

Beyond CS240





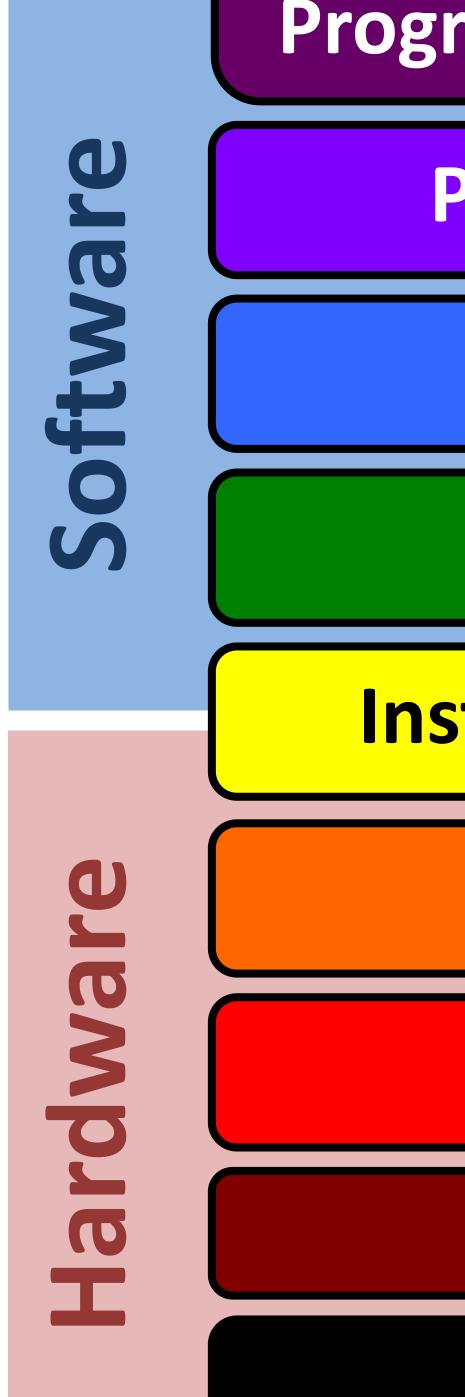
https://cs.wellesley.edu/~cs240/

CS 240 in Context

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Think about how much more you know about *how computer work*

compared to the start of the semester!



Program, Application, Algorithm

Programming Language

Compiler/Interpreter

Operating System

Instruction Set Architecture

Microarchitecture

Digital Logic

Devices (transistors, etc.)

Solid-State Physics



Foundations



Research

CS 301: Compilers and Runtime Systems (MIT 6.1100: Computer Language Engineering)

CS 342: Computer Security (MIT 6.1600 Foundations of **Computer Security)**

CS 242: Computer Networks

CS 251: Programming

Languages

CS 240: Computer Systems/Organization

Everything!

CS 340: Modeling for Computer Systems

CS 343: Distributed Computing

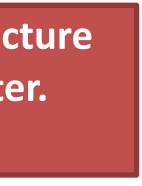
CS 310?: Cryptography (MIT. 6.5610 Applied Cryptography and Security; 6.5620 Cryptography and **Cryptanalysis**)

> **CS 34X?: Computer Architecture** (Olin ENGR3410 Computer. Architecture)

> > **CS 304: Databases** with Web Interfaces











Big Ideas in CS, Systems, and beyond

Abstraction

Abstraction is beautiful and empowering, but real abstractions have leaks and wrinkles.

Representation

Representations have costs but allow us to build useful things. Between layers of abstraction. Structured computation.

Performance

Memory: clever, imperfect abstraction. Tiny code changes, huge impact.

Trickiest exploits & errors involve multiple layers, even hardware! Thank you for thinking

These things matter more every day.

Translation

Security + Reliability

and learning with me this semester!

