IT 4833 Wireless Security Course Syllabus

Instructor

Professor: TBA
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Office Location: N/A
Office Hours: N/A
Virtual Office Hours: by D2L email or make an appointment.

Course Communication

Effective communication is the key to the success of both online and hybrid classes. Please use following guideline for class communication.

- **Email me or text me**. Email is the best way to reach me. My KSU email (fscotlan@kennesaw.edu) and you should e**mail me from your student account NOT D2L**. Your emails and texts are GUARANTEED to be replied WITHIN 24-48 HOURS. I do not respond to D2L emails if I am not on campus.
- When emailing me please put the course and section number in the subject line. Emails without proper subject line will not be answered.
- Avoid using personal email to contact me. Sensitive information (such as your grades) can ONLY be sent to D2L email or KSU email account.

Course Description

Classroom & Meeting Time:
Online

Credit hours: 3 Class Hours 0 Laboratory Hours 3 Credit Hours

Prerequisites: IT 4823 or CS 3502

Required Textbook
No textbook is required. Learning material will be provided through D2L course website.

Catalog Description

This course covers methods and techniques to secure wireless networks against threats and attacks. The topics include Security and Cryptography, Network Security Protocols, Security and Layered Architecture, Voice-Oriented Wireless Networks, Data-Oriented Wireless Networks, Security in Traditional Wireless Networks, Security in Wireless LAN, Security in Wireless Ad Hoc Network, Special Topic: Mobile Security.

Course Objectives

By the end of this course, you should be able to:
- Describe the differences between wireless security and wired security
- Build the working knowledge of security building blocks so that it can be applied to solve the problems of designing security solutions in wireless network systems
- Acquire the fundamental understanding of two main-stream approaches (i.e., data-oriented and voice-oriented) taken by wireless security systems
- Master to learn at least one of advanced wireless network security systems in depth, and enhance the skills of enabling and configuring a wireless network system

Minimum Technical 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 dsampso2
- Internet Connection. A high-speed Internet connection such as DSL or cable Internet access is highly recommended. You can also use computer labs on campus to complete the coursework.

Minimum Technical Skills Requirement

Students entering this course are expected to have following technical skills:

- General computer literacy. Students should be proficient with the basic functions of standard software packages (e.g., MS Word, MS Excel, MS PowerPoint, and Adobe Reader) and standard players (e.g., QuickTime, Windows Media Player). These programs will need to be accessible to students through home use or other computer access. A list of primers on many of these technologies is available at https://apps.kennesaw.edu/portal/prod/app_uni_cdoc_publ/documents/
- A working knowledge of the D2L learning management system is required for participation in online courses.
- A working knowledge of Linux operating system preferred, but not required.

Course Organization

For the online section and there is no scheduled face-to-face meetings. For the on-campus section, we meet twice a week. Regardless the format of class, the content of this course is organized by weekly modules. Each weekly module starts on Monday and ends on Sunday. The weekly module will be available to students one week ahead of the time. A weekly unit usually includes followings items.

1. A study guide - an overview of what are covered, learning objectives and a to-do-list.
2. Assigned readings from the textbook and supplemental material such as PowerPoint slides;
3. Information of due items such as quizzes, discussions and projects. All items are usually due on Sunday 11:59pm. And the due date may change during the course of the semester. Always refer to course calendar in the D2L course site for accurate due date.

Grading

Grading items	Weight
Discussions & Quizzes	20%
Assignments	20%
Team project	20%
Midterm Exam	20%
Final Exam	20%
Total	100%

Grade Conversion: A: (90-100), B: (80-89), C: (70-79), D: (60-69), F: (0-59)
Grade Indicator: this is a special grading item in the grade book. It summarizes your overall grade up to date. The indicator will be updated after each major assignment/exam grade release. Always be aware of your grade indicator.

Quizzes, Projects & Exams Policy

- All projects **MUST** be submitted through D2L (https://kennesaw.view.usg.edu/) course website by the deadline. Email submission will **NOT** be accepted. Any assignment that is less than 24 hours late is subject to 10% penalty. Any assignment that is more than 24 hours late will **NOT** be accepted.
- All quizzes and exams **MUST** be completed on D2L website by the deadline. The quizzes exams can't be opened/submitted after the deadline.
- Team projects – students will work in groups (4 or 5 people per group) on two team projects throughout the semester.

- If you must miss an exam due to illness, you must e-mail or call me *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

The final exam of this course must be proctored exam. 1) For hybrid section, students can take the exam at KSU scheduled time at KSU campus. Due to the limited number of seats, online students must have the instructor's approval if they wish to use this option; 2) Online students take the exam at a scheduled time at http://www.proctoru.com/ Note that it requires registration with proctorU.com, scheduling the exam and a payment of a nominal fee for this service, for which the student will be responsible.
PLEASE CONTACT THE INSTRUCTOR ASAP IF YOU HAVE ANY QUESTIONS.

Course Schedule

Below is an outline of the content and activities in each module of the course. Course schedule is tentative and subject to change. Use D2L calendar for accurate due dates of grading items.

Week	Date	Units/Chapters	Tests/Assignments
0	See D2L	Course Orientation	Introduction discussion
1	See D2L	LM1 – The Evolution of Wireless Network	Discussion 1
2	See D2L	LM2 – Information Security Essentials	Assignment 1
3	See D2L	LM3 – WLAN Overview	Quiz 1
4	See D2L	LM4 – WLAN Threats & Vulnerabilities	Discussion 2
5	See D2L	Spring Break	
6	See D2L	LM5 – WLAN Security	Quiz 2, Assignment 2
7	See D2L	Midterm Exam	
8	See D2L	LM6 - WLAN Security Tools	Assignment 3
9	See D2L	LM7 – Mobile Network Overview	Discussion 3
10	See D2L	LM8 – Cellular Network Security	Quiz 3
11	See D2L	LM9 – Mobile Devices Security	Assignment 4
12	See D2L	LM10 – Wireless Security Auditing	Discussion 4, Quiz 4
13&14	See D2L	Team Project	Team Project
15	See D2L	Final Exam (D2L)	

Note: the schedule is tentative and subject to change. ALWAYS use the deadline in the D2L course calendar as the accurate deadline for the due items.

Course Expectations

Student Responsibility

For this online class, you should expect 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.

Policies

Accessibility Statement

- The accessibility statement of the learning management system of this course, Desire to Learn, is available at https://www.d2l.com/accessibility/
- Android Studio accessibility statement: https://developer.android.com/studio/intro/accessibility.html
- Wireshark provide an accessibility Toolkit allowing accessibility technologies to interact with a graphical user interface. More information is available at: https://www.wireshark.org/docs/wsdg_html/

Privacy Statement

The privacy policy of the learning management system of this course, Desire to Learn, is available at: https://www.d2l.com/legal/privacy/

Attendance Policy

Attendance and participation in class are expected. If you have any problems with attendance (or something else), contact me **BEFORE** they become a problem.

The instructor is required to file an engagement report by **[date to be determined]**. Students who never login D2L course web site or only complete little to none course work will be considered as "**NOT ENGAGED**

STUDENT". Instructor will send an email to those students for verification before file the report. Not engaged students will be **DROPPED** from the class

Academic Honesty

Every KSU student is responsible for upholding the provisions of the Student Code of Conduct, as published in the Undergraduate and Graduate Catalogs. Section II 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. See also http://www.kennesaw.edu/scai/content/ksu-student-code-conduct.

Students are encouraged to study together and to work together on class assignments and lab exercises; however, the provisions of the STUDENT CONDUCT REGULATIONS, II. Academic Honesty, KSC Undergraduate Catalog will be strictly enforced in this class. Examples of cooperation are **OK**: talking with someone about approaches to the assignment, discussing a particular problem that you are having.

- Examples of cooperation are **NOT OK**: taking someone else's assignment and modifying it, examining someone else's solution in detail.
- Any cases involving suspected academic dishonesty result in a grade of **ZERO** for the assignment. This penalty applies to all students involved.

Committing plagiarism is considered an act of academic dishonesty and will be taken very seriously. Any instances where academic dishonesty is suspected will result in an automatic grade of a zero for all students involved. Further disciplinary action may be taken such as suspension or expulsion from the University.

Grade Appeals and Student Complaints

KSU desires to resolve student grievances, complaints and concerns in an expeditious, fair and amicable manner. For complaints regarding this course, please contact the professor. If the issue is not resolved, contact the department chair.

Withdrawal Policy

The last day to withdraw without academic penalty Wednesday **10/5/2016**. Ceasing to attend class or oral notice thereof DOES NOT constitute official withdrawal from the course. Students who simply stop attending classes without officially withdrawing usually are assigned failing grades. Students wishing to withdraw after the scheduled change period (add/drop) must obtain and complete a withdrawal form from the Academic Services Department in the Registrar's Office.

Enrollment Policy

Only those students who are enrolled in the class may attend lectures, receive assignments, take quizzes and exams, and receive a grade in the class. If a student is administratively withdrawn from this course, they will not be permitted to attend class nor will they receive any grade for the class.

Electronic Devices

In order to minimize the level of distraction, all beepers and cellular phones must be on quiet mode during class meeting times. Students who wish to use a computer/PDA for note taking need prior approval of the instructor since key clicks and other noises can distract other students. Recording of lectures by any method requires prior approval of the instructor. Students using a laptop in class should not check their email, browse the web, or in other way detract from the focus of the class.

Reasonable Accommodations

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 not individual faculty members or academic departments. A student anticipating a need for accommodation, must submit documentation requesting an accommodation in a timely fashion to permit time for a determination prior to submitting assignments or taking course quizzes or exams. Students may not request retroactive accommodation. Students should contact the office as soon as possible in the term for which they are seeking accommodations. Student Disability Services is located in the Carmichael Student Center in Suite 267. For more information, please call 470-578-2666 or visit the Student Disabilities Services websites at
www.kennesaw.edu/stu_dev/sds
http://www.kennesaw.edu/stu_dev/dsss/dsss.html

Student Privacy (FERPA)

Students have certain rights to privacy. http://registrar.kennesaw.edu/resources/ferpa.php

The University's online learning system and email system are designed to prevent unauthorized individuals from gaining access to sensitive information or information protected by federal or state law. We will communicate regarding course matters through the University's designated technology learning system or Kennesaw state email system.

KSU Sexual Misconduct Policy & Ethics Statement

KSU will not tolerate sexual misconduct or sexually exploitative or harassing behavior of any kind.
https://policy.kennesaw.edu/content/sexual-misconduct-policy.
You are expected to respect religious, cultural, and gender differences.

Classroom Behavior

Students are reminded to conduct themselves in accordance with the Student Code of Conduct, as published in the Undergraduate and Graduate Catalogs. Every KSU student is responsible for upholding the provision. Students who are in violation of KSU policy will be asked to leave the classroom and may be subject to disciplinary action by the University.

Reference Requirement

When you quote or base your ideas on other people's work (e.g., from articles, journals, magazines, books, websites, etc.) in assignments or discussions, you MUST cite the source you used. When you direct quote, you must put others' words in quotation marks and cite the source(s). When reading that source contributed to the ideas presented in your paper, you must give the authors proper credit.
Students are recommended to user APA style for their references.
   • APA style guide: http://owl.english.purdue.edu/owl/resource/560/01/

Student Course Evaluation:

A standard questionnaire (described below) will be administered during the last two weeks of the semester in all classes. Additional questions developed by the college or instructor(s) may be included as well. It is important that each student provide meaningful feedback to the instructor(s) so that changes can be made in the course to continually improve its effectiveness. We value student feedback about the course, our teaching styles, and course materials, so as to improve our teaching and your learning. At a minimum, the following two questions will be asked: 1) Identify the aspects of the course that most contributed to your learning (include examples of specific materials, exercises and/or the faculty member's approach to teaching and mentoring), and 2) Identify the aspects of the course, if any, that might be improved (include examples of specific materials, exercises and/or the faculty member's approach to teaching and mentoring).

Helpful Resources

Writing Center

The KSU Writing Center helps students in all majors improve their writing. Experienced, friendly writing assistants help with topic development, revision, research, documentation, grammar, and more. For more information or to make an appointment, visit writingcenter.kennesaw.edu or stop by English Building, Room 242 (Kennesaw campus) or Johnson Library, Room 121 (Marietta campus).

Library

The KSU Library System assists all students, faculty and staff with their research, including using library databases to find articles, accessing books and other materials in our catalog, and for specialized research needs. Librarians are available for in-person walk-up assistance at library help desks, one-on-one research appointments, and 24x7 via library chat. For more information on library locations, hours, and how to access our services please visit http://library.kennesaw.edu/

Student Email and Web Account Access:

KSU uses a central authentication server that will allow one username and password to be used by all KSU users to access an increasing variety of applications (email, WebCT etc.) This unified network identification is referred to as your "NetID". The source for university-provided email and web space for students is located at http://students.kennesaw.edu. Students have access to this system once they have established their NetID. This system will provide email service through a web based interface.

How to Activate your NetID:

To activate your NetID go to http://netid.kennesaw.edu and click on the "Sign up Now!" link. You will be asked to provide information to verify your identity and set your password. This password will only be for NetID enabled applications.

How to Look Up a NetID:

After you have activated your NetID, you can look up other users by logging into http://netid.kennesaw.edu and clicking on Directory Search.

How to Send Email:

Your NetID in combination with the new email address would look like netid@students.kennesaw.edu.

Web Address:

For student web address, your NETID in combination with the new server address would look like http://students.kennesaw.edu/~netid. If you have problems please call the Service Desk at ext. 6999 or e-mail service@kennesaw.edu.

Owl Printing System:

The Owl Print system (student network printing/copying solution) is in place in the KSU library as well as all the open labs and lab/electronic classroom combinations across campus. Students must have an Owl Print card to use printing/copying services.

Other Student Resources

For issues with technical difficulties, please contact the **Student Helpdesk**:
- Email: studenthelpdesk@kennesaw.edu
- Call: 470-578-3555

Additional Technology Resources
- Student Service Desk and Help Center
- Browser Checker
- USG Desire2Learn Help Center
- ITS Documentation Center
- Check Service Outages

- Maintenance Schedule

Academic Resources
- Academic Tutoring Services
- Disability Resources
- ESL Study and Tutorial Center
- Library
- The Writing Center

Student Support and Wellness Resources
- Career Services Center
- Counseling and Psychological Services

Work Cited

- The learning marital used in this course is based on the textbook. The source of other external learning material is clearly listed in the D2L course site.
- The course policies list in this syllabus are cited from Kennesaw State University student handbook: http://catalog.kennesaw.edu//content.php?navoid=2481&catoid=32
- There is reference requirement for students' work. APA citation style is recommended. Check out Policy section of the syllabus for details.