Operating Systems
Prof. Ashok K Agrawala

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Set 1
Course Overview
Today

• 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/fall2021/cmsc412/
• Piazza
  – https://piazza.com/class/kst1hepapn3sk
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>Name</th>
<th>First Name</th>
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<tbody>
<tr>
<td>Kittleson</td>
<td>Rhys</td>
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<tr>
<td>Hailu</td>
<td>Hana</td>
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<td>Lin</td>
<td>Xiaozhen</td>
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<td>Kabir</td>
<td>Tasnim</td>
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<td>Liu</td>
<td>Geng</td>
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<td>Ghiasi</td>
<td>Mohammad Amin</td>
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Class Overview

• Class Web Page

• Piazza
  – https://piazza.com/class/k5ihb0ezfcw227
Text

• Required
    Siberschatz, Galvin and Gagne,
    – John Wiley 2018

• Available
  – [https://www.wiley.com](https://www.wiley.com) – E-Book $ 76.00
    • May rent at lower price
  – [https://hubetext.com/shop](https://hubetext.com/shop) - PDF $8.00
Class Grades Server

http://grades.cs.umd.edu

- Complete grade information
- Interface for requesting regrades on exams and 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 - CSIC 2117

• 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

• Regular Quizzes and short exams
• Dates for exams will be announced
• Programming Assignments
• Class Participation
  – Watching Videos
  – Attending Class Zoom Sessions
  – Attending Recitation Zoom Sessions
  – …
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).

• Would require UMD CAS for Box Access