

**CIS 3347-110, CRN 80140, Data Communications and Infrastructure  
Fall 2019  
Texas A&M University-Central Texas**

**Instructor:** Dinesh Reddy, Ph.D.

**Office:** FH 3230

**Phone:** 254-519-5475

**Email:** [dreddy@tamuct.edu](mailto:dreddy@tamuct.edu) (I prefer Canvas email).

**Office Hours:** TR 11:30 am to 02:30 pm (or by appointment)

**Mode of instruction and course access:**

This course meets face-to-face, (with supplemental materials made available online).

This course uses the A&M-Central Texas Canvas Learning Management System [<https://tamuct.instructure.com>].

I use Canvas to post course content, assignments, quizzes, exams, and to communicate any other announcements with the class.

**Student-instructor interaction:**

You may ask questions during class hours or office hours. Outside the class hours, you may email me with your questions anytime as you would by attending the class and coming into my office. Your questions will be answered within 24 hours on weekdays and within 48 hours on weekends and holidays.

**911 Cellular:**

Emergency Warning System for Texas A&M University-Central Texas

911Cellular is an emergency notification service that gives Texas A&M University-Central Texas the ability to communicate health and safety emergency information quickly via email, text message, and social media. All students are automatically enrolled in 911Cellular through their myCT email account.

Connect at [911Cellular](https://portal.publicsafetycloud.net/Texas-AM-Central/alert-management) [<https://portal.publicsafetycloud.net/Texas-AM-Central/alert-management>] to change where you receive your alerts or to opt out. By staying enrolled in 911Cellular, university officials can quickly pass on safety-related information, regardless of your location.

**COURSE INFORMATION**

**Course Overview and description:**

A study of voice and data communications technologies, concepts, and applications, including communications terminology, hardware, software, protocols, and managerial issues in data and voice communications. Topics include alternatives available in hardware, software, and transmission facilities; design integration; and selection and implementation of communications solutions. In addition, students explore the current and future impact and directions of these technologies.

**Student Learning Outcomes:**

Students taking this course will be able to:

1. Illustrate network behavior and principles employed in an organization and the underlying operation of the communication networks.
2. Demonstrate the details of data and signals in Computer Networking and analyze the correct operation of various protocols
3. Understand the basic principles of Internet protocols and various internet services.

**Required Reading and Textbook(s):**

Data Communications & Computer Networks: A Business User's Approach: 8th edition.

Author: Curt M. White.

ISBN: 9781305116634      Publisher: Cengage Learning

**Supplemental (Optional) Reading**

Business Data Communications and Networking: 11<sup>th</sup> Ed (Fitzgerald, Dennis, Durcikova)

*Additional required readings and optional readings will be posted on Canvas.*

**COURSE REQUIREMENTS****Exams**

There will be three exams (two mid-terms and one final). Each exam is worth 100 points. The exams can be conducted either paper-based or on canvas. Exams will be based on the textbook, readings, and class discussions. It is assumed that you will read the assigned chapters and readings in advance. Make up exams are not typically given. The only acceptable excuses for missing an exam are circumstances clearly outside your control, such as illness, death in family, etc. If you miss an exam, notify me as soon as possible. I may require documentation of the circumstances.

**Lab work**

Labs are designed for students to have hands on experiences on the topics covered in this course. Instructions on what to submit for each lab will be posted on Canvas. You will be asked to prepare a lab report with your observations. All lab reports must be submitted before the end of the day (11:59 PM) on the due date mentioned in the course schedule. Late submissions will not be accepted for full points and will attract 10% deduction for each day that it is late. Each lab assignment is worth 40 points.

**Assignments**

There will be five assignments during the semester (40 points each). Assignments stress critical thinking by applying concepts learned in this course. Occasionally, some individual outside research will also be required. Assignments must be submitted before the end of the day (11:59

PM) on the due date mentioned in the course schedule. Late submissions will not be accepted for full points and will attract 10% deduction for each day that it is late.

**Quizzes**

There will be ten quizzes (true/false) that are designed to test the general understanding of the topics covered in the course. The quizzes can be conducted in-class either paper-based or on canvas. Late submissions will not be accepted. Each quiz is worth 20 points.

**Project Presentation**

Each student will need to present in class (either individual or in a group), a topic on Computer Networks and Data Communications. The presentation topics, presentation schedule, and grading rubric (used to assess the presentations) will be announced in class. Presentation is worth 100 points.

**Grading Criteria:**

Your semester grade will be based on the following criteria:

<b>Course Requirement</b>	<b>Points</b>	<b>Weightage</b>
Two Mid-Term Exams	200	20%
Final Exam	100	10%
Five Labs (40 points each)	200	20%
Five Assignments (40 points each)	200	20%
Ten Quizzes (20 points each)	200	20%
Project Presentation	100	10%
<b>Total</b>	<b>1000</b>	<b>100%</b>

Final letter grade distribution will be as per the following scale:

<b>Letter Grade</b>	<b>Points Range</b>
<b>A</b>	900 - 1000
<b>B</b>	800 - 899
<b>C</b>	700 - 799
<b>D</b>	600 - 699
<b>F</b>	Below 599

## Posting of Grades

All students' grade will be posted on the Canvas Grade book, and students can monitor their progress on Canvas grade book. Students can expect to see their grades within two weeks of the closing of class tests, exams, and assignments. Students are expected to visit Canvas course webpage regularly to get any update regarding this course.

## COURSE OUTLINE AND CALENDAR

**Course Schedule\* \*\*** (\* This schedule provides a general plan. Deviations may be necessary)  
(\*\* Readings for each week will be posted on Canvas)

Week	Date	Readings	Due
1	8/27	Syllabus, Chapter 1 – Introduction to Computer Networks	
	8/29	Chapter 1 – Continued	Chapter 1 Quiz
2	9/03	Chapter 2 – Fundamentals of Data and Signals	Lab 1
	9/05	Chapter 2 – Continued	Chapter 2 Quiz
3	9/10	Chapter 3 – Conducted and Wireless Media	Assignment 1
	9/12	Chapter 3 - Continued	Chapter 3 Quiz
4	9/17	Chapter 4 - Making Connections	Lab 2
	9/19	Chapter 4 – Continued	Chapter 4 Quiz
5	9/24	Exam 1 Review	
	9/26	<b>Exam 1</b>	<b>Exam 1</b>
6	10/01	Chapter 5 - Multiplexing and Compression	Assignment 2
	10/03	Chapter 5 – Continued	Chapter 5 Quiz
7	10/08	Chapter 6 – Data Packet Error Detection and Correction	Lab 3
	10/10	Chapter 6 – Continued	Chapter 6 Quiz
8	10/15	Chapter 7 - Local Area Networks: Part 1	Assignment 3
	10/17	Chapter 7 – Continued	Chapter 7 Quiz
9	10/22	Chapter 8 - Local Area Networks: Part 2	Lab 4
	10/24	Chapter 8 – Continued	Chapter 8 Quiz
10	10/29	Exam 2 Review	
	10/31	<b>Exam 2</b>	<b>Exam 2</b>
11	11/05	Chapter 9 – Introduction to MAN and WAN	Assignment 4
	11/07	Chapter 9 - Continued	Chapter 9 Quiz
12	11/12	Chapter 10 - The Internet	Lab 5
	11/14	Chapter 10 - Continued	Chapter 10 Quiz
13	11/19	Chapter 11 – Voice and Data Delivery Networks	Assignment 5
	11/21	Chapter 11 – Continued	
14	11/26	Project Presentations	
	11/28	<b>Thanksgiving Holiday</b>	
15	12/03	Project Presentations	
	12/05	Final Exam Review	
16	12/10	<b>Final Exam</b>	<b>Final Exam</b>

### Important University Dates:

August 26, 2019	Classes Begin for Fall Semester
August 26, 2019	Add, Drop, and Late Registration Begins for 16- and First 8-week Classes \$25 Fee assessed for late registrants
August 28, 2019	Deadline for Add, Drop, and Late Registration for 16- and First 8-week
September 2, 2019	Labor Day (University Closed)
September 3, 2019	Deadline to Drop First 8-week Classes with No Record
September 11, 2019	Deadline to drop 16-week Classes with No Record
October 1, 2019	Deadline for Teacher Education and Professional Certification Applications
October 4, 2019	Deadline to Drop First 8-week Classes with a Quit (Q) or Withdraw (W)
October 15, 2019	Deadline for Clinical Teaching/Practicum Applications
October 18, 2018	Classes End for First 8-week Session
October 18, 2019	Deadline to Withdraw from University for First 8-Week Classes (WF)
October 21, 2019	Add, Drop, and Late Registration Begins for Second 8-Week Classes \$25 Fee assessed for late registrants
October 21, 2019	Classes Begin for Second 8-Week Session
October 21, 2019	Class Schedule Published for Spring Semester
October 22, 2019	Deadline for Faculty Submission of First 8-Week Class Final Grades (due by 3pm)
October 23, 2019	Deadline for Add, Drop, and Late Registration for Second 8-Week Classes
October 25, 2019	Deadline for Graduation Application for Ceremony Participation
October 28, 2019	Deadline to Drop Second 8-Week Classes with No Record

November 4, 2019	Registration Opens for Spring Semester
November 8, 2019	Deadline to Drop 16-Week Classes with a Quit (Q) or Withdraw (W)
November 11, 2019	Veteran's Day (University Closed)
November 28-29, 2019	Thanksgiving (University Closed)
November 29, 2019	Deadline to Drop Second 8-Week Classes with a Quit (Q) or Withdraw (W)
December 13, 2019	Deadline for Applications for Tuition Rebate for Fall Graduation (5pm)
December 13, 2019	Deadline for Degree Conferral Applications to the Registrar's Office \$20 Late Application Fee
December 13, 2019	Deadline to Withdraw from University for 16- and Second 8-Week Classes
December 13, 2019	Fall Semester Ends

## TECHNOLOGY REQUIREMENTS AND SUPPORT

### Technology Requirements

This course will use the A&M-Central Texas Instructure Canvas learning management system. Logon to A&M-Central Texas Canvas [<https://tamuct.instructure.com>].

Username: Your MyCT username (xx123 or everything before the "@" in your MyCT e-mail address)

Password: Your MyCT password

### Canvas Support

Use the Canvas Help link, located at the bottom of the left-hand menu, for issues with Canvas. You can select "Chat with Canvas Support," submit a support request through "Report a Problem," or call the Canvas support line: 1-844-757-0953.

For issues related to course content and requirements, contact your instructor.

### Other Technology Support

For log-in problems, students should contact Help Desk Central.

24 hours a day, 7 days a week:

Email: [helpdesk@tamu.edu](mailto:helpdesk@tamu.edu)

Phone: (254) 519-5466

[Web Chat](http://hdc.tamu.edu): [<http://hdc.tamu.edu>]

*Please let the support technician know you are an A&M-Central Texas student.*

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## UNIVERSITY RESOURCES, PROCEDURES, AND GUIDELINES

### **Drop Policy.**

If you discover that you need to drop this class, you must complete a [Drop Request Form](https://www.tamuct.edu/registrar/docs/Drop_Request_Form.pdf) [https://www.tamuct.edu/registrar/docs/Drop\_Request\_Form.pdf].

Professors cannot drop students; this is always the responsibility of the student. The Registrar's Office will provide a deadline on the Academic Calendar for which the form must be completed, signed and returned. Once you return the signed form to the Registrar's Office, you must go into Warrior Web and confirm that you are no longer enrolled. If you still show as enrolled, FOLLOW-UP with the Registrar's Office immediately. You are to attend class until the procedure is complete to avoid penalty for absence. Should you miss the drop deadline or fail to follow the procedure, you will receive an F in the course, which may affect your financial aid and/or VA educational benefits.

### **Academic Integrity.**

Texas A&M University -Central Texas values the integrity of the academic enterprise and strives for the highest standards of academic conduct. A&M-Central Texas expects its students, faculty, and staff to support the adherence to high standards of personal and scholarly conduct to preserve the honor and integrity of the creative community. Academic integrity is defined as a commitment to honesty, trust, fairness, respect, and responsibility. Any deviation by students from this expectation may result in a failing grade for the assignment and potentially a failing grade for the course. Academic misconduct is any act that improperly affects a true and honest evaluation of a student's academic performance and includes, but is not limited to, cheating on an examination or other academic work, plagiarism and improper citation of sources, using another student's work, collusion, and the abuse of resource materials. All academic misconduct concerns will be reported to the university's Office of Student Conduct. Ignorance of the university's standards and expectations is never an excuse to act with a lack of integrity. When in doubt on collaboration, citation, or any issue, please contact your instructor before taking a course of action.

### **Academic Accommodations.**

At Texas A&M University-Central Texas, we value an inclusive learning environment where every student has an equal chance to succeed and has the right to a barrier-free education. The Department of Access and Inclusion is responsible for ensuring that students with a disability receive equal access to the university's programs, services and activities. If you believe you have a disability requiring reasonable accommodations please contact the Department of Access and Inclusion at (254) 501-5831. Any information you provide is private and confidential and will be treated as such.

For more information please visit our [Access & Inclusion](https://www.tamuct.edu/student-affairs/access-inclusion.html) web page [https://www.tamuct.edu/student-affairs/access-inclusion.html].

Texas A&M University-Central Texas supports students who are pregnant and/or parenting. In accordance with requirements of Title IX and related guidance from US Department of Education's Office of Civil Rights, the Dean of Student Affairs' Office can assist students who are pregnant and/or parenting in seeking accommodations related to pregnancy and/or parenting. Students should seek out assistance as early in the pregnancy as possible. For more information, please visit the [Student Affairs](https://www.tamuct.edu/student-affairs/index.html) web page [https://www.tamuct.edu/student-affairs/index.html]. Students may also contact the institution's Title IX Coordinator. If you would like to read more about these [requirements and guidelines online](http://www2.ed.gov/about/offices/list/ocr/docs/pregnancy.pdf), please visit the website [http://www2.ed.gov/about/offices/list/ocr/docs/pregnancy.pdf].

Title IX of the Education Amendments Act of 1972 prohibits discrimination on the basis of sex and gender—including pregnancy, parenting, and all related conditions. A&M-Central Texas is able to provide flexible and individualized reasonable accommodation to pregnant and parenting students. All pregnant and parenting students should contact the Division of Student Affairs at (254) 501-5909 to seek out assistance. Students may also contact the University's Title IX Coordinator.

### **Tutoring.**

Tutoring is available to all A&M-Central Texas students, both on-campus and online. Subjects tutored on campus include Accounting, Advanced Math, Biology, Finance, Statistics, Mathematics, and Study Skills. Tutors are available at the Tutoring Center in Warrior Hall, Suite 111.

If you have a question regarding tutor schedules, need to schedule a tutoring session, are interested in becoming a tutor, or have any other question, contact Academic Support Programs at (254) 519-5796, or by emailing Dr. DeEadra Albert-Green at [deeadra.albertgreen@tamuct.edu](mailto:deeadra.albertgreen@tamuct.edu).

Chat live with a tutor 24/7 for almost any subject from on your computer! Tutor.com is an online tutoring platform that enables A&M-Central Texas students to log in and receive FREE online tutoring and writing support. This tool provides tutoring in over 40 subject areas. Access Tutor.com through Canvas.

**University Writing Center:** Located in 416 Warrior Hall, the University Writing Center (UWC) at Texas A&M University-Central Texas is a free workspace open to all TAMUCT students from 10am-4pm Monday-Thursday during the summer with online hours available Monday-Thursday from 6:00-9:00pm. Students may arrange a one-on-one session with a trained and experienced writing tutor by visiting the UWC during normal operating hours (both half-hour and hour sessions are available) or by making an appointment via [WConline](https://tamuct.mywconline.com/) at [https://tamuct.mywconline.com/]. In addition, you can email Dr. Bruce Bowles Jr. at [bruce.bowles@tamuct.edu](mailto:bruce.bowles@tamuct.edu) to schedule an online tutoring session. Tutors are prepared to help writers of all levels and abilities at any stage of the writing process.



While tutors will not write, edit, or grade papers, they will assist students in developing more effective composing practices. By providing a practice audience for students' ideas and writing, our tutors highlight the ways in which they read and interpret students' texts, offering guidance and support throughout the various stages of the writing process. In addition, students may work independently in the UWC by checking out a laptop that runs the Microsoft Office suite and connects to WiFi, or by consulting our resources on writing, including all of the relevant style guides. Whether you need help brainstorming ideas, organizing an essay, proofreading, understanding proper citation practices, or just want a quiet place to work, the University Writing Center is here to help!

If you have any questions about the University Writing Center, please do not hesitate to contact Dr. Bruce Bowles Jr. at [bruce.bowles@tamuct.edu](mailto:bruce.bowles@tamuct.edu).

### **University Library.**

The University Library provides many services in support of research across campus and at a distance. We offer over 200 electronic databases containing approximately 250,000 eBooks and 82,000 journals, in addition to the 85,000 items in our print collection, which can be mailed to students who live more than 50 miles from campus. Research guides for each subject taught at A&M-Central Texas are available through our website to help students navigate these resources. On campus, the library offers technology including cameras, laptops, microphones, webcams, and digital sound recorders.

Research assistance from a librarian is also available 24 hours a day through our online chat service, and at the reference desk when the library is open. Research sessions can be scheduled for more comprehensive assistance, and may take place on Skype or in-person at the library. Assistance may cover many topics, including how to find articles in peer-reviewed journals, how to cite resources, and how to piece together research for written assignments.

Our 27,000-square-foot facility on the A&M-Central Texas main campus includes student lounges, private study rooms, group work spaces, computer labs, family areas suitable for all ages, and many other features. Services such as interlibrary loan, TexShare, binding, and laminating are available. The library frequently offers workshops, tours, readings, and other events. For more information, please visit our [Library website](http://tamuct.libguides.com/index) [<http://tamuct.libguides.com/index>].

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