

Sul Ross State University
Cyber Warfare
Summer 2023
CJ/CRIM 4365
Syllabus

Instructor: Oguzhan Basibuyuk, Ph.D

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Class hours: Online

Classroom: Online

Office hours: Monday, Wednesday, and Thursday between 1:00 PM and 3 PM

REQUIRED TEXT(S)

Chapple, Mike and David Seidl. Cyberwarfare: Information Operations in a Connected World, Second Edition, Burlington, MA: Jones & Bartlett, 2023 (ISBN 9781284228311)

<https://www.amazon.com/Cyberwarfare-Information-Operations-Connected-Assurance/dp/1284058484>

Additional readings (e.g., articles, reports) will be posted on Blackboard.

SRSU LIBRARY SERVICES

The Sul Ross Library offers FREE resources and services to the entire SRSU community. Access and borrow books, articles, and more by visiting the library's website, www.library.sulross.edu . Off-campus access requires your LoboID and password. Check out materials using your photo ID. Librarians are a tremendous resource for your coursework and can be reached in person, by email (srsulibrary@sulross.edu), or phone (432-837-8123).

Once you logged in to your Sul Ross Account on Blackboard you should be automatically connected to the library webpage as well. Thus, you can browse the online databases of the University and reach the articles on the reading list.

Syllabus is subject to updates and changes always look to the course announcements and reminders for updates. The faculty member reserves the right to amend this syllabus as needed.

COURSE DESCRIPTION

This course explores the cyberwarfare landscape, offensive and defensive cyberwarfare techniques, and the future of cyberwarfare. It also addresses military doctrine and strategies, intelligence operations, and cyberwarfare-related laws and ethics. Students will be exposed to many cybersecurity technologies, processes, and procedures that help to protect endpoints, networks, and data. They will also learn how to identify and analyze threat and vulnerabilities, and create appropriate mitigation strategies.

COURSE LEARNING OBJECTIVES

Upon successful completion of this course, you will be able to:

LO1- Explain the importance of information as a military asset.

LO2- Describe the targets and combatants of cyberwarfare.

LO3- Explain the role of law and ethics in cyberwarfare

LO4- Describe intelligence operations in cyberwarfare.

LO5- Describe cyberwarfare attackers and the evolution of cyberwarfare techniques

LO6- Describe the concept of defense-in-depth and various defense-in-depth strategies

LO7- Explain how cryptography is used in cyberwar

LO8- Explain how to defend endpoints, networks, and data.

LO9- Explain how military doctrine guides the conduct of warfare

LO10- Summarize what cyberwarfare may be like in the future

MARKETABLE SKILLS:

This course is designed also to help the students for building various marketable skills to use in their in careers Criminal Justice related professions. Specifically, in this course, the following marketable skills, which are some of the most important skills for such careers, will be emphasized during this course:

MS 1- Verbal and Written Communication Skills

MS 2- Critical Thinking and Observation

MS 3- Multicultural Understanding.

MS 4- Accessing Resources with Crime Data and the most current updates of legal codes and procedures.

MS 5- Teamwork and Working Collaboratively

MS 6- Analyzing the Factors Contributing to Crime

CLASS ATTENDANCE/PARTICIPATION:

Given that this is a fully online course; you cannot attend class in a traditional sense. However, students are expected to log into the class at the earliest opportunity to check the class web site every day for announcements. Weekly reaction papers and quizzes are a required part of class participation.

REACTION PAPERS (10 POINTS EACH)

You will write a reaction paper every week. Each paper must be minimum one page and 1.5-spaced in 12-point Times New Roman font. Reaction papers will be related to the reading of the week. When there is more than one reading assignment, then the students **SHOULD READ ALL REQUIRED READINGS BUT WRITE REACTION PAPER ON ONE OF THEM.** A reaction paper is not a summary; rather, it should include your perspective, ideas, and critique about the reading. The due dates for the reaction papers will be Sunday 11:00 pm each week.

WEEKLY QUIZZES (10 POINTS EACH)

You will take a quiz for every week to measure the knowledge of the week's required readings. The questions will be posted Friday 1:00 pm and due date will be Sunday 11:00 pm every week.

MIDTERM AND FINAL EXAMS (50 POINTS EACH)

There will be 2 major exams throughout the semester, with questions drawn from the readings and the supplemental materials posted by the professor. These 2 exams will be worth 50 points each. There will be no makeup exams.

ACADEMIC INTEGRITY:

Sul Ross State University students are responsible for reading, understanding, and abiding by the Sul Ross Student Code of Conduct.” Student Code of Conduct, Responsibilities, Procedures, and Rights are found in the University website.

Sul Ross State University and the instructor of this course both place a high priority on the academic integrity of their student scholars. As a result, all institutional guidelines and instructional policies concerning academic integrity will be strictly and uniformly enforced with all students regardless of context.

Academic integrity includes, but is not limited to, the following activities: cheating, plagiarism, collusion, fabrication, obtaining an unfair advantage, and falsifying academic records. In addition, academic dishonesty can include both actions and omissions to act in regards to academic exercises and activities. Cheating is defined here as the obtaining of information (electronic or otherwise) during an examination, the unauthorized use of books, notes, or other sources of information prior to or during an examination, the unauthorized use of books, the

removal of faculty examination materials, the alteration of documents or records, or actions identifiable as occurring with the intent to defraud or use under false pretenses. Collusion is defined here as helping other students engage in acts of academic dishonesty, whether the student involved obtains any direct academic advantage from these acts. Plagiarism is defined here as the submission of the ideas, words, or artistic productions of another, without giving due credit or when attempting to falsely represent them as one's own.

APA STYLE:

This course will use the American Psychological Association (APA) formatting and style guide for all written assignments. If you have any questions or concerns regarding the use of APA a number of resources have been provided below. Please note that all external sources must be appropriately cited. A failure to do so constitutes plagiarism and is a violation the course academic honesty standards. See www.citationmachine.net and <http://owl.english.purdue.edu/owl/resource/560/01/> for help with APA.

STUDENT SUPPORT SERVICES AND BLACKBOARD HELP DESK

Sul Ross State University has established a variety of programs to help students meet the challenges of college life. Support to students includes advising, counseling, mentoring, tutoring, supplemental instruction, and writing assistance. For a complete list of academic support services, visit the Student Support Services <https://www.sulross.edu/section/311/student-support-services>. For more information, students are encouraged to contact SSS at (432) 837-9118 or visit Ferguson Hall Room 105. For Blackboard help visit <https://www.sulross.edu/bb> or call 432-837-8523 (M-F 09:00 am-06:00 pm). You can get The Distance Education Handbook at <https://tvpb.sulross.edu/start/index.html>

DISTANCE EDUCATION STATEMENT

Students enrolled in distance education courses have equal access to the university's academic support services, such as Smarthinking, library resources, such as online databases, and instructional technology support. For more information about accessing these resources, visit the SRSU website. Students should correspond using Sul Ross email accounts and submit online assignments through Blackboard, which requires secure login information to verify students' identities and to protect students' information. The procedures for filing a student complaint are included in the student handbook. Students enrolled in distance education courses at Sul Ross are expected to adhere to all policies pertaining to academic honesty and appropriate student conduct, as described in the student handbook. Students in web-based courses must maintain appropriate equipment and software, according to the needs and requirements of the course, as outlined on the SRSU website. Directions for filing a student complaint are located in the student handbook.

DIVERSITY STATEMENT:

"I aim to create a learning environment for my students that supports a diversity of thoughts, perspectives and experiences, and honors your identities (including race, gender, class, sexuality, religion, ability, socioeconomic class, age, nationality, etc.). I also understand that the crisis of COVID, economic disparity, and health concerns, or even unexpected life events could impact the conditions necessary for you to succeed. My commitment is to be there for you and help you meet the learning objectives of this course. I do this to demonstrate my commitment to you and to the mission of Sul Ross State University to create an inclusive environment and care for the whole student as part of the Sul Ross Familia. If you feel like your performance in the class is being impacted by your experiences outside of class, please don't hesitate to come and talk with me. I want to be a resource for you."

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AMERICANS WITH DISABILITIES ACT AS AMENDED (ADAAA)

SRSU Disability Services. Sul Ross State University (SRSU) is committed to equal access in compliance with Americans with Disabilities Act of 1973. It is SRSU policy to provide reasonable accommodations to students with documented disabilities. It is the student's responsibility to initiate a request each semester for each class. Students seeking accessibility/accommodations services must contact Mary Schwartze Grisham, M.Ed., LPC, SRSU's Accessibility Services Coordinator at 432-837-8203 (please leave a message and we'll get back to you as soon as we can during working hours), or email mschwartz@sulross.edu Our office is located on the first floor of Ferguson Hall (Suite 112), and our mailing address is P.O. Box C-122, SUI Ross State University, Alpine. Texas, 79832.

LATE ASSIGNMENT SUBMISSION POLICY:

Students are supposed to finish their coursework on time and assignments must be submitted before the deadlines. Students are expected to show appropriate cause for missing or delaying major assignments or examinations. Late assignments will not be accepted unless there is an excuse that is recognized by the university.

GRADING:

There will be 1 midterm exam, 1 final exam, weekly quizzes and reaction papers throughout the semester. Questions for exams and quizzes will be drawn from the readings and the supplemental materials posted on Blackboard. The midterm exam and final exam will be worth 50 points each. There will be no makeup exam. Every week there will be a quiz for the related chapter(s). Each quiz will worth 10 points. The total grade will be 60 for all quizzes. Weekly reaction papers will be 10 points each. The total grade for papers will be 60.

Midterm Exam	50 pts
Weekly Quizzes	60 pts (6 quizzes, 10 points each)
Reaction papers	60 pts (6 papers, 10 points each)
Final Exam	50 pts
Total	220 pts

Scale:

A 220-160 B 159-120 C 119-80 D 79-40 F 39 & below

ACADEMIC CALENDAR

W	DATES	TOPICS	READINGS
1	June 1-4	Introduction of the course and syllabus Information as a Military Asset	Course textbook Chapter 1 Quiz 1 Paper 1
2	June 5-11	Chapter 2: Targets and Combatants Chapter 3: Cyberwarfare, Law, and Ethics Chapter 4: Intelligence Operations in a Connected World	Course textbook Chapters 2-3-4 Quiz 2 Paper 2
3	June 12-18	Chapter 5: The Evolving Threat: From Script Kiddies to Advanced Attackers Chapter 6: Social Engineering and Cyberwarfare Chapter 7: Weaponizing Cyberspace: A History MIDTERM EXAM	Course textbook Chapters 5-6-7 Quiz 3 Paper 3
4	June 19-25	Chapter 8: Nonstate Actors in Cyberwar Chapter 9: Defense-in-Depth Strategies Chapter 10: Cryptography and Cyberwar	Course textbook Chapters 8-9-10 Quiz 4 Paper 4
5	June 26- July 2	Chapter 11: Defending Endpoints Chapter 12: Defending Networks Chapter 13: Defending Data	Course textbook Chapters 11-12-13 Quiz 5 Paper 5
6	Jul 3-7	Chapter 14: Cyberwarfare and Military Doctrine Chapter 15: Pandora's Box: The Future of Cyberwarfare FINAL EXAM	Course textbook Chapters 14-15 Quiz 6 Paper 6

END OF COURSE EVALUATIONS:

Student evaluations of faculty are administered online at the end of each term/session for all courses with five or more students. Students will receive an email containing a link to a survey for each course in which they are enrolled. All responses are anonymous.