

# Operating Systems (CS 3430/CS 5430), Spring 2012

**Time and Place:** 11:00 AM - 12:15 PM Tuesday and Thursday in ITTC 328

**Web-site:** <http://www.cs.uni.edu/~fienup/cs3430s12/>

**Class Email List:** Send messages to CS-3430-01-spring@uni.edu from your UNI account

**Instructor:** Mark Fienup (fienup@cs.uni.edu)

Office: ITTC 313

Phone: 273-5918 (Home 266-5379)

Office Hours: M 9-11:45, 1:10-2; T 1:10-2; W 10-11:45 (← in 339 Wright Hall lab); 1:10-3 (← in ITT 313);  
Th 1:10-2; F 9-11:45

**Prerequisite:** Computer Organization (CS 1410/810:041), Data Structures (CS 1520/810:052), and Discrete Structures (CS 1800/810:080).

**Texts:** Free online textbook can be downloaded from: <https://gustavus.edu/+max/os-book/>

**Course Goals:** After this course, you should understand the theoretical underpinnings of the design of modern operating systems. This includes the topics of processes, interprocess communication and synchronization, memory allocation, segmentation, paging, loading and linking, resource allocation, scheduling, performance evaluation, file systems, storage devices, I/O systems, security, protection, and distributed systems.

**Course Description:** History and evolution of operating systems; process and processor management; primary and auxiliary storage management; performance evaluation, security, and distributed systems issues; and case studies of modern operating systems.

**Assignments:** The assignments will be a combination of "pencil-and-paper" exercises and programming assignments related to operating systems.

**Pedagogic Approach:** In class, I'll tend to break up the lecture with active (and group) learning exercises to aid learning. While this is not formally graded, part (5%) of your grade will be based on your participation in (and attendance for) these in-class activities. Students benefit by (1) increased depth of understanding, (2) increased comfort and confidence, (3) increased motivation, and (4) being better prepared to work in groups on the job. This might sound great, but it will require you (and me) to work differently to prepare for class. Before the class, you must read the assigned reading, thought about what I asked you to think about, etc.; otherwise you won't be able to effectively participate during class.

**Grading policy:** There will be three tests (including the final). I'll announce tests at least one week in advance to allow you time to prepare. Tentative weighting of course components is:

In-class Work:	5 %
Assignments:	29 %
In-class Test 1:	22 % (about Feb. 16)
In-class Test 2:	22 % (about March 29)
Final:	22 % (Thursday, May 3 from 10-11:50 AM in ITT 328)

Grades will be assigned based on straight percentages off the top student score. If the top student's score is 92%, then the grading scale will be, i.e., 100-82 A, 81.9-72 B, 71.9-62 C, 61.9-52 D, and below 52 F. Plus and minus grades will be assigned for students near cutoff points.

**Scholastic Conduct:** You are responsible for being familiar with the University' Academic Ethics Policies (<http://www.uni.edu/pres/policies/301.shtml>). Copying from other students is expressly forbidden. Doing so on exams or assignments will be penalized every time it is discovered. The penalty can vary from zero credit for the copied items (first offense) up to a failing grade for the course. If an assignment makes you realize you don't understand the material, ask questions designed to improve your understanding, *not* ones designed to discover how another student solved the assignment. The solutions to assignments should be **individual, original** work unless otherwise specified. Remember: discussing assignments is good. Copying code or test-question answers is cheating.

Any substantive contribution to your assignment solution by another person or taken from a publication (**or the web**) should be properly acknowledged in writing. Failure to do so is plagiarism and will necessitate disciplinary action. In addition to the activities we can all agree are cheating (plagiarism, bringing notes to a closed book exam, etc), assisting or collaborating on cheating is cheating. Cheating can result in failing the course and/or more severe disciplinary actions.

**Special Notices:**

- In compliance with the University of Northern Iowa policy and equal access laws, I am available to discuss appropriate academic accommodations that may be required for students with disabilities. Requests for academic accommodations are to be made during the first three weeks of the semester, except for unusual circumstances, so arrangements can be made. Students are encouraged to register with Student Disability Services, 103 Student Health Center, to verify their eligibility for appropriate accommodations.
- I encourage you to utilize the Academic Learning Center's free assistance with writing, math, science, reading, and learning strategies. UNI's Academic Learning Center is located in 008 ITTC. Visit the website at <http://www.uni.edu/unialc/> or phone 319-273-2361 for more information.