



KENNESAW STATE
UNIVERSITY

SYLLABUS

COLLEGE OF COMPUTING AND SOFTWARE ENGINEERING

DEPARTMENT OF INFORMATION TECHNOLOGY

PREFIX IT/CYBR4883 : COURSE TITLE: INFRASTRUCTURE DEFENSE
FALL 2023

Course Information

Class meeting time: For All "W" Sections Online Only

Instructor

Name: Professor Foster A. Scotland
E-mail: fscotlan@kennesaw.edu
Office Location: Norton Hall R2-211
Office Phone: TBD
Office Hours: T: 4pm-6pm (Teams), R: 4pm-6pm (Teams), by Appointment Only

Course Communication:

- Email is the best way to reach the instructor. **Use your student email only** NOT D2L for faster responses. Instructor's KSU email **fscotlan@kennesaw.edu**
- When you email the instructor using your student account, put the course and section number in the subject line. Emails without proper subject line will not receive a reply.
- Students' emails sent as requested will be replied **WITHIN 48 hours** during the weekday. Weekend and holidays do not apply. Emails from 5pm Friday until 9am Monday will be replied to on Monday.
- Sensitive information (such as your grades) can **ONLY** be sent to D2L email or KSU email account.

Course Description

Prerequisites/Corequisites: C or better grade in CYBR 4323 or IT 4323

Credit Hours: 3

Required Texts: *Chained Exploits: Advanced Hacking Attacks From Start to Finish*

Andrew Whitaker, Keatron Evans, Jack Voth

ISBN-10: 032149881X

ISBN-13: 978-0321498816

Edition: 1st

Optional Texts:

Course Description:

This course provides an overview of the infrastructure assessment and penetration testing process and the processes and techniques for improving the defensibility of that infrastructure.

Technology Requirements:

- This class uses D2L as hosting site. Run a system check to ensure your computer work with D2L. Check out UITS D2L training: <http://uits.kennesaw.edu/support/d2ltraining.php> .
- Internet Connection. A high-speed Internet connection such as DSL or cable Internet access is highly recommended. You may also use computer labs on campus to complete the coursework.
- This course also uses VMWare Virtual Machines and the VMware Horizon Client which can be located here <https://ccseprduag01.kennesaw.edu/>
- A web camera is required for a student to take quizzes/exam.

Student Learning Outcomes

By the end of this course, a student should be able to:

1. Define the overall process of infrastructure assessment
2. Describe the goals of a penetration test
3. Identify and Explain the processes and techniques for mitigating risks identified in an infrastructure assessment
4. Explain the goals and content for communicating the results of a penetration test and remediation plan to a managerial audience

Course Requirements and Assignment

This course will be organized as module units. Each module starts every other **Monday** and ends on **Sunday**. All homework, quizzes, and lab assignments belonging to a particular weekly unit are due on **Sunday of that week at 11:59PM**.

Evaluation and Grading Policies

Weight Distribution

Grading Item	Weight
Labs / Assignments	60%
Discussions	10%
Exams	30%
Total	100%

Grading Scale:

90% - 100% A
80% - 89% B
70% - 79% C
60% - 69% D
0% - 59% F

Course Policies

Course Attendance Policy

- For on campus/hybrid section, students are expected to come to each class on time. Stay during the whole class period.
- For both campus/hybrid and online section, students' attendance is also measured by how often a student login in D2L course website, participation of online discussion, as well as on-time completion of homework.

Grading Items Turnaround Time

- The grades for the quizzes and exams will be available 48 business hours after the due date
- The grades for labs/assignments/projects will be available 96 business hours after the due date

Assignments & Exam Policy

- All assignments **MUST** be submitted through D2L (<https://kennesaw.view.usg.edu/>) course website by the deadline specified in course calendar. Email submissions will **NOT** be accepted. Any assignment that is less or equal than 24 hours late is subject to 10% penalty unless prior notified to the instructor. Any assignment that is 24 hours and 1 second late will **NOT** be accepted, unless late submission is prior approved by the instructor.
- All quizzes and exams **MUST** be completed on D2L website by the deadline specified in course calendar. The quizzes exams can't be opened/submitted after the deadline.
- If you must miss an exam due to illness, you must e-mail or call the instructor before the scheduled time. Failure to notify the instructor prior to the scheduled time will produce an automatic zero for the exam. NO makeup test except for emergencies with proof (e.g. doctor's slip).

Proctored Exam

Respondus Lockdown Browser + Web Camera will be used for the final exam. LockedDown Web Browser Student Guide: https://apps.kennesaw.edu/files/pr_app_uni_cdoc/doc/Respondus-LockDown-Browser_StudentGuide.pdf

Student Responsibility

For this class, you are expected to spend seven to eight hours each week on coursework:

- Check KSU email regularly;
- Login D2L course website frequently to access the course material (at least every other day);
- Follow the weekly study guide in the learning module;
- Study the assigned material such as virtual lectures, textbook chapters and the PowerPoint slides;
- Complete assigned quiz/assignment/discussion/project on time.

Tips for Effective Online Learning

For an online class, students can really enjoy the benefits of learning at your own pace and at the place of your choice. Below are some tips for effective online learning.

- *Check D2L course website frequently.* It's recommended that students should login D2L

course site **AT LEAST** every other day. Always be aware of current status of the course. Take advantage of the posted learning material such as recorded lectures.

- *Work with the instructor closely.* If you have any question, contact the instructor immediately. You can either email or text me and your message is guaranteed to be replied within 12 hours.
- *Start your work early.* If you can start a task early, don't start late. Assuming you spend the same amount of time completing the task, starting later will be much more stressful than starting early. Never start until the last minute! You'll have no turnaround time if you need help or something happens.
- *Keep up with the work.* Don't fall behind. If you do, contact the instructor immediately for what you need to do. The instructor may also contact you if he is concerned. Respond to the instructor's inquiry promptly.

Class Communication Rules

In any classroom setting there are communication rules in place that encourage students to respect others and their opinions. In an online environment, the do's and don'ts of online communication are referred to as **Netiquette**. As a student in my course you should:

- Be sensitive and reflective to what others are saying.
- **Avoid typing in all capitals** because it is difficult to read and is considered the electronic version of 'shouting'.
- Don't flame - These are outbursts of extreme emotion or opinion.
- Think before you hit the post (enter/reply) button. You can't take it back! Don't use offensive language.
- Use clear subject lines.
- Don't use abbreviations or acronyms unless the entire class knows them. Be forgiving. Anyone can make a mistake.
- Keep the dialog collegial and professional, humor is difficult to convey in an online environment.
- **Always assume good intent and respond accordingly.** If you are unsure of or annoyed by a message, wait 24 hours before responding.

Course Schedule

The course schedule is tentative and is subject to change. Please use D2L course calendar as accurate due dates.

WEEK	DATES	MODULE	TOPIC	DUE
01	See D2L	1	Start Here	Syllabus Quiz, Introduction Discussion
02	See D2L	1	Risk Management	
03	See D2L	1	Penetration Testing	Lab1, Discussion 1
04	See D2L	2	Pen-testing, Security Analysis, & Design	Lab2
05	See D2L	3	Security Architecture & Design	
06	See D2L			Exam 1
07	See D2L	4	Intrusion Detection & Prevention	

08	See D2L	4	Stress Testing IDS	
09	See D2L	5	Wireless Secure Infrastructure	
10	See D2L	5	Hacking Websites; Free Credit Cards	Lab 3
11	See D2L	6	Blockchain	Discussion 2
12	See D2L	7	Log Analysis	
13	See D2L	8	Cyberwar & Social Engineering	
14	See D2L	8	Penetration Testing	
15	See D2L		Review for exam 2	
16	See D2L			Exam 2

Important dates:

First Day of Class: August 14, 2023

Last Day to Withdraw without penalty: October 23, 2023

Last Day of Class: December 4, 2023

Institutional Policies

- Federal, BOR, & KSU Course Syllabus Policies
- Academic Integrity Statement
 - Examples of violation of academic integrity: 1) copy from others or from Internet; 2) allow others to copy your work; 3) use other's help or help other in completing the quizzes or exams.
 - The first violation of academic integrity, the student will immediately receive 0 for the associated grading item. For the 2nd violation, the student will receive a fail grade for this course.

KSU General Statements

Course Delivery

KSU may shift the method of course delivery at any time during the semester in compliance with University System of Georgia health and safety guidelines. In this case, alternate teaching modalities that may be adopted include hyflex, hybrid, synchronous online, or asynchronous online instruction.

Face Coverings

Based on guidance from the University System of Georgia (USG), masks are encouraged based on individual preference and assessment of personal risk. Disposable face coverings can be picked up at the Office of Emergency Management at Chastain Pointe on the Kennesaw campus

and Norton Hall Police Precinct on the Marietta campus. Please email oem@kennesaw.edu if you have questions.

KSU Academic Integrity Statement

Every KSU student is responsible for upholding the provisions of the [Student Code of Conduct](#), as published in the Undergraduate and Graduate Catalogs. Section 5c of the Student Code of Conduct addresses the university's policy on academic honesty, including provisions regarding plagiarism and cheating, unauthorized access to university materials, misrepresentation/falsification of university records or academic work, malicious removal, retention, or destruction of library materials, malicious/intentional misuse of computer facilities and/or services, and misuse of student identification cards. Incidents of alleged academic misconduct will be handled through the established procedures of the Department of Student Conduct and Academic Integrity (SCAI), which includes either an "informal" resolution by a faculty member, resulting in a grade adjustment, or a formal hearing procedure, which may subject a student to the Code of Conduct's minimum one semester suspension requirement.

KSU Disruption of Campus Life Policy

All students are responsible for knowing the information, policies and procedures outlined in the Kennesaw State University Codes of Conduct. [Student Conduct and Academic Integrity](#) (SCAI) includes: the general Student Code of Conduct, the Residential Code of Conduct, and the Code of Academic Integrity.

KSU Web Accessibility Policy Statement

Federal law Section 508 Subsection 1194.22 of the Rehabilitation Act and the Board of Regents (BOR) of the University System of Georgia (USG) Web Accessibility Guidelines require that all web content meet the federal government's accessibility guidelines. As such, KSU complies with USG guidelines.

University accessibility assistance is provided by several offices as noted below. Staff in these offices work to accommodate requests for access or assistance with access as soon as possible to either accommodate the request or identify an effective alternative for the requester.

REQUEST FOR	OFFICE	CONTACT NUMBER	CONTACT EMAIL
Student Support Services	Student Disability Services	470-578-2666	studentdisability@kennesaw.edu
Student Technology Assistance	University Information Technology Services	470-578-3555	studenthelpdesk@kennesaw.edu
Third Party Technology Assistance	University Information Technology Services	470-578-6999	service@kennesaw.edu

KSU Reasonable Accommodations Policy

Students with qualifying disabilities under the Americans with Disabilities Act (ADA) and/or Section 504 of the Rehabilitation Act who require “reasonable accommodation(s)” to complete the course may request those from Office of Student Disability Services. Students requiring such accommodations are required to work with the University’s Office of Student Disability Services rather than engaging in this discussion with individual faculty members or academic departments. If, after reviewing the course syllabus, a student anticipates or should have anticipated a need for accommodation, he or she must submit documentation requesting an accommodation and permitting time for a determination prior to submitting assignments or taking course quizzes or exams. Students may not request retroactive accommodation for needs that were or should have been foreseeable. Students should contact the office as soon as possible in the term for which they are seeking accommodations. Student Disability Services is in the Carmichael Student Center in Suite 267 on the Kennesaw campus or Building A in Suite 160G on the Marietta campus. Please visit the [Student Disability Services \(SDS\) website](#) for more information or call the office at 470-578-2666 (Kennesaw campus) or 470-578-9111 (Marietta campus).

KSU Enrollment Management/Course Attendance Policy

Students are solely responsible for managing their enrollment status in a class; nonattendance does not constitute a withdrawal.

Copyright Law

It is the responsibility KSU faculty and students to respect the rights of copyright holders and complying with copyright law. The University System of Georgia recognizes that the exclusive rights of copyright holders are balanced by limitations on those rights under federal copyright law, including the right to make a fair use of copyrighted materials and the right to perform or display works during face-to-face teaching activities.

The University System of Georgia facilitates compliance with copyright law and, where appropriate, the exercise in good faith of full fair use rights by faculty and staff in teaching, research, and service activities. The University System of Georgia ensure compliance with copyright law in the following ways.

- A. The USG informs and educates students, faculty, and staff about copyright law, including the limited exclusive rights of copyright holders as set forth in 17 U.S.C. § 106, the application of the four fair use factors in 17 U.S.C. § 107, and other copyright exceptions.
- B. The USG develops and makes available tools and resources for faculty and staff to assist in determining copyright status and ownership and determining whether use of a work in a specific situation would be a fair use and, therefore, not an infringement under copyright law;
- C. The USG facilitates use of materials currently licensed by the University System of Georgia and provides information on licensing of third-party materials by the University System; and
- D. The USG identifies individuals at the University System and member institutions who can counsel faculty and staff regarding application of copyright law.

Protecting Students' Privacy (FERPA)

Students have certain rights to privacy. These rights are mandated by federal policy. Leaving their work in an unsecured area such as outside your office door (unless agreed upon with each

student) means that the students' names and grades and possibly social security numbers are accessible to everyone. Additionally, research papers can be taken and used by other individuals. It is recommended that you permit students to retrieve their work from your office if you don't return it to them in class. Information should not be made public in any way in which a student's grades, social security number, or other personal information may be identified. Grade information may be shared with members of the KSU community who also have a legitimate educational interest in student success (e.g. academic advisors or members of the Behavioral Response Team). Faculty may be asked to provide early alert information if there is a concern that a student is at risk, academically or otherwise.

As a member of the Kennesaw State University community of scholars, I understand that my actions are not only a reflection on myself, but also a reflection on the University and the larger body of scholars of which it is a part. Acting unethically, no matter how minor the offense, will be detrimental to my academic progress and self-image. It will also adversely affect all students, faculty, staff, the reputation of this University, and the value of the degrees it awards. Whether on campus or online, I understand that it is not only my personal responsibility, but also a duty to the entire KSU community that I act in a manner consistent with the highest level of academic integrity. Therefore, I promise that as a member of the Kennesaw State University community, I will not participate in any form of academic misconduct.

The [Student Handbook](#) contains information regarding Rights Pertaining to Student Records, and FERPA specific details are available on the [Registrar's website](#).

Privacy in the Education Process. A key requirement of the formal evaluation process is the protection of individual privacy rights concerning educational grading. The University's online learning system and email system is designed to prevent unauthorized individuals from gaining access to sensitive information or information protected by federal or state law. Consequently, faculty and students are strongly encouraged to only communicate regarding course matters through the University's designated technology learning system.

KSU Sexual Misconduct Policy

In accordance with federal and state law including, Title IX of the Education Amendments of 1972 ("Title IX") and Title VII of the Civil Rights Act of 1964 (Title VII), the University System of Georgia (USG), including Kennesaw State University, prohibits discrimination on the basis of sex in any of its education programs or activities or in employment. The USG is committed to ensuring the highest ethical conduct of the members of its community by promoting a safe learning and working environment. To that end, Kennesaw State University follows USG Board of Regents Policy Manual, Section 6.7. See <https://equity.kennesaw.edu/titleix/title-ix.php>.

Withdrawal from Classes

Students who withdraw from courses before the withdrawal deadline, as specified by the academic calendar will receive a grade of W. A student who officially withdraws from a course by the end of the last day to withdraw without academic penalty will receive a grade of "W" and receive no credit.

A student who officially withdraws from a course after the last day to withdraw without academic penalty and before the last week of classes during the semester will receive a grade of "WF," which will be counted as an "F" in the grade point average calculation.

Students may drop one, some, or all of their classes during the drop/add period. Courses dropped in this manner do not appear on a student's transcript and are not considered as hours attempted for financial aid purposes. No grade is assigned for such courses. However, a student who wishes to withdraw from a course after the last day of the drop period for a term must withdraw through Owl Express. Students with an active registration hold on their record must clear that hold before being able to withdraw from their coursework.

If a student experiences significant personal hardship (e.g., medical or family emergency, prolonged illness), the Dean of Students can approve a hardship withdrawal from all courses in the term for which the student is currently registered. In the case of an approved hardship withdrawal from all courses, the Registrar will assign grades of "W" for those classes. The deadline for final approval of a hardship withdrawal by Dean of Students is the last day of class for which the hardship withdrawal is sought. If the hardship withdrawal process is not complete by the last day of class for which the hardship withdrawal is sought, a student must appeal for a retroactive hardship withdrawal from the Academic Appeals Committee.

Appeals for retroactive hardship withdrawals must be directed to the Academic Standing Committee. Retroactive hardship withdrawals are rarely granted if it has been more than one year since the last day of class for which the withdrawal is sought. Extraordinary justification must be shown. In the case of approved retroactive hardship withdrawals, the Registrar will assign a grade of "W."

If a student is suspended by the Office of Student Conduct following a violation of the University's Code of Conduct not related to academic dishonesty, the Office of Student Conduct may facilitate a University-initiated withdrawal from courses for which a student is registered for the term. The Registrar will assign grades of "W" for those classes.

A student will receive a refund only when the student withdraws from ALL courses for the applicable semester and only by the schedule outlined in the University refund policy.

Students should be aware that a reduction in their hours might result in the loss of full-time student status and thus affect their financial aid, scholarships, athletic and ticket eligibility, University housing accommodations, use of University resources and access to University facilities, immigration status for international students, and Veterans Educational Benefits. Students should contact the appropriate office and their academic advisor with questions about the impact of their withdrawal from a course before initiating a withdrawal. Veterans and dependents of veterans who receive educational benefits must notify the Veterans Education Benefits Area in the Office of the Registrar of any course load reductions.

Military Withdrawals

A student will receive a "WM" symbol for all courses and a full refund of tuition and mandatory fees and a pro rata refund of other fees for military and other service, as defined by BOR Policy Manual, Section 7.3.5.3. To request a military withdrawal, the student must submit a copy of official orders to the Office of the Registrar.