

CSC 411: Advanced Networking

Instructor

frye@kutztown.edu

<http://faculty.kutztown.edu/frye>

GroupMe App: frye@kutztown.edu

Online office hours link:

<https://kutztown.zoom.us/j/111776224?pwd=QzdGaXIHOWxxTGsvdXNvWmptUk10Zz09>

Microsoft Teams: <https://teams.microsoft.com/l/chat/0/0users=frye@kutztown.edu>

Dr. Lisa Frye

Phone: 610-683-4422

484-619-3132 (during office hours)

Office: Old Main 254



Office Hours

Tue 9:30-11:00pm (Zoom)

Thu 9:30-11:00pm (Zoom)

Wed 2:00-4:00pm (Zoom)

Other times by appointment

COURSE INFORMATION

Meetings MW 4:30-5:50; OM158 Hybrid.

Dates Semester midterm: 3/1. Last day 'W': 4/2. Final: week of 5/3.

Course Description This course deals with the theory, implementation and administration of networks. It is also concerned with the various layers of Internet architecture stack, with concentration on layers 3 and 4. The primary protocols for these layers, Transmission Control Protocol (TCP) and Internet Protocol (IP), will be studied in detail. Network addressing and related protocols will also be covered. 3 sh. Prerequisites: CSC 311 or unconditional admission to the Graduate program.

Course Objectives

- Explain the differences between the various types of network devices, i.e. switches & routers.
- Demonstrate the correct usage of various types of network addresses, including MAC, IP, and CIDR (Classless Internet Domain Routing).
- Describe how TCP is used to exchange data on a network.
- Explain TCP flow control and congestion control.
- Explain the basic IP functionality, including routing.
- Describe the procedures used to perform network management, including SNMP (Simple Network Management Protocol) and common troubleshooting tools.
- Explain how wireless networks are established and behave.

Text Computer Networking: A Top-Down Approach Featuring the Internet
by: James F. Kurose and Keith W. Ross; Seventh edition (prior editions are fine)

COURSE GRADE

Grading Policy	Final Project	15%
	Assignments	75%
	Team Collaboration	5%
	Class Participation	5%

The University Scale will be used in determining letter grades. Plus/minus grading will be used. In order to receive a passing grade for the course, you must have a passing test average.

Note: This syllabus is subject to change at the discretion of the instructor.
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CSC411

Spring 2021

- Readings** It is expected that you will complete all readings and **be prepared to discuss them in class.**
- Hybrid Class Guidelines** This course will integrate in-person (face-to-face) and synchronous online experiences. It will also include asynchronous components. If you are a remote student, you will log in for synchronous class sessions at the scheduled class time. All other students will attend class on a rotating schedule to allow for social distancing. On days you are not attending in-person, you will log in for synchronous instruction. See below for the policy for recording of class lectures. Additional guidelines will be distributed regarding the hybrid class modality. Here are some guidelines for attending the In-Person Hybrid class.
- Students attending in-person may still want to login to Zoom (if it won't distract you from the lecture). There may be days where in-class activities will require all students to login to Zoom. You will be told to login to Zoom prior to these activities.
- In-person students may want to bring headphones to class for group activities; If attending class in-person, do NOT wear the headphones until told to do so by the instructor.
- Assignments** Assignments will be posted in D2L. Late assignments will be accepted but will be penalized 10% for each calendar day it is late. All assignments must be **typed** and turned in via D2L or turnin on acad (assignment specification will include submission details). Include the following information at the top of **ALL** assignments: ***your name, major (CS or IT), date, the course (CSC411), Dr. Frye and assignment number/title.*** For program assignments, the department documentation standard must be followed.

POLICIES

Masks Required

Current research on the COVID-19 virus suggests there is a significant reduction in the potential for transmission of the virus from person to person by wearing a face mask that covers the nose and mouth. As described in the Kutztown University COVID-19 pandemic response plan, **students and employees MUST wear face masks in classrooms, public areas and common spaces on campus**, in addition to practicing social distancing. For the safety of everyone, **any student not appropriately wearing a face mask will be asked to leave the classroom immediately.** The student will be responsible to make up any missed class content or work. Please note, a face shield can be worn *in addition* to a face mask – not instead of a face mask (unless approved for pre-existing conditions).

The Student Conduct Pandemic Response Guidelines include information on penalties for not wearing face masks in the classroom. Students who demonstrate a willful pattern of non-compliance, expose community members to a serious, demonstrable health risk, and/or do not comply with a directive of a university employee related to a university-approved pandemic regulation are subject to immediate interim suspension from their academic schedule. [Full information can be found online.](#)

- Email** The best way to contact me is by e-mail (frye@kutztown.edu). When sending me e-mail, please indicate the course number in the subject line by putting it in brackets before your subject. For example, if you are in 411, the following may be the subject:
- [CSC411] Help with lab #2

- Documentation** The computer science documentation standard must be followed for all software assignments. <https://www.kutztown.edu/Documents/Computer%20Science/DocumentationStandard.pdf>

- Course Materials** The materials provided by the instructor in this course are for the use of the students enrolled in the course only. Course materials are not to be distributed outside of the class environment.

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Statement of Permission for Class Recordings	As per Kutztown Policy (Kutztown University Policy GEN-006) Zoom or class sessions may not be recorded if a participant does not give permission for the recording. Please be aware that all class lectures for this course and other similar meetings are being recorded for educational purposes. If you do NOT want your comments to be recorded, you may remain silent (no audio) and not use Chat during the session. If you do not want to be recorded, you can send any questions/comments privately to the instructor using the Chat feature in Zoom. Sessions that are recorded will be available to the class ONLY . Zoom recordings will be posted (usually through D2L) or sent to class participants for future review or to catch up on a missed class. University policy also prohibits students from recording or downloading a recording for any purpose without the permission of the instructor. Any questions regarding this matter should be directed to the instructor.
Class Recordings	Class recordings provided to the class are for your individual use only. Class recordings may NOT be downloaded to your computer, uploaded to the internet, or otherwise shared, transmitted or published.
Attendance	Regular class attendance and participation are expected and highly encouraged. Students are responsible for all material covered in class.
Class Participation	This course is intended to involve a lot of class discussion. Every student is expected to participate in the class discussions. Attendance, completed homework and doing the readings do not constitute class participation. Students must participate in the discussions, voluntarily, and contribute to the content.
Academic Dishonesty	All students should familiarize themselves with the Computer Science & Information Technology Dept. Academic Integrity Policy . Any student copying work or giving work to another student will minimally receive a zero for that assignment. Severe or repeat offenses may result in more extreme consequences.
Course Work / Accreditation	Any course work submitted to the instructor (including but not limited to assignments, tests, and projects) may be photocopied and retained for the purpose of assessment, accreditation and quality improvement. All personal identification information, such as name or student ID, will be removed.
Classroom Etiquette	Respect for your classmates, instructor, and the class is expected. Please come to class <u>on time and prepared to learn</u> . Coming and going during class should only occur in unavoidable situations. Electronic devices should be neither seen nor heard (unless used for class instructions, notes, etc.).
Students with Disabilities	Students with diagnosed disabilities or special needs that require accommodations for this course must first contact the Disability Services Office, located in the Office of Human Diversity at 215 Stratton Administration Building. Do this as soon as possible so that we may have a dialogue as to your needs and the recommended accommodations.
Gender-Based Crimes	Educators must report incidents of gender-based crimes, including sexual assault, sexual harassment, stalking, dating violence, and domestic violence. If a student discloses such incidents to me during class or in a course assignment, I am not required to report the disclosure, unless the student was a minor at the time the incident occurred. Regardless of the student's age, if the incident is disclosed to me outside the classroom setting or a course assignment, I am required by law to report the disclosure, including relevant details, such as the names of those involved in the incident, to Public Safety and Police Services and to Mr. Jesus Peña, Title IX Coordinator.

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