

Slide 1

Administrivia

- (Why are we in this room? I don't know! I thought we were going to be in CSI 388! but TigerPAWS thinks otherwise.)
- One purpose of the syllabus is to spell out policies (next slides).
- Most other information will be on the Web, either on my home page ([here](#), office hours) or the course Web page (next slide).

A request: If you spot something wrong with course material on the Web, please let me know!

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Course Web Page

- "Course Web page" (site?) is meant to point you to pretty much all information for the course — readings, assignments, etc.
- You can find it via TLearn, or via the link from my home page (findable from the department's Web site, <http://www.cs.trinity.edu> or — probably? — by doing a Web search on my name).

Course FAQ

- “What will my grade be based on?” (See syllabus.)
- “What happens if I can’t turn in work on time, or I miss a class?” (See syllabus.)
- “What’s your policy on collaboration?” (See syllabus.)

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Course FAQ, Continued

- “When is the next homework due?” (See “Lecture topics and assignments” page.)
- “Do I have to use the lab computers for programming assignments?” (No, but that may be the easiest way to make sure they meet my criteria for full credit — I will test on one of these machines.)
- “When are your office hours?” (See my home page.)

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Note that part of my job is to answer your questions outside class, so if you need help, please ask! in person or by e-mail or phone.

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A Little About Me

- Up until last spring I hadn't thought about telling students a little about myself on the first day. A colleague mentioned that she does, so — okay!
- Short version of biography: Undergrad degrees from UT Austin, math and Plan II. More than ten years in what we now call IT (about half doing operating-system-related work on IBM mainframes). Back to school for master's and PhD in computer science. Two years as a postdoc, then at Trinity since Fall 1999.
- I teach a variety of courses, but currently focusing more on courses "close to the machine". My research area (sadly neglected for some years) is parallel computing.
- (What do I do for fun? well . . .)

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Why Take This Course?

- (It was required in a previous departmental curriculum. Now it's not, but maybe it should be?)
- "ACM says so" (i.e., curriculum recommendations include course on operating systems). Why? Well . . .
- To be a "computer scientist", need to have a broad understanding of computer systems — and operating system is a key part of a computer system.
- Knowing something about how operating systems work helps you write efficient code.
- Many of our courses "demystify" parts of computer systems (e.g., CS1/CS2 and Computer Design); so does this course.
- It might even be interesting . . . (I hope so!)

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What Is An Operating System?

- Definition by example?
- Definition(s) from operating systems textbooks?

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What Is An Operating System? Continued

- Definition by example:
 - Recent: Windows, Linux, UNIX, OS X (Mac), iOS, ChromeOS, Android ...
 - Older: BeOs, MULTICS, VMS, MVS, VM/370, ...
 - (Also special-purpose O/S's for special-purpose hardware — e.g., video-conferencing system.)
- Definition(s) from operating systems textbooks:
 - Something that provides “virtual machine” for application programs and users (“top down”).
 - Something that manages computer’s resources (“bottom up”).
- Another view — key part of bridging gap between what hardware can do (not much, but very fast) and what users want.

Course Overview

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- Brief history of operating systems.
- Review of what hardware can do, what operating system must/should do.
- Discussion of major functions of operating system — problem(s) to be solved, solutions:
 - Process management.
 - Memory management.
 - I/O management.
 - Filesystem management.

Focus on principles rather than details.

Minute Essay

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- (Most lectures will end with a “minute essay” — as a quick check on your understanding, a way for me to get some information, etc., and also to track attendance. Just put your answer in the body of the message; no Word documents please, and put “minute essay” and the course in the Subject line.)
- Would you rather have class here or in CSI 388 (too small).
- What are your goals for this course?
- What operating systems have you used/installed/experienced?
- What assembly languages do you know well enough to read, and to write a little?
- Anything else you want to tell me? about the course, what you did this summer, ... ?