

Course Syllabus

Course Information

Course Number/Section	CS 5348
Course Title	Operating Systems

Contact Information

Professor	I-Ling Yen
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Office Location	ECSS 4.402
Office Hours	Tuesday 2:30pm-4:30pm (via Teams)

TA	DongYu Mao
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TA Office Hours	Wednesday 9:00am-11:00am

Course Description

This course is designed to train students in both theory and practice in the operating systems area. Lectures will introduce the important issues and techniques in operating systems design. Projects are designed to enhance students' ability in better understanding operating systems and being proficient in concurrent programming.

The major topics covered in this course include:

- Introduction to Operating Systems
- Processes, Threads, and Processor Scheduling
- Concurrency Control, Synchronization, and Deadlocks
- Memory Management and Virtual Memory Concept
- Disk Device/Storage Management and File Systems
- Preliminaries to Distributed Systems

Readings

- Operating Systems by William Stallings, 9th Edition, Prentice Hall
- Class notes
- Recommended books for projects
 - The C Programming Language by Brian W. Kernighan and Dennis M. Ritchie
 - Advanced Programming in the UNIX Environment by W. Richard Stevens R. Richard Stevens, Addison Wesley
 - Multithreaded Programming with Pthreads, by Bil Lewis and Daniel J. Berg, Prentice Hall
 - Unix Network programming: Networking APIs: Sockets and XTI by W. Richard Stevens, Prentice Hall

Grading

- Projects 48%
- Homework assignments 4%
- Exams 48%

Exam dates:

- Exam 1 2/19
- Exam 2 4/2
- Exam 3 5/7

Homework: Each homework is due on Monday of the corresponding exam week. The materials covered the week before the exam week will be in the exam and, hence, in the homework assignment. You need to try to work on the homework questions right after a question is covered; otherwise, it will be difficult to complete all the questions in the last minute. Answers will be posted on Tuesday.

Grading Policy

The grade will be determined based on the exams, and the projects. Unless initiated by the instructor, no make-up work, dropped scores, or other means of raising your grade should be expected. At the end of the semester, it is possible that grades may be curved, but a curve should not be expected.

Exams must be taken at the designated time. Exceptions require advance approval by the instructor. It is up to the instructor to determine whether an exception will be made, and will depend largely on proof of extraordinary circumstances. Otherwise, missed exams will be recorded as a zero.

Students are expected to attend all class lectures. If absent, the student is responsible for any material covered or anything announced during the missed class period. The instructor will not repeat the covered material of the classes for the students who miss those classes.

Academic Integrity

The faculty expects from its students a high level of responsibility and academic honesty. Plagiarism will result in an F grade for the course.