Applied Cybersecurity Community Clinic
Applied Cybersecurity Clinic Practicum
I 320 – Spring 2024 – 27430

Contact Info
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Office hours: Monday 12 PM-1:30 PM, Wednesday 3:15-4:45 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 Central Texas-based small business, municipal government, or nonprofit to render pro bono cybersecurity services (semester 2). During the first semester, students will learn key cybersecurity defense concepts and skills, such as vulnerability assessment, network configuration and security, access controls, authorization techniques, responding to a cyberattack, business planning, and penetration testing. Students will also learn how to form an effective cybersecurity operations 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 designated client organization, building cybersecurity capacity and bolstering the client organization's ability to recover from a cyber incident 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 Central Texas area
- Assess, prioritize, and mitigate cyber risks to client organizations through design and implementation of a customized cybersecurity improvement project plan involving configuration of access and authorization controls, installation of endpoint and network monitoring tools, and drafting of cybersecurity plans and policies, amongst other cybersecurity solutions
- Communicate cybersecurity risks, suggested mitigations, and project status with client leaders, mentors, and instructor on a regular basis, keeping all stakeholders apprised of progress and challenges throughout 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 check-ins with the clinic instructor will count for **35% of your grade**. 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 can 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, **15% of your grade** for the Practicum

course will result from surveys completed by your fellow team members (5%), your industry expert mentors (5%), and your client organization representative(s) (5%) concerning your personal contributions to the semester. These surveys will serve as a holistic way of grading your performance on the project, teamwork abilities, and impact on your client organization, not unlike how an annual evaluation functions in a real work environment.

A rubric will be provided via Canvas. Metrics to be judged include, but are not limited to: 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 assigned tasks.

The remaining **50% 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.

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 during your client engagement:

- Templates you may optionally use: (also available on Canvas)
  - Project Plan Template
  - Written Report Template
  - Presentation Template

- Important reference materials:
  - General Cybersecurity Resources (also available on Canvas)
  - CISA Cybersecurity Performance Goals Checklist
  - Global Cyber Alliance (GCA) Small Business Toolkit
  - CIS Blueprint for Ransomware Defense Tools and Resources

- Additional trainings to augment your experience and refresh on specific cyber topics:
  - Cybersecurity for Critical Urban Infrastructure Online Course
  - EC-Council's Essential Cybersecurity Training Series
  - TEEX Cyber Readiness Center Training Catalog

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: January 16th-19th
- Team meetings with Professor Lockhart via Zoom
- Set meeting time with your client organization to introduce yourselves, possibly visit their office, assess their cybersecurity concerns and general goals for this semester

- **Assignment #1 (due Sunday, February 4th 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:

Week 2: January 22nd-26th
- Team meetings with Professor Lockhart via Zoom
- Meet with client organization, define scope and timeline of work, and begin initial risk assessment planning and division of labor
- Set regular schedule for engaging with client organization, team, and assigned mentors (as needed), committing approx. 6-9 hours per week. Communicate team schedule to professor via meeting or email

Week 3: January 29th-February 2nd
- Team meetings with Professor Lockhart via Zoom

- **Assignment #2 (due Sunday, February 18th by 11:59pm):** Submit UT Box link to project plan spreadsheet with this semester's tasks, assignments, timeline, etc. outlined to the best of your team's ability. Keep in mind this will be a living document by which you will update your progress over the course of the semester for the instructor and client organization to view. 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.

Week 4: February 5th-February 9th
- Team meetings with Professor Lockhart via Zoom

Week 5: February 12th-16th
- Team meetings with Professor Lockhart via Zoom

Week 6: February 19th-23rd
- Team meetings with Professor Lockhart via Zoom

Week 7: February 26th-March 1st
- Team meetings with Professor Lockhart via Zoom

- **Assignment #3 (due Sunday, March 3rd 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.

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

Week 9: March 11th-15th
Spring Break – No Class

Week 10: March 18th-22nd
- Team meetings with Professor Lockhart via Zoom

Week 11: March 25th-29th
- Team meetings with Professor Lockhart via Zoom

Week 12: April 1st-5th
- Team meetings with Professor Lockhart via Zoom

- **Assignment #4 (due Monday, April 29th by 11:59pm):** Submit UT Box link to final PDF copy of your team's written report summarizing the full scope of your team's work over the semester and detailing final completion of all tasks, assignments, policy drafts, etc. requested and approved by your client organization. Ensure the final copy is also shared with the client for their records and, if appropriate, includes resources/guides for managing software tools and requesting future cyber services or assistance. Only one team member needs to submit on behalf of your team via Canvas Assignment #4.

- **Assignment #5 (due Monday, April 29th 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 5% of your final grade, as described above.

Week 13: April 8th-12th
- Team meetings with Professor Lockhart via Zoom

Week 14: April 15th-19th
- Team meetings with Professor Lockhart via Zoom

Week 15: April 22nd-26th
- Team meetings with Professor Lockhart via Zoom

Week 16: Monday, April 29th
- Final client engagement written report link due by **11:59pm**
- Team member surveys due by **11:59pm**