Instructor:
Jonathan Canedo
jcanedo@angelo.edu
410-353-3987 (text or leave message)
I do not have a local phone number and I am not located in San Angelo. Please no calls after 9pm Central Time. Sending me a text or an email message will be the most reliable way to get in touch with me.

Course Description:
This course focuses on how communication systems function, their interconnectivity, and vulnerabilities. There are quite a few different sectors of the infrastructure in the United States that is deemed critical, but we will focus on the communications infrastructure. The course materials focus on processes and procedures associated with hardening and protecting critical communications infrastructure from natural hazards, terrorist attacks, and attacks associated with modern conflicts.

Course Bibliography and Required Readings:
There is no required textbook for this class. All readings are available on-line or will be provided by the instructor.

Course Objectives/Learning Outcomes:
Objective 1: Identify the components of the U.S. communications infrastructure

Objective 2: Explain the dependencies of other sectors of the U.S. infrastructure on communications

Objective 3: Describe the vulnerabilities of the communications infrastructure

Objective 4: List the government agencies and private sector organizations that are focused on protecting the communications infrastructure

Objective 5: Describe the policies and procedures that can help mitigate the risks to the communications infrastructure
Course Organization:

Lesson 1: Introduction to Communications Infrastructure: Voice Communications
An overview of the telecommunication infrastructure, with a focus on telephone and cellular phone systems. Included will be a discussion of the Emergency Communication System and its dependence on the telecommunications infrastructure during an emergency.

Lesson 2: Data Communication and the Internet
A look at the systems and networks that make up the internet and other data systems.

Lesson 3: SCADA and the Electrical Grid
A look at how the communications infrastructure affects other important sectors, examine the features of SCADA systems, and look at the electrical power grid as an example of a SCADA controlled system.

Lesson 4: Natural Disaster and Physical Attack
Physical damage to individual components of the communications infrastructure; whether through natural disaster, intentional attack, or even operator error; is examined.

Lesson 5: Cyber Attack
A look at possible motives, methods, and mitigations of a cyber-attack on the communications infrastructure.

Lesson 6: Preparedness and Resilience
A discussion of the concepts of preparedness and resiliency as they apply to the communications infrastructure.

Lesson 7: Agencies and Regulations
The government’s role in protecting the communications infrastructure.

Lesson 8: Protection and Security
What are the security policies and procedures that should be in place to prevent or mitigate the effects of a cyber-attack on the communications infrastructure.

Grading Policies:
Grades for this class are based on weekly posts on the discussion board and two writing assignments. There is no final exam. The second writing assignment is due the Wednesday of the final week of the class, 18 October 2017. Discussion board posts are due each Friday evening, posted by 10pm Central Time. Responses to your classmates’ posts are due no later than the following Sunday by 7pm Central Time. Posts time-stamped after the due times will be considered late.

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

A = 90 – 100%
B = 80 – 89%
C = 70 – 79%
D = 60 – 69%
F = 59% and below
<table>
<thead>
<tr>
<th>Assignment</th>
<th>Percent of Overall Grade</th>
<th>Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discussion Board Posts</td>
<td>45%</td>
<td>Weekly</td>
</tr>
<tr>
<td>Writing Assignment 1</td>
<td>20%</td>
<td>End of Week 4, 22 September 2017</td>
</tr>
<tr>
<td>Writing Assignment 2</td>
<td>35%</td>
<td>Wednesday of Week 8, 20 October 2017</td>
</tr>
</tbody>
</table>

Writing Guidelines:
Each writing assignment deals with the topic under discussion. Writing assignments should be 5-8 pages, with eight pages as a hard maximum. The goal of each assignment is not to have you write lengthy papers but to demonstrate understanding of the topic and the ability to concisely and adequately discuss it.

Make sure to use proper grammar, formatting, and styles for your papers. The preferred format is APA Style. Detailed instructions on APA Style can be found at: https://owl.english.purdue.edu/owl/resource/560/01/. Follow these guidelines with a couple of caveats: You do not need to use a page header/running head and you do not need to include an abstract for the assignments. Do use a title page and a separate page for your references. APA does not recommend the use of footnotes or endnotes, but you should use them in your papers. I prefer you use endnotes for citing where you explicitly use a source; footnotes should be used if you need to add an explanatory sentence or two that would not fit in your paper. I do not expect you to need to use footnotes. You may also use Chicago Style if you choose, detailed information on the Chicago Style can be found at: http://www.chicagomanualofstyle.org. Regardless of what style you choose, make sure to be consistent within each paper. Otherwise, standard formatting applies: 1 inch margins, double-spaced, common font such as Times New Roman 12 point. Make sure to cite your sources appropriately. Please submit both of your writing assignments as Word documents. If you do not have access to Microsoft Word, please let me know so that we can make other arrangements (copy the paper directly into the assignment section of Blackboard for the appropriate week). Other formats will not be accepted.

Discussion Board Post Guidelines:
Each discussion board post should be approximately 200 words, citing sources as appropriate. You do not need to use formal footnotes or endnotes. For the posts use in-line citations with author’s last name, year of publication, and page number. For example, if you were quoting material from an article I wrote in 2015 and the material was on page 86 the citation would be: (Canedo 2015: 86). The citation goes immediately after where you include the cited information. Responses to your classmates’ discussion posts should be approximately 100 words each. I will not word count your posts or responses unless they obviously look short.

I recommend writing your posts and responses in Word or another program so that you can check spelling, grammar, and formatting. While these are not formal papers I do expect you to use proper formats. No partial sentences, unfinished thoughts, or informal language usage will be acceptable. Additional guidance will be provided as necessary.
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.

Accommodations for Disability
The Student Life Office 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 contacting the Student Life Office at (325) 942-2191 or (325) 942-2126 (TDD/FAX) or by e-mail at Student.Life@angelo.edu to begin the process.

The Student Life Office will establish the particular documentation requirements necessary for the various types of disabilities.

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.