Operating Systems
CSE 410
Summer 2016

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About This Course

6 weeks * 3 lectures + 1 Week * 2 lectures
-(1 holiday + 2 exam days)
= 17 lectures

We need to cover >= 12 chapters [tentative]
and...
6 Homeworks + 5 Exercises + …
About This Course

Yes... Lots of work...

What's even worse:

10:20 – 12:10 = 1h 50min lecture
About This Course

A lot of work **BUT**

- We will learn important and interesting concepts related to operating systems
- **Processes** (how to write a **shell** or terminal program in Linux?)
- **Threads**: How to implement **Multithread** programs and parallel algorithms?
- **Synchronization**: How to share resources between multiple process?
- How to do **Memory** management?
Format of the Lecture

Monday+Wednesday+Friday

10:20 – 11:10

+ 10 min break

+ 11:20 – 12:10

Course Website:

http://www.cse.msu.edu/~cse410
Links

Course’s web site:

http://www.cse.msu.edu/~cse410

Piazza:

http://piazza.com/msu/summer2016/cse410/home
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<td>Overview and Exam Practice</td>
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Material (1)

☐ Week 1
Computer System Overview + Operating System Overview + Processes

☐ Week 2
Processes + Threads

☐ Week 3
Threads + Processor Scheduling algorithms
Material (2)

Week 4

**Midterm** + Memory Management + Virtual Memory

Week 5

Concurrency control + Synchronization + Deadlock

Week 6

I/O Management + File Management

Week 7

Wrap up + Exam Practice + **Final**
Grading Policy

- Exams 50%
  - Midterm Exam 25%
  - Final Exam 25%
- Homework/Projects 40%
- Exercises/Quizzes 10%
- Presentation (optional) + up to 10%
Homeworks

- There will be 6 HWs (one per week)
- Will be posted on Wednesday
- **Deadline**: 1 week from posting the homework
- 2 conceptual/problem solving questions
- 4 HWs are implementation projects:
  - C/C++ programming
  - Kernel programming
  - Linux environment
Rules about Assignments of Homework

- Individual assignments
- Collaborative solutions are not permitted

Project Late Points Policy:
- Late assignment points will be reduced by 20% per day.
- Maximum delay of 2 days permitted
- For some projects, late submission will not be accepted
  - Such exception will be mentioned in class
  - Typically for cases where solution needs to be discussed immediately after deadline
Rules about Assignments of Homework

• TA and I will be available to help you with linux programming

• For questions: attend TA or my office hours or Piazza

• You may not of course obtain any materials from previous students, web, etc. [do it by yourself!]
Exercises

- There will be 5 exercises

- I will be posting exercises roughly once a week on Piazza every Monday
- **Deadline**: 1 week from posting the exercise

- The goal of exercise is to enable you to collaborate with each other (and me and TA) to learn the required background/basics (e.g., shell programming, Linux environment) and dig into the concepts in the course that are necessary to do the assignments or do well in exams and quizzes.

- Quizzes are based on exercises!
Rules about Assignments of Exercises

• Exercises are different than everything else in that collaboration is permitted and in fact encouraged.

• Piazza will be used to collaborate on exercises.
• You can submit your answers and/or comment on someone else’s answer in Piazza.
Rules about Assignments of Exercises

• Exercises will not be graded.

• You will receive credit for an exercise only if
  – You should submit your solution
  – The grading of exercises is binary (either submitted or not)
Rules about Assignments of Exercises

• Unless posted by me or TA, treat material on piazza as how you treat the material on Internet
  – It might be correct but is not guaranteed to be 😞
  – These are answers posted by some students in the class.
Exams

• Two Exams
• **Midterm:**
  • Date: Monday, Week 4
  • Covers Chapters 1, 2, 3, 4, and 9

• **Final:**
  • Date: Wednesday, Week 7
  • Covers 7, 8, 5, 6, 11, and 12
Quiizzes

• Several short quizzes based on the Exercises!

• Two lowest quiz scores will be dropped and not be included in grade calculation.

• Might be announced in advance, most will not
Presentation

• **Optional!**
  
• To help students to boost their grade

• Most likely in last few lectures

• Topics from Chapter 11 and Chapter 12

• Or other interesting topics: Android operating systems!
Guaranteed Grade Scale

- 4.0 ≥ 90% of points available
- 3.5 ≥ 85% of points available
- 3.0 ≥ 80% of points available
- 2.5 ≥ 75% of points available
- 2.0 ≥ 70% of points available
- 1.5 ≥ 65% of points available
- 1.0 ≥ 60% of points available
Curve

• If your score exceeds the respective value from the scale, that grade is guaranteed.
  – For example, if your total score is 83, your final grade cannot be lower than 3.0

• If two students’ score is very close, I assign them identical grade (subject to above rule).
  – For example, if there are two students with overall score of 89.99 and 90.01 then they will receive the same grade of 4.0
Announcements for Class

- Most announcements will be made on Piazza or course webpage.

- I will be assuming that you are aware of all announcements made in class.
Excuses for …

• Make-ups for exams and Extend assignments’ due date
  – documented illness
  – personal emergency
  – Job interview (only applicable for this class)
    • Must notify before the fact and provide appropriate documentation
    • Same would apply if you are attending a conference based on recommendation from a professor in our department.

MSU’s policy on Integrity of Scholarship and Grades