University of Illinois at Urbana-Champaign
Dept. of Electrical and Computer Engineering

ECE 220: Computer Systems & Programming

Introduction and Overview

Spring 2018

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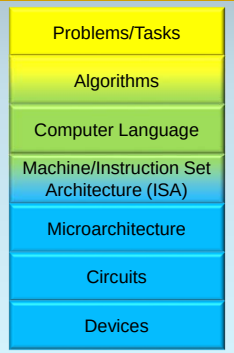
Digital Systems are Comprised of Seven Layers

The colors indicate the typical basis for each layer

- **human language / theory**
- **software**
- **digital hardware**

(figure based on Patt & Patel Ch. 1)



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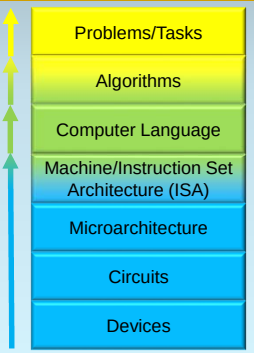
Our Class Builds Upwards from ECE120

Your future work!

Future classes (CS374)

ECE220 is here!

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



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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

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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

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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.)

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Our Staff

Prof. Steve Lumetta (lumetta)
Office Hours: Tues 3:30 – 5:30 p.m.
in Daily Byte

Jianxiong Gao (gao2)

Charles Zega (zega2)

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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"

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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

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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

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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

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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)

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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.

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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.

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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.

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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.

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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.

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