Kennesaw State University - Department of Information Technology
IT4323: Data Communications & Networking
Spring 2020

Instructor:	Dr. Shirley Tian
Course Lecture:	Hybrid course. Class meeting is every Tuesday 2:00 pm - 3:15 pm Building J, Room 260 (Marietta Campus)
Office Number:	Building J, Room 378B (Marietta Campus)
Office Hours:	Tuesday /Thursday 11:00 am – 1:00 pm on campus in J building 378B; instructor is also available by appointment and D2L online Monday/Wednesday.
Phone:	470-578-5168
Email:	xtian2@kennesaw.edu *preferred method of contact *Students must send email from their students.kennesaw.edu email – NOT through D2L Response to emails within 24-48 hrs. (with possible delays during weekends & school holidays/breaks) **Students are also encouraged to interact with each other and the instructor via Discussion Board.**

COURSE DESCRIPTION, COURSE OUTCOMES/GOALS

Credit Hours:	3
Co-requisites:	IT 3121 Hardware & Software Concepts (or equivalent)
Textbook:	*ALG Course, No Textbook Needed* Reference book: *Data Communications and Networking (5th Edition)* *B.A. Forouzan, McGraw-Hill, 2012,* *ISBN: 978-0-07-337622-6* *E-book can be found here: https://manjushasborse.files.wordpress.com/2018/08/data-communications-and-networking-5th-edition_mmjadhav.pdf*
Technical Requirements:	Computer – You will need to have access to a computer running MS Windows 7 (or later) or Linux and a high-speed Internet connection. You will need at least 20 GB of storage capacity and 4 GB of RAM to install and run the tools we will be using in the course. You will also be required to install a VM to use Wireshark. The VM can either be Virtual Box (if you use MAC) or VMWare. Another option is to use the CCSE VM online, and it is installation-free service. The CCSE VM instruction: https://ccse.kennesaw.edu/docs/CCSE%20Virtual%20Desktop%20Login%20Instructions.pdf
Class Design:	This section (section 01) is delivered through Brightspace D2L. You are expected to read all the course materials in the module, including the videos, articles, slides. Labs, homework assignments, lecture slides, and other materials will be posted on D2L.

Course Description:	Fundamental concepts of computer networking. Topics include properties of signals and media, information encoding, error detection and recovery, LANs, backbones, WANs, network topologies, routing, internet protocols, and security issues. The focus is on general concepts together with their application to support the business enterprise. Credits: 3
Learning Outcomes:	Students who complete this course successfully will be able to: 1. Describe the layered architecture of computer networks and Internet; 2. Summarize and compare techniques and protocols in data link layer, such as error detection/correction, data link control, media access control, LAN, LAN connection, etc; 3. Analyze IP addressing and NAT; be able to implement address allocation; 4. Describe network layer protocols such as IP, ARP, and ICMP; 5. Define and assess routing protocols such as RIP, OSPF, BGP; 6. Summarize the algorithms, flow control, and error control in transport layer protocols UDP and TCP; 7. Describe the algorithms and implementations in application layer protocol HTTP;

Special Dates:	
Last Day of Drop/Add	Jan. 10 (Fri) 11:45PM
Last day to withdraw w/o academic penalty	Feb. 26 (W)
Holidays	Jan. 20 (M); March 28 – April 4 (spring break)
Last day of class	April 27 (M)

COURSE CONTENT, REQUIREMENTS, METHODS OF EVALUATION

Course topics/Activities and how they contribute to grading evaluation:
Course activities may include, but are not limited to:
1. Reading assignments
2. Student research projects
3. Class exercises
4. Presentations
5. Class and group discussions
6. Quizzes
7. Simulations/Case studies

Grading Scale: [List the specific grading scale for this course.]

Assessment Criteria:	
Attendance /Participation	10%
Quizzes	5%
Labs	25%
Project	20%
Exams 1 & 2	20%
Final Online Exam	20%

Attendance /Participation: For online students, your participation grade will be determined by your reading of the online discussions and other material and by the extent that you contribute to those online discussions. You are expected to read every item that is posted in the discussion areas. You are also expected to actively participate in the online discussions in the Discussion tool by making at LEAST three significant posts (content-based) per week in the Course Content discussion forum under

that week's topic(s). Your reading of posts will contribute to 3% of your final grade, and your contribution to the discussion board will contribute to another 3% of your final grade.

You will have an opportunity to participate in the research project about cybersecurity topics. This activity will allow you to work in a group of 4. Online students will need to find your group members and complete the activities and tasks online. And then submit one report for the group. This activity will contribute 4% of your final grade. More details will be announced after the mid-term.

Quiz/Exam Policy: Quizzes are completed online through D2L according to the deadlines stated in D2L. It is the student's responsibility to keep up with assignments and deadlines. Only one attempt is allowed for quizzes. The lowest grade for quizzes will be dropped. For online students, please include proctored exam requirements – http://www.kennesaw.edu/dlc/virtualexam/

Exams 1&2: Exam 1 will be delivered online 2 weeks priors to the withdrawal date and Exam 2 will be delivered prior to Spring Break. You will be given instructions for these exams and a study sheet to help focus your areas of study. The exams will be timed. You will be allowed to take it during a specified week in the schedule whenever you choose outside of class.

Final Exam: The final exam is an online final short answer exam. No resources will be allowed for the Final Exam. The final exam will be proctored during the last day of class during the regular class period on Thursday, April 27th. Should you have a conflict during that period, you must notify the instructor and make other arrangements.

Make-up Policy: There are no makeup quizzes. The quizzes are available from the beginning of the semester and have established due dates. Unless you miss an exam due to a medical emergency or some other personal emergency that can be documented, you will not be allowed an extension for the quizzes and exams. In each case, the instructor must be notified of such emergency within 24 hours of the deadline missed and documentation must be presented.

Assignment Policy: Module Assignments are given usually every other week.   Please start your assignments early as they generally will take longer than you might expect. Assignments are due by the deadlines indicated in D2L. There are no exceptions. Late assignments are given a grade of 0. An assignment is considered late if it is received 24 hours or more after the deadline. In the case of a medical emergency or personal emergency, an extension may be allowed with proper documentation presented to the instructor within one week of the deadline.

Course Technology: You will be expected to download the current version of Wireshark and run it in a Virtual Machine (Virtual Box or VMWare). In D2L, the Course Content tab Additional Resources has links to the websites for downloading each of these tools.

CREDIT HOURS, PREREQUISITES, MEETING TIMES, MODALITY, SCHEDULE
Class Meeting Location: Face to Face with Online Supplement

Communication w/ Instructor: Set office hours – Tuesday /Thursday 11-1pm in campus in J-378B; instructor is also available by appointment and D2L online Monday/Wednesday. please email for an appointment. Make certain you are using the appropriate email for the instructor xtian2@kennesaw.edu.

Electronic Communications. The University provides all KSU students with an "official" email account with the address "students.kennesaw.edu." As a result of federal laws protecting educational information and other data, **this is the sole email account you should use to communicate with your instructor or other University officials.**

Tentative Weekly Schedule:

Module Assignments/Quiz due on Sunday @ 11:59pm – assignments are not considered late until 24 hours after the deadline. After the 24 hour period ends, later assignments will not be accepted.

	Week – Date	Topic
1	Jan.7	Module 1 – Start Here Acceptance of syllabus Chapter 1 – Introduction Chapter 2 – Network Models Complete Introduction Discussion Complete Module 1 – Wireshark Lab
2	Jan. 14	Module 2 – Physical Layer Chapters 3 – Introduction to Physical Layer Chapter 4 – Digital Transmission Chapter 5 – Analog Transmission Complete Chapters 3-5 Quiz
3	Jan. 21	Module 3 – Physical Layer Chapter 6 – Bandwidth Utilization Chapter 7 – Transmission Media Chapter 8 - Switching Complete Chapter 8 Assignment
4	Jan. 28	Module 4 – Data link Layer Chapter 9 – Introduction to Data Link Layer Chapter 10 – Data Link: Error Detection Chapter 11 – Data Link: Data Link Control Module 4 – Chapters 10 & 11 Assignment Chapter 9 Quiz
5	Feb. 4	Module 5 – Data link Layer Chapter 12 – Media Access Control Chapter 13 – Wired LANs, Ethernet Chapter 11 &12 Quiz
6	Feb. 11	Module 6 Data Link Layer Chapter 15 Wireless LANs Module 6 – Chapter 15 Assignment Exam1 (Ch 2-13)
7	Feb. 18	Module7 – Network Layer Chapter 18 – Subnetting
8	Feb. 25	Module 8 – Network Layer (Online Lecture Only, NO in-Class Lecture) Chapter 18 – Subnetting Chapter 18 Assignment Introduce Project
9	Mar. 3	Module 9 Chapter 19 – Network Layer Protocols Chapter 20 – Unicast Routing Chapter 19 – 1 Ping and Tracert Chapter 19- Wireshark TCP Lab
10	Mar. 10	Module 10 Chapter 22 – Next Gen IP

11	Mar. 17	Module 11 – Transport Layer Chapter 23 – Introduction to Transport Layer Exam 2 (Ch 13-22) Project Work
12	Mar. 24	Module 12 Chapter 24 Transport Layer Protocols Project Due
13	Mar. 31	Module 13 Chapter 25-26 Application Layer
14	Apr. 7	Latest Network Related Issues, research activity Review for Final
15	Apr. 14	Final Exam – Online. Students will be able to take the final exam online. All students qualifying for Disability Services can schedule their exam with Disability Services. Conflicts must be discussed with the instructor prior to the 5th week.

General Expectations for Coursework in CCSE IT Programs

This course syllabus *is a general "plan" for the course and not a contract* - please know that the course instructor is permitted to make updates to it. If you have questions regarding this, please contact the Chair of the IT Department.

1. *Intellectual Property Issues.* You may not misappropriate the intellectual property of a member of the Faculty, another student, an online resource or other source even if you paid for them to do your work.
   Ideas, and course content are the intellectual property of the author irrespective of whether they are written in a book, course online content, course lectures or a paper. Kennesaw State University prohibits the misappropriation of intellectual property (which is a form of theft), which can result in discipline for a student, up to and including dismissal from the University. If the student is also a member of a profession with an applied code of ethics, it may additionally result in professional discipline, as well as subjecting the student to any civil legal remedies protecting intellectual property.

2. *Copyright Law.* It is the responsibility of KSU faculty and students to respect the rights of copyright holders and comply with copyright law. Students, faculty, and staff must comply with 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.

3. *Electronic Recording.* You may not record or disseminate any electronically recorded class discussion unless given explicit permission by the instructor in writing. If a student needs to electronically record a course as a result of a recognized disability or other exceptionality, the student should contact the University's DisAbled Student Support Services to develop an appropriate reasonable accommodation.
   http://www.kennesaw.edu/stu_dev/dsss/prospect.shtml

TURN-AROUND TIME/FEEDBACK

Assignments will be graded within 8-10 days of submission deadline. Solutions will not be provided to assignments; however, students can discuss individual feedback given with instructor.

COURSE WITHDRAWAL

Please refer to the KSU Catalog http://www.kennesaw.edu/registrar/policies/withdrawl.php

ACADEMIC INTEGRITY

Every KSU student is responsible for upholding all provisions of the Student Code of Conduct, as published in the Undergraduate and Graduate Catalogs. The Code of Conduct includes the following:

- o 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 University Judiciary Program, 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.

- o Students involved in off-campus activities shall not act in a disorderly or disruptive fashion, nor shall they conduct any dangerous activity.

- o Students involved in off-campus activities shall not take, damage or destroy or attempt to take, damage or destroy property of another.

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.

Netiquette: Communication Courtesy

All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions and chats. Inappropriate communication will not be tolerated and will be reported to the Chair and Dean. It may result in dismissal from the course.

KSU 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
- Career Services Center
- 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
- Center for Health, Promotion and Wellness
- Student Health Clinic