

Information Technology Infrastructure

Course Objectives

This course introduces students to information technology infrastructure for data communication and networking including concepts, models, architectures, protocols, standards, implementation, and performance evaluations. Students will acquire fundamental knowledge about underlying mechanisms and protocols in information technology infrastructure for data communication and networking, be capable of essential network programming using sockets, and be familiar with network methods to analyze system performance of various aspects of computer networks.

Course Information

- Prerequisite: CS 220 or equivalent; or consent of instructor
- Class time: 10:30 – 11:45 am, Tuesday & Thursday
- Lecture format: Pre-recorded videos and online (Zoom)
- Course webpage: Canvas – <https://bradley.instructure.com/>
- Final exam: 2:30 – 4:30 pm, December 11, 2020 (Ref: [University website](#))

Instructor Information

- Instructor: Dr. Tachun Lin
- Office hours:
 - 10 am - 12 pm on Wednesdays (by appointment)
 - [Click this link to make an appointment](#)
- Contact info:
 - E-mail: djlin@fsmail.bradley.edu

Course Material

Textbook: James F. Kurose and Keith W. Ross, “Computer Networking: A Top-Down Approach,” 7th Edition, Addison-Wesley, 2016 (ISBN-13: 9780133594140)

Grade

- Attendance: 5%
- Homework Assignments: 20%
- Lab(s) & Project(s): 25%
- Midterm Exam: 20%
- Final Exam: 30%
- Overall: A (grade $\geq 90\%$); B ($80\% \leq \text{grade} < 90\%$); C ($70\% \leq \text{grade} < 80\%$); D ($60\% \leq \text{grade} < 70\%$); F (grade $< 60\%$).

Reasonable Accommodations

In accordance with University procedures, if you have a documented disability and require accommodations to obtain equal access in this course, please contact me privately to discuss your specific needs. You must be registered with Student Access Services located at 100 Heitz Hall. You can reach the SAS at (309) 677-3654 or find more information at the Student Access Services website <http://www.bradley.edu/offices/student/sas/>

Course Policies

1. **Communication:** Please communicate with me via email (with the following code). Emails should adhere to a few simple rules:

- Please send email through your Bradley email account.
- Include your course section (CIS 430/530 01) in the subject field.
- Please include your name.
- Please include an applicable subject in the subject line (e.g., Project X)
- If you are asking a question about a program or debugging, please make an appointment.
- I will need to see your source code and how you program.
- You need to show me previous workable version and the current version with problem with newly added code, and show me your efforts in trouble-shooting.
- Debugging is part of a programming assignment

2. **Late submission policy:** Unless an agreement is reached between the students and instructor at least 48 hours before the due date/ time, all late submissions will receive a 25%/day penalty after the designated due date/time. Zero point will be assigned on/after the fourth day passing due.
3. **Citations:** If you consult with any source (including the textbook and the instructor) to complete an assignment, you should credit that source with a citation. Sources that should be cited include friends, classmates, tutors, websites, and any books. A friend or tutor should never complete an assignment for you. You should never copy and paste large segments of code from a website. It is sometimes acceptable to copy small segments of code from a website (3 lines or fewer), but the website should be cited.

Academic Honesty

The instructor takes academic integrity very seriously. Any submitted materials deemed to be plagiarism or fail to meet academic integrity standards will be given a zero. It is the responsibility of each student to be honest in all of his or her work. Plagiarism is considered dishonest.

Refer to [Breach of Academic Integrity](#) for more detail information.

Tentative Course Schedule

Note: the instructor reserves the right to change the schedule whenever necessary

Table 1: Class Schedule

Week	Topics	Reading Assignments
1 – 2	Introduction and Overview	Ch. 1
3 – 5	Application Layer	Chs. 1–2
6 – 7	Transport Layer	Chs. 2–3
8	Midterm Review and Exam (10/15)	Chs. 1–3
9 – 11	Network Layer – Data Plane	Ch. 4
12 – 13	Network Layer – Control Plane	Ch. 5
14	Thanksgiving break (11/23 – 11/27)	
15	Network Layer – Control Plane	Ch. 5
16	Review	
	Final Exam (2:30 – 4:30 p.m., December 10)	

Lecture Delivery Information

Join Zoom Meeting through this [Zoom Link](#)

Meeting ID: 779 612 7590

Passcode: BUCSISOHRS

One tap mobile

+13126266799,,7796127590#,,,,,0#,,8467396295# US (Chicago)

+13017158592,,7796127590#,,,,,0#,,8467396295# US (Germantown)

Dial by your location

+1 312 626 6799 US (Chicago)

+1 301 715 8592 US (Germantown)

+1 929 436 2866 US (New York)

+1 346 248 7799 US (Houston)

+1 669 900 6833 US (San Jose)

+1 253 215 8782 US (Tacoma)

Meeting ID: 779 612 7590

Passcode: 8467396295

Find your local number: <https://Bradley.zoom.us/j/ab5bqmwT1j>

Bradley University's Statements for Course Syllabi

Bradley University *empowers students for immediate and sustained success in their personal and professional endeavors by combining professional preparation and co-curricular experiences*. Integrating knowledge, skills, and dispositions while developing your professional attitudes are important to learning at our university. Learning is an active, engaging process. Professionalism, collegial sharing, and mutual respect are expected during this course in all aspects of learning and interactions with others. Regular attendance, participation in class discussions, ethical technology use, and completion of required readings and assignments will position you for success in this course and in the future.

Student Assistance and Services

Academic Success Center

<https://www.bradley.edu/offices/student/asc/support/>

The Academic Success Center provides tutoring, mentoring, and student success workshops on a variety of issues, such as time management, goal setting, note-taking, and preparing for exams. It is located on the third floor of Cullom-Davis Library. The phone number is (309) 677-2416. The email address is success@bradley.edu.

- Math Success Center

<https://www.bradley.edu/offices/student/asc/support/math/>

The Math Success Center provides tutoring, review sessions, and other learning resources to help students master mathematical content. It is located on the third floor of Cullom-Davis Library. The phone number is (309) 677-2416. The email address is success@bradley.edu.

- Writing Center

<https://www.bradley.edu/academic/departments/eng/resources/center/>

The Writing Center is located on the third floor of Cullom-Davis Library. The phone number is (309) 677-3254. The email address is bradleywritingcenter@bradley.edu. It is possible to call or email to schedule an appointment. Walk-ins are also accepted. In addition, the Writing Center offers virtual appointments via Zoom.

Office of Student Access Services

<https://www.bradley.edu/offices/student/sas/>

The Office of Student Access Services (SAS) helps students with documented disabilities by facilitating accommodations that remove barrier to academic success. Students seeking such accommodations must register with SAS, which is located in 100 Heitz Hall. The

phone number is (309) 677-3654. For additional related resources, go to: <https://www.bradley.edu/offices/student/sas/studentresources/>

Student Counseling Services

<https://www.bradley.edu/campuslife/healthservices/counseling/>

The Counseling Center provides short term mental health counseling and related services to help students identify barriers, improve coping, and achieve personal and academic goals. It is located in the Markin Center, Room 52. The phone number is (309) 677-2700. The “after hours” phone number is (309) 677-3200. The email address is bradleyhealthservices@bradley.edu

Health Services

<https://www.bradley.edu/campuslife/healthservices/>

The Health Services Office provides care of general physical health and illness problems, as well as minor injuries, allergy issues, and medication management. It is located in the Markin Center, Room 101. The phone number is (309) 677-2700. The email address is bradleyhealthservices@bradley.edu

Student Support Services

<https://www.bradley.edu/offices/student/support/>

Student Support Services is designed to offer guidance to students in times of need. Its mission is to provide personal attention and resources to students as they work to achieve their academic and personal goals. Student Support Services serves as a major link between Academic Affairs and Student Affairs striving to improve student retention through positive communication and relationships with students, faculty, staff and families. It is located in Sisson Hall, Room 101 and 103. The phone number is (309) 677-3910.

Title IX

Bradley University seeks to provide an environment that is free of bias, discrimination and harassment. Under Title IX, discrimination based on sex or gender is prohibited. If you have been impacted by sex discrimination including sexual assault, sexual harassment, dating violence, domestic violence or stalking, we encourage you to report it to the Executive Director of Student Support Services. While you may talk to a faculty member, faculty are required to share such reports with the University’s Title IX Coordinator or Executive Director of Student Support Services. Please refer to the Bradley University Statement on Sexual Harassment and Sexual Misconduct Policy and Procedures at: <http://www.bradley.edu/campuslife/studenthandbook/policies/misconduct/index.dot>

Office of Diversity and Inclusion

<https://www.bradley.edu/campuslife/odi>

The Office of Diversity and Inclusion (ODI) supports historically underrepresented communities – Asian, African American, Hispanic/Latinx, Multiracial, or students who are first in their families to attend college – as they transition to Bradley. The office also handles incidents of bias or discrimination based on race or ethnicity. The office offers services for lesbian, bisexual, transgender or questioning students. The office is located in the Garrett Center. The phone number is (309) 677-2646. The email address is diversity@bradley.edu

Student Academic Integrity And Standards Of Conduct

Academic Integrity

Plagiarism is a serious offense and all instances of it will be dealt with according to [Bradley University's policies and procedures](#). Students who submit plagiarized work, in whole or part, will receive a failing grade for that assignment and students who plagiarize also risk failing the course. Plagiarism is generally defined as using the ideas of another as your own. Plagiarism is not avoided by simply changing a few words or by paraphrasing the work of others. [Click here to learn about the differences between paraphrasing and summarizing](#), or copy this link: <http://www.lib.usm.edu/legacy/plag/paraphrasing.php>. All borrowed material—not just quotes—must be attributed through proper and clear citation of sources, (i.e., in Footnotes or Endnotes). When in doubt, reference it and ask your instructor! Click here or copy this link for an overview of Bradley University's academic misconduct policies related to "Cheating and Plagiarism": <https://www.bradley.edu/campuslife/studenthandbook/policies/policies/cheating/>

Important Information

[Click here](#) or copy this link for the Student Handbook, which provides information on the Academic Calendar, Conduct and University Policies, Services for Students, and University Observed Holidays: <https://www.bradley.edu/campuslife/studenthandbook/>

Standards of Conduct

Bradley University is dedicated to a safe, supportive and non-discriminatory learning environment. It is the responsibility of all students to familiarize themselves with Bradley University policies regarding Standards of Conduct: <https://bradley.edu/campuslife/studenthandbook/policies/conduct/> and other University Policies: [Click here](#) or copy this link for direct access to Bradley University's Standards of Conduct & University's Policies (in the Student Handbook): <https://www.bradley.edu/campuslife/studenthandbook/policies/>

In-Class Discussion Guidelines

We will have many discussions in this class. It is imperative that everyone be actively engaged in making our discussion space a safe one where all students feel comfortable sharing their thoughts. One of the best ways to do this is to remember that this is a scholarly discussion. All of our comments should be focused on the issues we are studying in class and we should rely on evidence from our course materials to support our arguments. All of us bring different backgrounds and experiences to the discussion. When we are exposed to a new perspective or idea, it enriches our learning. We will be respectful of others and strive to make our discussions inclusive of all voices.

Note: The instructor reserves the right to change/modify the syllabus if necessary.