



SYLLABUS
College of Computing and Software Engineering

Department of Information Technology

IT 6823: Information Security Concepts and Administration

Spring 2021

# Course Information

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Class meeting time: Thursdays 5pm-6:15pm*.*

Modality and Location: Hybrid (50% online). Atrium building (J) 260.

# Instructor

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**Name**: Lei Li

**E-mail**: lli@kennesaw.edu

**Office Location**: Marietta campus, Atrium building (J) 364

**Office Phone**: 470-578-3915

**Office Hours**: Wednesdays and Thursdays 2pm- 5pm, or by appointment. Virtual office hours through MS Teams by appointment.

**Course Communication**:

# Email is the best way to reach the instructor. Use D2L email if possible. Instructor’s KSU email should only be used when you don’t have access to D2L site.

# Students’ emails will be replied WITHIN 24 hours during the weekday. Weekend and holidays don’t apply.

# When email the instructor using accounts other than D2L email, put the course number (IT 6823) in the subject line. Emails without proper subject line will not be replied.

# Avoid using personal email. Sensitive information (such as your grades) can ONLY be sent to D2L email or KSU email account.

# Course Description

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**Prerequisites/Corequisites**: IT 5423 Computer Networks and System Administration

**Credit Hours:** 3-0-3

**Required Texts**: No textbook is required. Learning material will be provided in D2L course website

**Recommended Texts**: None.

**Course Description:**

This course provides an overview of the principles, methodologies, and best practices in securing an enterprise IT infrastructure. Topics include security frameworks and models, risk assessment and management, access control, cryptography, instruction detection/prevention systems, penetration testing, incident response and recovery, and other existing and emerging security domains.

# Technology Requirements

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* 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.
* A web camera is required for a student to take quizzes/exams.

# Student Learning Outcomes

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Upon a successful completion of this course, a student should be able to:

* Compare and contrast the concepts, components, methodology, and architecture of information security and its specialized domains;
* Describe authentication techniques and analyze, design, develop and implement access control;
* Explain vulnerability analysis and penetration testing;
* Conduct independent research on a subject related to the course material.

# Course Requirements and Assignment

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## The requirements of this course are listed as follows.

## **Assignments***:* There are 3 assignments. Assignment 1 and 2 contains problem solving questions in the subject areas of access control metrics, cryptography. Assignment 3 is hands-on lab on penetration testing.

## **Quizzes:** There are 4 quizzes which mainly contain multiple choice questions related to the content of corresponding learning modules.

**Discussions**: there are 6 discussions. One is course introduction. The other 5 discussions tie to the content of the learning modules.

**Exams**: There are two exams: midterm and final. Midterm exam is multiple choice questions. Final exam is comprehensive and is composed of a list of short-answer or problem-solving questions.

**Research paper**: this is a team project where 3 or 4 students work together to conduct an in-depth research on a focus area of information security domain.

The weight distribution of the grading items is listed in the section below.

# Evaluation and Grading Policies

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## **Weight Distribution**

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| --- | --- |
| **Grading Item** | **Weight**  |
| Assignments  | 25% |
| Quizzes | 15% |
| Discussions  | 10% |
| Research Paper | 15% |
| Midterm Exam | 15% |
| Final Exam | 20% |
| **Total**  | **100%** |

## **Grading Scale:**

90% - 100% A

80% - 89% B

70% - 79% C

60% - 69% D

0% - 59% E

Grades will be rounded up if they are > or = .5 or above, for example, an 89.6 is an A, but 79.2 is a C.

# Course Policies

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# 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 midterm exam will be available immediately after the due dates
* The grades for assignments, discussions, research paper and final exam 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 submission will **NOT** be accepted. Any assignment that is less or equal than 24 hours late is subject to 10% penalty. Any assignment that is less or equal than 48 hours late is subject to 20% penalty. Any assignment that is more than 48 hours late will **NOT** be accepted.
* All quizzes and exams MUST be completed on D2L website by the deadline specified in course calendar. The quizzes and 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>

A student must have a web camera in order to complete the final exam. Please contact the instructor if you have any questions.

**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 you 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.

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| **Week**  | **Date**  | **Course Contents**  | **Notes**  |
| 01  | 01/11 – 01/17  | Overview of Information Security  | Course IntroductionDiscussion #1 |
| 02  | 01/18 – 01/24  | Information Security Framework | Quiz #1  |
| 03  | 01/25 – 01/31  | Risk Management | Assignment #1 |
| 04  | 02/01 – 02/07  | Information Security Policy & Access Control  | Discussion #2 |
| 05  | 02/08 – 02/14  | Authentication System | Assignment #2 |
| 06  | 02/15 – 02/21  | Cryptography (Encryption and Key Management)  | Quiz #2 |
| 07  | 02/22 – 02/28  | Midterm Exam  | Midterm Exam |
| 08  | 03/01 – 03/07  | Malware | Discussion #3Research paper team formation |
| 09  | 03/08 – 03/14  | Holiday Break! |  |
| 10  | 03/15 – 03/21 | Vulnerability Analysis & Penetration Testing Intrusion  | Quiz #3 Term paper abstract |
| 11  | 03/22 – 03/28  | Detection/Prevention System | Assignment #3  |
| 12  | 03/29 – 04/04 | Incident Response and Recovery | Discussion #4 |
| 13  | 04/05 – 04/11  | Mobile, cloud, and web security | Quiz #4 |
| 14  | 04/12 – 04/18 | Cyber security data analysis  | Discussion #5 |
| 15 | 04/19 – 04/25 | Emerging Information Security Domain |  |
| 16  | 04/26 – 05/02 | Term Paper Presentation | Research paper- final |
| 17 | 05/03 – 05/09  | 05/03 – Last Day of ClassFinal Exam - TBD  | Final Exam |

**Important dates:**

* Add/Drop ends: Jan 15 11:45pm
* Last Day to Withdraw Without Academic Penalty: Mar 15 11:45 p.m.
* Last Day to Withdraw for the Term With a WF: Apr 26.
* Last Day of Class: May 3.

**Institutional Policies**

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* [Federal, BOR, & KSU Course Syllabus Policies](https://cia.kennesaw.edu/instructional-resources/syllabus-policy.php)
* [Academic Integrity Statement](http://scai.kennesaw.edu/codes.php)
	+ 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**

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**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 buildingsto 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 contract Covid-19.

# Student Resources

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This link contains information on help and resources available to students: [KSU Student Resources for Course Syllabus](https://curriculum.kennesaw.edu/resources/ksu_student_resources_for_course_syllabus.php)