



SYLLABUS

COLLEGE OF COMPUTING AND SOFTWARE ENGINEERING

DEPARTMENT OF INFORMATION TECHNOLOGY

IT/CYBR 4843: ETHICAL HACKING

FALL 2023

Course Information

Class meeting time: Hybrid/ Online

Modality and Location: Thursday 2pm-3:15pm(J260)

Instructor

Name: Soheyla Shahab

E-mail: sshahab@kennesaw.edu

Office Location: J 393

Office Phone: (470) 578 3803

Office Hours: Tuesdays from 10:30am to 11:30am (virtual using Microsoft Teams), or by appointment. Please feel free to reach out to me.

Course Communication:

- Email is the best way to reach your instructor. Please use KSU email if possible. You may use D2L, however there may be a substantial delay before your email is replied to.
- I will do my best to reply to all student emails within 24 hours during the weekday. Weekend and holidays don't apply.
- When emailing the instructor, please put the course number and section in the subject line, and remember to include your name. Emails without proper subject line will not be replied to.
- Avoid using personal email. Sensitive information (such as your grades) can ONLY be sent via D2L email or KSU email account.

Course Description

Prerequisites/Corequisites: IT 4323 (Data Comm. & Networks)

Credit Hours: 3

Required Texts: None

Recommended Texts:

- Michael Simpson, *Hands-On Ethical Hacking and Network Defense*. Course Technology Incorporated, 2011, ISBN 978-1-4354-8609-6, 2nd Edition
- Gray Hat Hacking: The Ethical Hackers Handbook, by Allen Harper, McGraw-Hill, 4th Edition, 2001.

Course Description:

This course focuses on detection of network and system vulnerabilities by taking an attacker-like approach to system, network, and data access. Topics include network attacks and defenses, Operating System and application vulnerabilities, social engineering attacks, and malware. Ethical, legal implications of network attacks are also discussed.

Technology Requirements:

- This class uses D2L as hosting site. Run a system check to ensure your computer will 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.
- The instructor will provide all instructions assuming that you have access to a Windows or Macintosh computer. We will use open source software, NetLab+, and VMWare Workstation. All labs can be completed by accessing to NetLab+ at <https://ccsenetlab2.kennesaw.edu>

Note that all troubleshooting issues arising due to the usage of personal computer/laptop to complete lab work are your responsibility. The instructor will make every effort to direct you to the campus resources available.

Student Learning Outcomes

Students who complete this course successfully will be able to

- Explain what an ethical hacker can and cannot do legally.
- Describe security threats and vulnerabilities.
- Use hacking tools to locate and fix security leaks.
- Identify operating systems vulnerabilities.
- Explain cryptosystems and describe attacks on cryptosystems.
- Analyze network security vulnerabilities and technical controls.

Course Requirements and Assignment

There are 13 modules in this course – one for each week and two exams. Weeks start on Monday and end on Sunday.

Content Modules Each module usually contains:

1. Assigned reading.
2. Assigned hands-on exercises.
3. Self-quiz or discussion topic

For each content module you should:

1. Read the assigned reading
2. Complete assigned labs, quiz or discussion as appropriate.
3. Do not wait until the last minute to start, late submission is strongly discouraged.

Evaluation and Grading Policies

Weight Distribution

Grading Item	Weight
2 Tests	40%
13 Lab Reports	20%
4 Discussions	20%
1 Semester Project	20%
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.

Grading Items Turnaround Time

- The grades for the quizzes and exams will be available 1 week after the due date
- The grades for labs/assignments/projects will be available 1 week 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 the Living Schedule. Email submission will **NOT** be accepted. Late work will be accepted up to 48 hours after the due date for an **immediate 25%** penalty. No late work will be accepted more than 48 hours after the due date.
- All quizzes and exams **MUST** be completed on D2L website by the deadline specified in the Living Schedule. 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 exams will be given except for emergencies with proof (e.g. doctor's slip).

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 log in 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

Please take a look at the Living Schedule listed in D2L (LivingScheduleS22IT4843) in the same directory as this syllabus. This will be our road map for the course and will show what topics will be covered and when. It will also list important dates such as: Assignment due dates, exam dates, and scheduled university closures.

Important dates:

- Add/Drop ends: Aug 18 11:45pm
- Last Day to Withdraw Without Academic Penalty: Oct 10 11:45 p.m.

- Last Day to Withdraw for the Term With a WF:
- Last Day of Class: Nov 30

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 Statements on COVID-19

Face Masks in The Classroom

As mandated by the University System of Georgia, the university requires the use of face masks in the classroom and in KSU buildings to protect you, your classmates, and instructors. Per the University System of Georgia, anyone not using a face covering when required will be asked to wear one or must leave the area. Repeated refusal to comply with the requirement may result in discipline through the applicable conduct code.

Reasonable accommodations may be made for those who are unable to wear a face covering for documented health reasons. [Please contact Student Disability Services at sds@kennesaw.edu for student accommodation requests.](#)

Shifting Modalities

Please note that the university reserves the right to shift teaching modalities at any time during the semester, if health and safety guidelines require it to do so. Some teaching modalities that may be used are F2F, Hyflex, Hybrid, or online, both synchronous and asynchronous instruction.

Staying Home When Sick

If you are ill, please stay home and contact your health professional. In that case, please email the instructor to say you are missing class due to illness. Signs of illness include, but are not limited to, the following:

- Cough
- Fever of 100.4 or higher
- Runny nose or new sinus congestion
- Shortness of breath or difficulty breathing
- Chills
- Sore Throat
- New loss of taste and/or smell

Seating Plans

Students will sit in the same seat for every F2F class so that the instructor can use a seating plan for contact tracing if a student contracts Covid-19.

Student Resources

This link contains information on help and resources available to students: [KSU Student Resources for Course Syllabus](#)