# CS 37400 Course Syllabus

Spring 2022

**Course Number:** CS 37400-01
**Course Title:** Computer Networks
**Course Credit Hours:** 3
**Course Time**: MW 1:30 – 2:45 pm, KT 245
**Office Hours:** MW 12:15 pm – 1:15 pm,
TR 11:00 – 11:45
or by appointments

**Questions**:
Email for quick questions: Liud@pfw.edu
Brightspace Discussions for common questions

**Instructor:**
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**TA :**
Aishwarya Madupuri Suresh <madua01@pfw.edu>

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**Prerequisites:** CS 16100

**Course Description:**
This course is a survey of data communications and computer networks. Topics include network applications and architecture, transport-layer services, multiplexing and demultiplexing, routing and switching, link-layer services, error-detection and correction, multiple access protocols, Ethernet, and local area networks.

**Course Learning Outcomes:**
Upon successful completion of the course requirements, a student should be able to:
1. Describe network architecture, protocols, and performance measurements (1)
2. Describe application protocols such as HTTP, SMTP, and DNS (1)
3. Write a client-server application (2, 6)
4. Understanding transport layer protocols TCP/UDP (1, 2)
5. Understand network layer routing protocols (2, 6)
6. Understand the link layer multiple access control protocols (1)

**Topics Covered:**

Ch 1 Computer Networks and Internet (1.1 to 1.5, 2 weeks)
Ch 2 Application Layer (2.1-2.5 and 2.7, 2 weeks)
Ch 3 Transport Layer (3.1 to 3.5, 2 weeks)
Ch 4 Network Layer: Data Plane (4.1 to 4.2.2 and 4.3, 3 weeks)
Ch 5 Network Layer: Control Plane (5.1 to 5.2, 3 weeks)
Ch 6 Link Layer and LANs (6.1 to 6.4.3 and 6.7, 3 weeks)

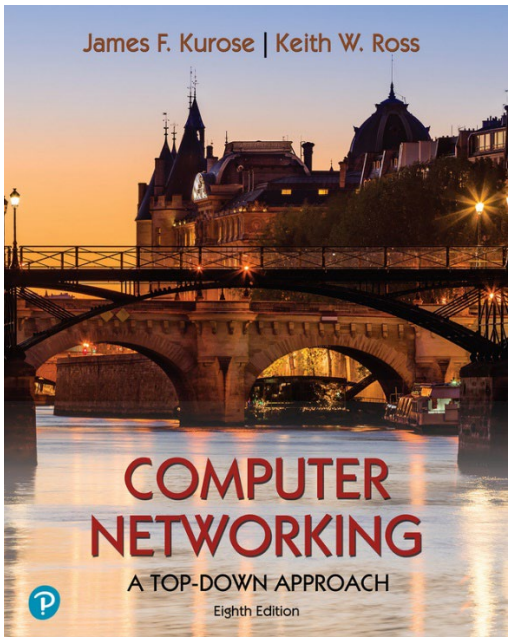
**Required Textbook:**

Computer Networking, 8th ed. Kurose and Ross, Pearson, ISBN: 978-0-13-668155-7 (hardcopy).

Please feel free to get any electronic versions.

Here is a direct link to the Kurose Computer Networking 8e

Pearson eText Kurose Computer Networking 8e-- Instant Access--Pearson+




**Self-Test:**

A self-text per chapter will be available on Brightspace. These tests will help prepare for exams even though they will not be counted towards final grade.

**Active Learning**

There will be a group learning activity using POGIL (pogil.org) for each unit.

**Grading/Evaluation:**

25 % Midterm, Ch 1 – 3, TBA.
25 % Final Exam, Ch 4 – 6, TBA
35 % Homework Assignments
10 % Programming Projects
5 % Attendance and Class Participation

In general: A: 90-100%, B: 80-89%, C: 70-79%, D: 60-69%, F: < 60%

Homework and projects are submitted through Brightspace by 11:59 pm on the announced due dates.

**Late submission that is accepted will be penalized as follows:**

| | |
|---|---|
| Within 24 hours | 10% deduction |
| After 24 hours | No accepted |

**Midterm and Final Exam Policy**

Only pens/pencils and scratch papers
No textbook, notes, any written materials allowed

**Tentative Schedule:**

| **Week Of** | **First Meeting** | **Second Meeting** | **Homework/ Project/ Exam** |
|---|---|---|---|
| week 1 | syllabus, Chapter 1 | | |
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**Other Policies:**

**Academic Honesty Policy:** All submitted work must be your own contribution and nobody else's! Discussions with others are allowed. However, copying solutions from others are prohibited. Please See ACM's Code of Ethics and Professional Conduct for standards of ethical conduct.

**Make-Ups**: Make-ups and incompletes will be given only in extreme circumstances. To schedule a make-up exam, you must contact either the instructor or Department office prior to the date and time of the exam. The instructor reserves the right to either allow a makeup with penalty, a makeup without penalty, or deny a makeup as it relates to the circumstances and the promptness of notice. Expect to provide documentation for the makeup.

**Attendance Policy:** Class attendance is a University requirement. I will expect you to attend every class. I will be taking attendance and your grade may be adversely affected by any absences. In the event you cannot attend class you are responsible for obtaining any course-related information or materials.

**Note to Students with Disabilities:** If you have a disability and need assistance, special arrangements can be made to accommodate most needs. Contact the Office for Services for Students with Disabilities (SSD) as soon as possible to work out the details. They are located in Walb Student Union, room 113, telephone number 481-6658. Once the Director has provided you with a letter attesting to your needs for modification, bring the letter to the instructor. For more information, please visit the web site for SSD at http://www.ipfw.edu/ssd/.

**Note to Mental Health**: Balancing life and school is not always easy. At Purdue University Fort Wayne every student matter. We are your Mastodon family and we CARE. If you are feeling sad or depressed, are having trouble sleeping, concentrating, finishing tasks, or feeling anxious or fearful, or have any concerns, academic or otherwise, it can be helpful to talk with someone. Asking for help can be hard but is an important first step.

There are a number of campus and community resources created to help you navigate a wide variety of challenges.

First is the CARE team. They help students create a plan to confront difficulties while providing support and the resources needed to keep you safe and successful. Any faculty or staff can help you get to the CARE Team. They can be found at https://www.pfw.edu/offices/dean-of-students/about/care-team or call the Dean of Students office at 260-481-6601 or dos@pfw.edu

The Student Assistance Program for counseling is staffed by The Bowen Center and is located on the second floor of Walb in the Health Center. The 24-hour Counseling Hotline is 800-342-5653. For more information go to https://pfw.edu/get-support

The PFW Police Department is trained to respond to mental health/psychological emergencies; the Fort Wayne Police Department also has crisis intervention officers available 24/7. In case of emergency, call 911 (from a campus phone 9-911).

For more information or other resources, contact Project COMPASS (COMmunity Partners Against Student Suicide) compass@pfw.edu

And for COVID-19 student-specific information:
https://www.pfw.edu/pfw-ready

**Other Learning Resources:**

1. Classmates and students who have taken a similar course before
2. Tutors from CASA (http://www.pfw.edu/casa) at KT G21
3. websites with relevant information on similar courses
4. General information for students from the Dean of Students (http://www.pfw.edu/doc)

**Course Evaluation Surveys**
(Student Evaluation of Instruction and Course Learning Outcomes Assessment surveys)

Course evaluation is an important component of the Computer Science Department's assessment plan. Data gathered from assessment surveys helps us to evaluate and improve course content and delivery. To ensure that these data reflect the experiences of all students, your participation is required in both the Student Evaluation of Instruction and the Course Learning Outcomes Assessment surveys. These surveys are distributed online via the Purdue Qualtrics system and each takes 2-5 minutes to complete. Approximately two weeks prior to the end of the semester you will receive a link to each survey via your IPFW email account. These surveys are anonymous and no results will be released to the instructor until after the end of the semester. The CS Department expects that you complete both surveys before the final exam date. If you have any difficulties accessing a survey, you should immediately notify the instructor or the CS Department Secretary (pitcherk@pfw.edu, 260-481-6803).

**ABET Program Learning Outcomes**

The following learning outcomes are defined by ABET, our accrediting agency, for computer science programs.

1. Analyze a complex computing program and to apply principles of computing and other relevant disciplines to identify solutions
2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline
3. Communicate effectively in a variety of professional contexts
4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles
5. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline
6. Apply computer science theory and software development fundamentals to produce computing-based solutions [CS]