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 projects

• Class Grades Server
  – Grades.cs.umd.edu

• Web Page
  – https://www.cs.umd.edu/class/fall2023/cmsc412/

• Piazza
  – https://piazza.com/configure-classes/llqtjftalxb2iq
Catalog Description

• A hands-on introduction to operating systems, including topics in –
  – multiprogramming,
  – communication and synchronization,
  – memory management,
  – IO subsystems, and
  – resource scheduling polices.

• 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

<table>
<thead>
<tr>
<th>Liu</th>
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<td>Kabir</td>
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• Required
  – CMSC412: Operating Systems Spring 2023
    • ZYBooks
      – 1. Sign in or create an account at learn.zybooks.com
      – 2. Enter zyBook code: UMDCMSC412AgrawalaFall2023
      – 3. Subscribe

• URL
  – https://learn.zybooks.com/zybook/UMDCMSC412AgrawalaFall2023
Grades Server And Piazza

- **Server**
  - [http://grades.cs.umd.edu](http://grades.cs.umd.edu)
- **Complete grade information**
- **Interface for requesting regrades on exams and projects**

- **Piazza**
  - [https://piazza.com/configure-classes/llqtjftalx2iq](https://piazza.com/configure-classes/llqtjftalx2iq)
• 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 0318

• Recitation
  – Section 0101
    • MW 10:00 PM to 10:50 PM – CSIC 2117
  – Section 0102
    • MW 11:00 AM to 11:50 AM – CSIC 2117
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).