

CS 381: Introduction to Computer Networks

Dr. Michael Galloway

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Class Website: <https://sites.google.com/view/cs381>

Class Room: Snell Hall B 103

Class Hours: 11:10am - 12:30pm Tues/Thurs

Office: COHH 2113

Office Hours: Tues/Thurs 9:30am-11am and 1pm-2pm

Course Description

An introduction to the design and analysis of computer networks and their applications, including the basics of data communication, network topologies, protocols, routing and switching, naming, and addressing.

Prerequisites

CS 290 with a grade of "C" or better

Learning Outcomes

By the end of the course, students have an understanding of:

1. Introduction: Internet overview, packet switching, layering structure
2. Application Layer: Principles, HTTP, FTP, Email, DNS
3. Transport Layer: Principles, UDP, TCP
4. Network Layer and Routing: IP, routers, routing protocols
5. Link Layer: Local networks, error detection and correction, MAC, ARP, Ethernet, 802.11
6. Socket Programming

Textbook

Computer Networking A Top-Down Approach, Eighth Edition. James Kurose, Keith Ross.
ISBN 13: 978-0135928738

Handouts and web documents will also serve as supplemental readings.

Grading Policy

The final grading policy for CS 381 is as follows:

90% and above: A

80% to 89.99999%: B

70% to 79.99999%: C

60% to 69.99999%: D

Below 60%: F

There is no rounding of scores. Thus, 89.999990% is a B. **If you have questions regarding the grading of your assignments/projects/exams, you must come see the instructor within one week after the date the assignment was returned.**

- 40% Content assessments
- 20% Assignments
- 20% Project
- 20% Final Exam
- 0.5% each Topic Summaries (bonus)

Content Assessments

Content Assessments will replace exams in CS 381. These assessments will consist of one question (possibly multiple subsections) related to material covered (lectures, assigned reading, homework assignments, and project related content) in the previous three classes. Content assessments will not be announced beforehand and will be given during the last 20 minutes of class. The lowest three content assessment grades will be dropped. Content assessments will be closed book/electronic devices.

Assignments

Each student should work on assignments independently. All submissions must be received prior to the stated deadline. **These assignments must be your own work. You may not take/give/submit a physical or electronic copy of any part of a solution to an assignment from anyone or any public resource.**

Project

Students are expected to complete a fully functional socket-based project for this course. **Note: The project is individual based and it is NOT a group project.** Each individual will give a presentation and demo on their final project. **The project must be your own work. You may not take/give/submit a physical or electronic copy of any part of a solution to your project from anyone or any public resource.**

Final Exam

CS 381 will have a comprehensive final exam covering content discussed in class and reading assignments for the semester.

Topic Summaries

Topic summaries (700 words single or double spaced) can be submitted for extra credit. These summaries can consist of overviews of class lectures, specific research/interest areas related to your project focus, or more in-depth articles on specific content mentioned in class. Each topic summary submitted will increase your course grade by 1/2 of a point (1 point overall grade increase for every 2 topic summaries).

Topic summaries must be typed and turned in during class (one summary per class, no exceptions). There are no limitations on how many topic summaries submitted over the course of the semester. Topic summaries may cite references, as long as the references are listed on the second page of the summary, and the references are not plagiarized. Summaries will be checked for plagiarism at the end of the semester. If any of your topic summaries have been found guilty of plagiarism, you will lose all topic summary bonus points for the semester.

Each topic summary must include: Your Name, Date, Topic Summary Title, and References.

Course Policies

Attendance is mandatory and will be taken during every lecture. It is your responsibility to make sure you sign the course roll during each class. **You are allowed up to four absences and/or lateness to class, excused or unexcused. After the fourth absence and/or lateness, your final grade will be reduced by one letter grade for each subsequent absence/lateness.**

Makeup Policy

In order to make up in-class work, you will need a written, university authorized excuse. No late turn-in of assignments/projects will be accepted for credit.

Academic Dishonesty Policy

All assignments are to be completed individually. You may discuss problems in any assignment/project with your colleagues, but copying solutions is forbidden. For the project, it is expected that you have written every line of code that you submit (with the exception of code given in class).

The minimum punishment requested for plagiarism, or any other academic misconduct, is dismissal from the class with a failing grade. You are required to protect your work from plagiarism. If your work is plagiarized, it will be assumed that you were a willing participant in the plagiarism and you will receive the same punishment as the plagiarist, absent evidence to the contrary.

Accommodations for Disabilities

In compliance with University policy, students with disabilities who require academic and/or auxiliary accommodations for this course must contact the Student Accessibility Resource Center located in Downing Student Union, 1074. SARC can be reached by phone number at 270-745-5004 [270-745-3030 TTY] or via email at sarc.connect@wku.edu. Please do not request accommodations directly from the professor or instructor without a faculty notification letter (FNL) from The Student Accessibility Resource Center.

Title IX Misconduct/Assault Statement

Western Kentucky University (WKU) is committed to supporting faculty, staff and students by upholding WKU's Title IX Sexual Misconduct/Assault Policy (#0.2070) at [wku title ix policy and grievance procedure.pdf](#) and

Discrimination and Harassment Policy (#0.2040) at [discrimination.pdf](#)

Under these policies, discrimination, harassment and/or sexual misconduct based on sex/gender are prohibited. If you experience an incident of sex/gender-based discrimination, harassment and/or sexual misconduct, you are encouraged to report it to the Title IX Coordinator, Andrea Anderson, 270-745-5398 or Title IX Investigators, Michael Crowe, 270-745-5429 or Joshua Hayes, 270-745-5121. Please note that while you may report an incident of sex/gender based discrimination, harassment and/or sexual misconduct to a faculty member, WKU faculty are "Responsible Employees" of the University and MUST report what you share to WKU's Title IX Coordinator or Title IX Investigator. If you would like to speak with someone who may be able to afford you confidentiality, you may contact WKU's Counseling and Testing Center at 270-745-3159.