December 9th**
- Submit PDF copy of Final Cyber Clinic Engagement Report to client organization representative(s) and upload to team UT Box Folder by **11:59pm on Tuesday, December 10th**