

CSMC 412

Operating Systems

Prof. Ashok K Agrawala

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Set 1

Course Overview

Today

- Introduction to the class
- Review Syllabus
 - read the warning about the size of the project
- Class Grades Server
 - Grades.cs.umd.edu
- Web Page
 - <http://www.cs.umd.edu/class/fall2022/cm412/>
- Piazza
 - <https://piazza.com/class/l6uzby6erju22i>

Catalog Description

- A hands-on introduction to operating systems, including topics in –
 - multiprogramming,
 - communication and synchronization,
 - memory management,
 - IO subsystems, and
 - resource scheduling policies.
- The laboratory component consists of constructing a small kernel, including functions for device IO, multi-tasking, and memory management.

Prerequisites

- Minimum grade of C or better - in
 - CMSC330, and
 - CMSC351
- 1 course with a minimum grade of C- from
 - CMSC414,
 - CMSC417,
 - CMSC420,
 - CMSC430,
 - CMSC433,
 - CMSC435,
 - ENEE440,
 - ENEE457

Teaching Assistants

Liu	Geng
Singh	Steicy
Busha	Anurag

Text

- Required
 - CMSC412:Operating Systems Fall 2022
 - ZYBooks
 - Sign in or create an account at learn.zybooks.com
 - Enter zyBook code: UMDcmssc412AgrawalaFall2022
 - Subscribe
- URL
 - <https://learn.zybooks.com/zybook/UMDcmssc412AgrawalaFall2022>

Grades Server And Piazza

- Server -
 - <http://grades.cs.umd.edu>
- Complete grade information
- Interface for requesting regrades on exams and projects

- Piazza
 - <https://piazza.com/class/l6uzby6erju22i>

Programming Projects:

- Understanding operating system concepts is a hands-on activity. This class will include several **substantial** programming projects that will require students to read and understand provided code, write new modules, and debug the resulting system. *The programming assignments will be time consuming and students taking this class should plan their class schedules accordingly.*
- The instructor reserves the right to fail, regardless of overall numeric score, students who do not submit a *good faith attempt* to complete all programming assignments.

Class Scheduled Times

- Lecture
 - Tu Th 11:00 AM to 12:15 PM – IRB 1116
- Recitation
 - Section 0101
 - MW 12:00 PM to 12:50 PM – CSIC 1121
 - Section 0102
 - MW 1:00 PM to 1:50 PM – CSIC 1121

Class Schedule

Grading

- Dates for exams will be announced
- Programming Assignments
- Class Participation
 - Reading the assigned readings
 - Doing the exercises from the book
 - Interacting in the class
 - ...

Some Useful Videos

By Dr. Neil Spring

- Review of 216
 - [Sizes](#) - Necessary distinction between sizeof and strlen.
 - [Malloc](#) - Model for how malloc tracks memory, how to interpret memory errors.
 - [Timing](#) - Reminder of user / kernel separation.
- Synchronization Topics
 - [Synchronization Overview](#) - The basics
 - [Semaphore Interface](#) - How Semaphores can be used.
 - [Semaphore Implementation](#) - How Semaphores are built (so you know what they are and don't reinvent them).