Introduction and Overview
Spring 2018

Digital Systems are Comprised of Seven Layers

The colors indicate the typical basis for each layer:
- **human language / theory**
- **software**
- **digital hardware**

(figure based on Patt & Patel Ch. 1)

Our Class Builds Upwards from ECE120

Your future work!
Future classes (CS374)
ECE220 is here!

In ECE120, you learned to build a computer from bits and gates.

What is ECE220?
- Teach a systems perspective that includes both hardware and software (and math!)
- ECE culture and goals
- Expectations of engineers
- Lifelong learning necessary
- Understand and identify tradeoffs
- International group—leverage it!
- Academic reality and grade philosophy
Opportunities for International Connections

- Monthly meet and greet gatherings (free food!)
  - Tuesdays 12:30 – 1:30 in 212 Engineering Hall
  - 30 January, 20 February, 3 April
- URLs
  - Engineering International Student Programs
    http://publish.illinois.edu/internationalstudentprogram/
  - Calendar of Upcoming Events
    http://go.engineering.illinois.edu/InternationalStudentPrograms

  main contact: Lori West,
  206 Engineering Hall, loriwest@illinois.edu

ECE220 Honors Section (this lecture)

This section is an Honors Section!
- more challenging than regular sections
- same topics
- faster pace, somewhat deeper coverage
- harder MPs and exams
- earn A or B (any type), get “H” credit

  All individual work.
  (No partners for MPs.)

Our Staff

- Prof. Steve Lumetta (lumetta)
  Office Hours: Tues 3:30 – 5:30 p.m.
  in Daily Byte
- Jianxiong Gao (gao2)
- Charles Zega (zega2)

Where to Find Information

Start with the web page!

One way: remember this link
http://lumetta.web.engr.illinois.edu/220-S18/

Another way:
- type “Steve Lumetta” into Google
- Follow link to 220 S18 page under “Classes”
Read Web Page and Piazza Every Day

On the web page:
- announcements from course staff
- course information and timing
- assignments, exams, and due dates
- reference materials

On Piazza:
- ask any non-personal questions here
- do not post answers

Workload Includes Machine Problems

Machine Problems (MPs) every week
- programming assignments
- usually due **Thursdays at 11:59:59 p.m.**
- submit on EWS Linux machines via SVN (Subversion)
- feedback tool will try to help you, but you are responsible for testing!

**FIRST MP: THURSDAY 25 JANUARY**

Workload Also Includes Exams

Two midterms
- each **designed to take 1.5 hours**
  for an average student
- Thursday 15 February, 7:00-10:00 p.m.
- Thursday 5 April, 7:00-10:00 p.m.

Final exam: **Friday 4 May, 8:00-11:00 a.m.**

Locations: TBD

Let Us Know About Conflicts Early

University has clear rules for conflicts (online)
- Midterms: **Section 3-202 of Student Code**
- Finals: **Section 3-201 of Student Code**

Finals rules
- depend on class sizes;
- if you can’t tell, ask Jamie Smith in advising.

If you have a conflict, **let us know early!**
(at least one week before the exam)
And Workload Includes Labs

In discussion section every Friday, you will...

- solve programming problems
- related to concepts from lecture
- and somewhat relevant to your MPs.

How Will We Grade?

MPs 30%
Midterm #1 20%
Midterm #2 20%
Final 30%
Labs 0% (skip at your own peril)

Late Policy for MPs: -2 pts per hour or fraction thereof. We will grade ONLY your last submission.

Get to Know Your Fellow Students

Say “hi” to the person next to you in lecture, discussion, Krannert, the movie theater. Go ahead, try it now. Really!
Use the “red book” in Terry Peterson’s office (in ECE advising) to find others in the class.

Don’t Cheat!

See Section 1-402 of the Academic code.

In all assignments and exams in our class, work must be your own.

It’s ok to talk and help each other understand, but it’s not ok to give/share/lend/copy/allow someone to copy code/answers.
Your Guide to the Slides

The title gives the main point.

**Definitions** and **key messages** in bold blue.

**Parameters** and **variables** in bold green.

Other colors used on a per-slide basis.