Administrivia

- One purpose of the syllabus is to spell out policies (review today).

- Most information will be on the Web, on either my home page (office hours) or the course Web site.

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

A Few Words About Teaching and Learning This Semester

- The good news: We're back in the classroom! (We can see at least part of each others' faces.)

- The bad news: We're back in the classroom! (News about the pandemic is getting scary again.)

- I feel more at risk than the average person, but Trinity really wants in-person teaching. So: Classes in person, virtual office hours.

Course Web Site

- "Course Web 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 (should be findable from the page about me in TU's Web site, or by doing a Web search on my name).

Slide 3

Syllabus

- (Review syllabus.)

Slide 4

Why Take This Course?

- (It was required in a previous departmental curriculum. Now it's not, though in a perfect world maybe it would be. Then again, we'd also require a course in compilers, and one in networks, and . . .)

- "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!)

What Is An Operating System?

- Definition by example?

- Definition from operating systems textbook?

What Is An Operating System? Continued

- Definition by example:
    - **–** Recent: Windows, Linux, UNIX, OS X (Mac), iOS, ChromeOS, Android . . .
    - **–** Older: MULTICS, VMS, MVS, VM/370, . . . (In the mainframe days, typically each hardware company had its own operating system(s).)
    - **–** Special-purpose O/S's for special-purpose hardware.
- Definition from previous textbook:
    - **–** 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.

A Little About Me

- 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 . . .)
- (This summer I finally learned something about x86 assembly language. It was a fun summer project, but oh my, ugly language!)

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About Minute Essays

- 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.

- Send me your answer by e-mail (no word-processor attachments please). And *please* put "minute essay" and the course in the Subject line. This makes it much easier for me to pick them out of my inbox and save them for my attendance-tracking scripts.

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Minute Essay

- What are your goals for this course? (It's okay to just say that you need a course for the Systems requirement for the major!)

- Anything else you want to tell me? about the course, what you did this summer, . . . ?

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