

## 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](#).

## ISSA 3315 Introduction to Cryptology

### Course Description/Overview

This course's ultimate objective is to introduce the student to the world of codes and ciphers. This course will rely on the long history of cryptology, from 1900 B.C.E. to present day. This course introduces to students to several methods of both manual encryption and decryption and methods used today to ensure personal information is encrypted in both military and civilian applications.

### Course Required Textbooks:

The following textbook is required for this course. Other readings are assigned each week and are provided to you via a link in the course materials. Additionally, where possible, videos are utilized to enhance student learning.

- Singh, Simon. *The Code Book: The Secrets Behind Codebreaking*. New York: Ember, 2016. ISBN: 9780375890123
- Provided Texts
  1. [Basic Cryptanalysis](#) Field Manual (FM 34-40-2)
  2. [History of Encryption](#) White Paper from SANS.org
  3. [Military Cryptanalysis](#) War Department Military Cryptanalysis

### Course Objectives/Learning Outcomes

**Learning Outcomes:** Students have a right to know what instructors expect them to learn from a course of instruction and how their learning will be measured. This course establishes several learning outcomes that are measured subjectively. When you finish this course you should be able to:

1. Describe the history of cryptology.
2. Describe why cryptology was needed, and is still in use today.
3. Discuss the use of military cryptology.
4. Describe the method of both encoding and decoding.

**Objectives:** As a result of completing this course, the student will be able to:

1. Demonstrate a knowledge of the definition of cryptology
2. Demonstrate a knowledge of the history of cryptology before the U.S. Civil War.
3. Demonstrate a knowledge of the history of cryptology after the U.S. Civil War to the present.
4. Demonstrate a working knowledge of encoding to include steganography.
5. Demonstrate a working knowledge of how to decode a message.
6. Demonstrate a basic working knowledge of the operations of a 10 by 10 coded matrix.

**Prerequisite Knowledge**

While there are no prerequisites, the course materials, assignments, learning objectives and expectations in this upper level undergraduate course assume that the student has completed all lower level general education coursework. Such coursework is necessary to develop research, writing, and critical thinking skills. Students who have not fulfilled all general education requirements will be at a great disadvantage and should strongly consider completing those requirements prior to registering for this course.

**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 Learning 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 participate in weekly discussions.

**Grading Policies/Assessment of Learning**

This course is a colloquium (meaning a group discussion, from the Latin Colloqui – to talk together—to have a conversation). As such, weekly participation in the discussion threads is expected and forms part of the grade. Final grades are composed as follows:

Assignment	Percent of Grade	Due
Participation in the Discussion Board	45%	Weekly: weeks 1 – 3 and 5-7. <b>At the e initial post are due on Thursday before replies to at least 2 other posting Sunday P.M. Central Standard Time.</b>

Final Project at least 500 words in length	55%	Thursday at 11:59 P.M. Central Star 8

### Research Paper

The Final paper is at least 500 words. The final must have a title page that includes the title, course name and number, instructor's name, author's name, and date. A reference page is required and must include at least two (2) references. Use standard 1 inch margins on all sides, 12 point Times New Roman font, and standard double-spacing. An abstract is NOT required. Cite your references in EVERY instance and include a properly formatted reference list at the end of the paper. Use at least four sources with relevant citations to those sources. Use standard 1 inch margins on all sides, 12 point Times New Roman font, and standard double-spacing. An abstract is NOT required. Cite your references in EVERY instance and include a properly formatted reference list at the end of the paper. Use at least four sources with relevant citations to those sources.

CMS (Chicago Manual Style) is the preferred format for this course. To access the Chicago Style guide, go to: <http://www.chicagomanualstyle.org>

Every writing assignment should be submitted as a Microsoft Word or PDF document. If you do not have Microsoft Office or Adobe Acrobat, then copy the text you have written directly into the assignment section of Blackboard during the appropriate week.

*DO NOT submit writing assignments in Word Perfect, Microsoft Works, or some e-mail format. They will not be accepted.*

### 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](#)

### Participation & Communication

In this class *everyone*, brings something to the table. Your ideas and thoughts do count, not only to me, but the entire class. Feel free to ask questions either via e-mail or the discussion board. **Check the discussion board regularly.** Many student questions are applicable to the class as a whole, as are the responses. You may be surprised how many of your classmates have the same questions and concerns as you. I may simply post your particular question on the discussion board and allow your classmates to provide the answer through their own posts. Weekly discussion questions allow the student to demonstrate comprehension of lesson materials by preparing a response to a discussion question(s) posed by the instructor. The student response is assembled from knowledge gained through course materials and independent research. All students should follow the "General Rules for Discussion Questions Posts" below. Failing to

follow these rules and guidelines may result in score deductions. Formal grading of weekly discussion questions will be completed using the [Discussion Question Grading Rubric](#).

#### **General Rules for Discussion Question Posts:**

- All students **MUST** participate. Failing to participate may result in a failing grade for the course.
- Students must post a response to the instructors' weekly question by **11:59 p.m. CST on Friday of each week with an assigned discussion** and must respond to a minimum of two other students' post by **11:59 p.m. CST on Sunday of each week**.
- Engage in an honest and forthright discussion, backing your position with proper references. There are no "correct" answers in the discussion area. Stating a position on an issue without providing a reference to source materials to back up your position is "simply your opinion." Such opinion statements are not appropriate in an academic setting.
- Avoid repeating the assigned readings in your own words. Use assigned readings as one of your resources, not as the single source for your post.
- Avoid plagiarism - paraphrasing a source document is plagiarism if you do not give the author due credit.

#### **Courtesy and Respect**

Courtesy and Respect are essential ingredients to this course. We respect each other's opinions and respect their point of view at all times while in our class sessions. The use of profanity & harassment of any form is strictly prohibited (Zero Tolerance), as are those remarks concerning one's ethnicity, life style, race (ethnicity), religion, etc., violations of these rules will result in immediate dismissal from the course.

#### **Date and Time of Final Exam**

This is an online course. In lieu of a final exam, students submit the cyber vulnerability research papers throughout in the course. Students are concurrently asked to complete end of course surveys and provide an end of program analysis.

#### **Office Hours and/or hours of outside-of class contact**

This is an online course. The professor will provide contact information and availability times for direct discussion in the Instructor Information section on Blackboard.

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 %

D = 60 – 69 %

F = 59 % and below.

#### **Course Organization:**

##### **Lesson 1: Theory of Cryptology**

Including definitions, and usage

**Lesson 2:History of Cryptology**

From B.C.E to the U.S Civil War

**Lesson 3:Cryptanalyzing a Ciphertest**

Example of how to break a coded text.

**Lesson 4:Encoding a Message**

An encrypted message. Steganography will be introduced in this lesson

**Lesson 5:Decoding a Message**

A readable format. Decoding of a steganography message from previous message will be demonstrated

**Lesson 6:Practice of Encoding and Decoding messages**

From previous weeks in preparation for the final decoding messages

**Lesson 7:Final**

A rather lengthy message will be posted, in an image, and the final will be based on the students ability to perform the action into readable format. (Note: your final is due midnight Wednesday night of Week 7).

**Communication****Office Hours/Contacting the Instructor**

See the Instructor Information section for contact information.

**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**

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](mailto: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.

**Course Syllabus Statement on Required Use of Masks/Facial Coverings by Students in Class At Angelo State University**

As a member of the Texas Tech University System, Angelo State University has adopted the mandatory *Facial Covering Policy* to ensure a safe and healthy classroom experience. Current research on the COVID-19 virus suggests there is a significant reduction in the potential for transmission of the virus from person to person by wearing a mask/facial covering that covers the nose and mouth areas. Therefore, in compliance with the university policy students in this class are required to wear a mask/facial covering before, during, and after class. Faculty members may also ask you to display your daily screening badge as a prerequisite to enter the classroom. You are also asked to maintain safe distancing practices to the best of your ability. For the safety of everyone, any student not appropriately wearing a mask/facial covering will be asked to leave the classroom immediately. The student will be responsible to make up any missed class content or work. Continued non-compliance with the Texas Tech University System Policy may result in disciplinary action through the Office of Student Conduct.