Course Syllabus and Policy Requirement Statement

In order to access your course materials, you must agree to the following, by clicking the "Mark Reviewed" button below.

By checking the "Mark Reviewed" link below, you are indicating the following:

• You have read, understood, and will comply with the policies and procedures listed in the class syllabus, and that you have acquired the required textbook(s).
• You have read, understood, and will comply with class policies and procedures as specified in the online Student Handbook.
• You have read, understood, and will comply with computer and software requirements as specified with Browser Test.
• You have familiarized yourself with how to access course content in Blackboard using the Student Quick Reference Guide or CSS Student Orientation Course.

BOR/ISSA 6350 Cyber Vulnerability

Course Description/Overview

Cyber vulnerabilities pose potentially devastating consequences to the U.S. critical infrastructure systems such as water systems, power lines, communications systems, agriculture, and others. There are over 18 different national critical systems in the U.S. and protecting these critical systems is a paramount job for all cybersecurity stakeholders involved. We discuss many of these cyber vulnerabilities throughout the course to recognize the current cyber vulnerabilities as well as any future attacks.

As a Graduate Seminar, the students will essentially determine the flow of the course through their participation in discussions and writing requirements.

Prerequisite Knowledge

There is no specific prerequisite knowledge for this course; however, it is recommended that students have some security knowledge in protecting national security and describing computer vulnerability.

Online Course Access

The student will complete all required course activities through the University online course site. Upon registration the student will be provided with the course access in Blackboard Leaning System. The student is advised to contact the school administrator if the registered courses are unavailable.

Required Technical Skills

Students are expected to possess technical skills in computer use and collaborate in the online course activities in a weekly basis. Students are required to access the online course and participate in the required discussion forums.
Course Required Textbooks:


Course Objectives/Learning Outcomes

Objectives:
This course will introduce the need for a national cyber security program to protect critical infrastructure. The ten components of this program, which make up the remaining chapters of the textbook, are introduced as well.

After completing this course, the student will be able to:

1. Identify cyber threats and vulnerabilities to national critical infrastructure.
2. Analyze cyber threats and vulnerabilities to critical infrastructure.
3. Evaluate recommended solutions to cyber threats to national critical infrastructure.
4. Apply cybersecurity best practices to a practical application.

Grading Policies

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Percent of Grade</th>
<th>Due</th>
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</thead>
<tbody>
<tr>
<td>Participation in the Discussion Board</td>
<td>30%</td>
<td>Weekly when no essay is assigned. Primary postings are due no later than 08:00 am. Central Time on Saturday morning. Responses are due no later than 08:00 am. Central Time on Monday morning at the start of the next lesson.</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>30%</td>
<td>Due Monday morning of the beginning of lesson 6, not later than 08:00 AM Central Time. See Lesson 5 for detailed instructions.</td>
</tr>
<tr>
<td>Final Exam</td>
<td>40%</td>
<td>Due not later than Friday 11:59PM (CST) of Week 8.</td>
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Rubrics:

Discussion forums and writing assignments will be graded using a standardized rubric. It is recommended that you be familiar with these grading criteria and keep them in mind as you complete the writing assignments. There are two rubrics. Click the link to download the PDF document:

- Discussion Rubric
- Writing Assignment
  Rubric http://blackboard.angelo.edu/bbcswebdav/pid-2344407-dt-content-rid-110823_4/xid-110823_4

Some thoughts on late work:

Don’t be late. In the professional world, late is often too late. In the intelligence profession and in related fields, being late with written assessments - even with the right assessment or with brilliant work - oftentimes means arriving after the LTIOV - latest time information is of value. However, sometimes lateness is unavoidable. If you know you will be late, let me know ahead of time. In these instances, some accommodation may be possible.

Essays will be turned in to the professor via the Blackboard Assignment system. Essays not submitted through Blackboard will not be graded. Material submitted late will not be accepted. Students will not present their essay to their fellow students.

Grades will be based on your ability to organize the material, integrate relevant concepts and theories, cite your sources, and present them in essay form in discussion threads as well as mid-term and final assignments. You are expected to apply your own observations as necessary when demonstrating your complete understanding of the concepts.

Students are expected to write original material in support of discussion and essay requirements associated with this class. Please review the Student Handbook and Student Code of Conduct if you have further questions regarding this.

Due to the nature of this class, there isn’t a minimum required number of words for original or discussion posts, nor is there a minimum number of discussion posts expected each week.

- Students are expected to write an original post that addresses the question. Students are expected to write at a graduate level.
- Students are expected to use appropriate source materials in support of their examples, evidence and details, such as primary source materials or peer-reviewed article and journals. For more on this, please see the Porter Henderson Library Research Tools webpage, http://www.angelo.edu/services/library/handouts/
- Students are expected to participate in discussions with their classmates on a range of topics, enough to ensure that their
own biases of their studies have not affected their understanding of the learning objectives for the week.

April 17 Last day to drop a class or withdraw from the Last 8-Week session of the Spring 2020 semester.

Angelo State University employs a letter grade system. Grades in this course are determined on a percentage scale:

- A = 90 – 100 %
- B = 80 – 89 %
- C = 70 – 79 %
- F = 69 % and below.

Course Organization:

Lesson 1:
Introduction Cyber Vulnerabilities

This lesson introduces the need for a national cyber security program to protect the national critical infrastructure systems. The lesson covers threats to national infrastructure and components of a national cybersecurity methodology. In addition, the lesson will discuss different attack modes against the critical infrastructure targets.

Chapter 1 - Introduction.

Lesson 2:
Diversity's Role in Cybersecurity

This lesson discusses the concept of diversity and will discuss the role it plays in a cybersecurity program. Further, the lesson introduces the concept of diversity and will discuss the role it plays in a cybersecurity program. How diversity can stop worm propagation is discussed, as are various methods of diversifying a system. The concept of diversity will be introduced with its importance in stopping malicious attacks.

Chapter 2 –Deception
Chapter 3 - Separation

Lesson 3:
Discretionary Tactics

This lesson discusses the concept of discretion — when it is effective and when it is not. The discussion begins with the idea of a trusted computing base, continues through ways to share information, and concludes with methods of obscuring and compartmentalizing information.

Chapter 4 – Diversity

Lesson 4:
Cybersecurity Protection Depth and Discretion
This lesson discusses the concept of commonality and depth. The cybersecurity protection measures deployed in depth and discretion will be discussed in detail.

Chapter 5 – Commonality
Chapter 6 – Depth

**Lesson 5:**
**Cybersecurity Protection Discretion and Collection/Midterm Essay Due**

This lesson discusses the concepts of discretion and collection. The cybersecurity protection measures deployed in discretion and collection will be discussed.

Chapter 7 – Discretion
Chapter 8 – Collection

**Lesson 6:**
**Cybersecurity Protection and Correlation**

This lesson describes the cybersecurity concept of correlation. Cyber correlation can be used defensively by the internal stakeholders and offensively by adversaries.

Chapter 9 – Correlation

**Lesson 7:**
**Cybersecurity Protection and Awareness**

This lesson describes cybersecurity awareness program and the cybersecurity incident response program.

Chapter 10 – Awareness
Chapter 11 – Response

**Lesson 8:**
**Feedback and Final Paper**

This week is the final week of the course. We ask you for feedback on the Cyber Vulnerability course. Students complete and submit their final essays.

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**Communication**

**Office Hours/Contacting the Instructor**

See the Instructor Information section for contact information.

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**University Policies**

**Academic Integrity**
Angelo State University expects its students to maintain complete honesty and integrity in their academic pursuits. Students are responsible for understanding and complying with the university Academic Honor Code and the ASU Student Handbook.

Title IX at Angelo State University

Angelo State University is committed to providing and strengthening an educational, working, and living environment where students, faculty, staff, and visitors are free from sex discrimination of any kind. The University prohibits discrimination based on sex, which includes pregnancy, sexual orientation, gender identity, and other types of Sexual Misconduct. Sexual Misconduct is a broad term encompassing all forms of gender-based harassment or discrimination including: sexual assault, sex-based discrimination, sexual exploitation, sexual harassment, public indecency, interpersonal violence (domestic violence and/or dating violence), and stalking. As a faculty member, I am a Responsible Employee meaning that I am obligated by law and ASU policy to report any allegations I am notified of to the Office of Title IX Compliance. This is done in order to connect students with resources and options in addressing the allegations reported. As a student, you are encouraged to report any incidents of sexual misconduct directly to ASU's Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator. You may do so by contacting:

Michelle Boone, J.D.
Director of Title IX Compliance/Title IX Coordinator
Mayer Administration Building, Room 210
325-942-2022 michelle.boone@angelo.edu
You may also file a report online 24/7 at www.angelo.edu/incident-form.

If you are wishing to speak to someone about an incident in confidence you may contact the University Health Clinic and Counseling Center at 325-942-2173 or the ASU Crisis Helpline at 325-486-6345. The Office of Title IX Compliance also provides accommodations related to pregnancy (such as communicating with your professors regarding medically necessary absences, modifications required because of pregnancy, etc.). If you are pregnant and need assistance or accommodations, please contact the Office of Title IX Compliance utilizing the information above.

For more information about Title IX in general you may visit www.angelo.edu/title-ix.

Accommodations for Disability

ASU is committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs or activities of the university, or be subjected to discrimination by the university, as provided by the Americans with Disabilities Act of 1990 (ADA), the Americans with Disabilities Act Amendments of 2008 (ADAAA), and subsequent legislation.

Student Affairs is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability, and it is the student's responsibility to initiate such a request by emailing studentservices@angelo.edu, or by contacting:

Office of Student Affairs
University Center, Suite 112
325-942-2047 Office
325-942-2211 FAX

Student absence for religious holidays

A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. A student who is absent from classes for the observance of a religious holy day shall be allowed to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence.