TRINE
U N I V E R S I T Y

Course Syllabus

Course Title: Cybersecurity

Term and Year: Spring Term (2), 2024

Course and Section Number: IS 5403

Time and Place: Hybrid (Detroit)
INPERSON is Sunday April 21, 8am to 5pm

Number of Credit Hours: 3

Instructor: Mr. Martinez

Office Location/Hours: Evenings by appt

Office Phone: (586) 205-2630 cell

Email: martinej@trine.edu

Course Description: This course provides knowledge and practical skills required for a variety of cybersecurity roles. Throughout this course, students will use technologies and tools to identify and address security threats, attacks and vulnerabilities. Emphasis is placed on the latest trends and techniques in risk management, risk mitigation, threat management and intrusion detection. This course also covers principles and foundations of network architecture and design, cryptography, and PKI.

Learning Outcomes: Upon completion of this course, the student should be able to:

1. Compare elements of cybersecurity to societal vulnerabilities.
2. Assess threats, vulnerabilities, and intelligence to reduce exposure to attacks.
3. Evaluate cryptography by weighing its importance to data security.
4. Design simple computer networks and secure protocols for safe network usage.
5. Develop firewalls, intrusion detection, and intrusion protection approaches to ensure security of networks.
6. Implement secure network architecture practices.
7. Create organizational cybersecurity processes and procedures.

Prerequisites: IS 5203 Network Management

Required Text: None

References: Coursera: IBM Cybersecurity Analyst Professional Certificate (www.coursera.org)
IBM Cybersecurity Analyst Professional Certificate | Coursera

Other Materials:

Course Requirements: Coursera: IBM Cybersecurity Analyst Professional Certificate
                         (www.coursera.org)

Attendance/Participation: All students are expected to log in to their courses regularly throughout the week to receive instruction, materials, and updates from the instructor. It is your responsibility to

check in and submit your assignments, complete your discussion board postings, and finish quizzes and exams by the due dates.

If you do not participate in the course, you will be counted absent. Simply logging in is not enough; you must submit/complete an assignment, post to a discussion board, or other similar assignment tasks to avoid being counted absent. Instructors are required to submit attendance the Monday following each week of class.

This attendance is reported to the Financial Aid Department and may result in the loss of any financial aid refund you are expecting if you have not been participating in your courses. **In addition, you will be administratively dropped from the course if you are reported absent a total of three weeks.**

If this is a HYBRID class, please ensure that you arrive at 7am. Lateness is not tolerated. If you are going to miss the in-person class, notify your instructor AND academic advisor so you can fill out an extreme circumstances letter. Only EXTREME circumstances will be approved. Please make every effort to attend as scheduled.

Grading/Evaluation:

Assignments	Amount	Value	Points	Percentage
Discussion Forum	4	50	200	15%
Coursera Quizzes	33	100	3300	23%
Podcast Quizzes	4	100	400	15%
Storytime Video Responses	6	50	300	10%
Reflection Blogs	7	50	350	15%
Architecture Video Responses	10	50	500	20%
Coursera IBM Capstone	1	50	50	2%
Total	141	-	5100	100%

Trine Graduate Grading Scale:

Grade	Percentage	Quality Points	Meaning of Grade
A	93-100	4.0	Excellent
B+	86-92	3.5	Very Good
B	81-85	3.0	Good
C+	75-80	2.5	Above Average
C	70-74	2.0	Average (lowest passing grade)
F	00-69	0.0	Failure
I	Incomplete	Not figured into GPA	
IP	In Progress (grade deferred)	Not figured into GPA	
W	Withdrawal	Withdrawal before completion of 80% of semester	

WP	Withdrawal	Withdrawal after completion of 80% of semester issued only under special circumstances and with approval of the department chair/director	

Other Policies:

Artificial Intelligence Policy:
Artificial Intelligence (AI) is prohibited: All work submitted by students in this course must be generated by the student. Students may not have another person or entity contribute to an assignment for them, which includes using AI. Students may not incorporate any part of an AI-generated response in an assignment, use AI to formulate arguments, use AI to generate ideas for an assignment, or submit work to an AI platform for improvement. Using an AI tool to generate content may qualify as academic misconduct in this course.

Academic Misconduct:
The University prohibits all forms of academic misconduct. Academic misconduct refers to dishonesty in examinations (cheating), presenting the ideas or the writing of someone else as one's own (plagiarism) or knowingly furnishing false information to the University by forgery, alteration, or misuse of University documents, records, or identification. Academic dishonesty includes, but is not limited to, the following examples: permitting another student to plagiarize or cheat from one's own work, submitting an academic exercise (written work, printing, design, computer program) that has been prepared totally or in part by another, acquiring improper knowledge of the contents of an exam, using unauthorized material during an exam, submitting the same paper in two different courses without knowledge and consent of professors, or submitting a forged grade change slip or computer tampering. The faculty member has the authority to grant a failing grade in cases of academic misconduct as well as referring the case to Student Life.

Plagiarism:
You are expected to submit your own work and to identify any portion of work that has been borrowed from others in any form. An ignorant act of plagiarism on final versions and minor projects, such as attributing or citing inadequately, will be considered a failure to master an essential course skill and will result in an F for that assignment. A deliberate act of plagiarism, such as having someone else do your work, or submitting someone else's work as your own (e.g., from the Internet, fraternity file, etc., including homework and in-class exercises), will at least result in an F for that assignment and could result in an F for the course.

Electronic Devices:
Use of electronic devices including smart watches and cell phones is prohibited during exams or quizzes unless directly allowed by the instructor.