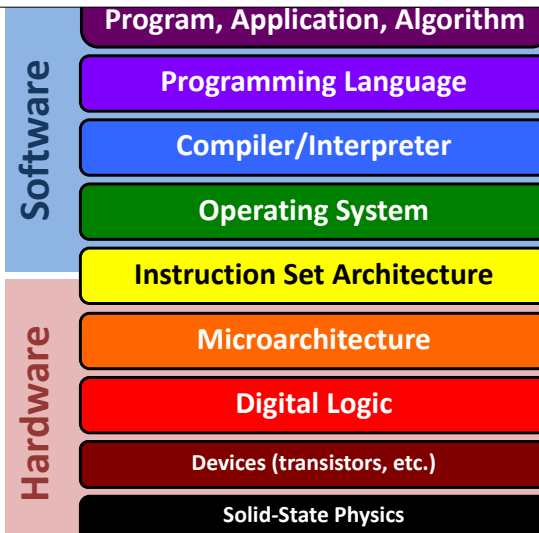


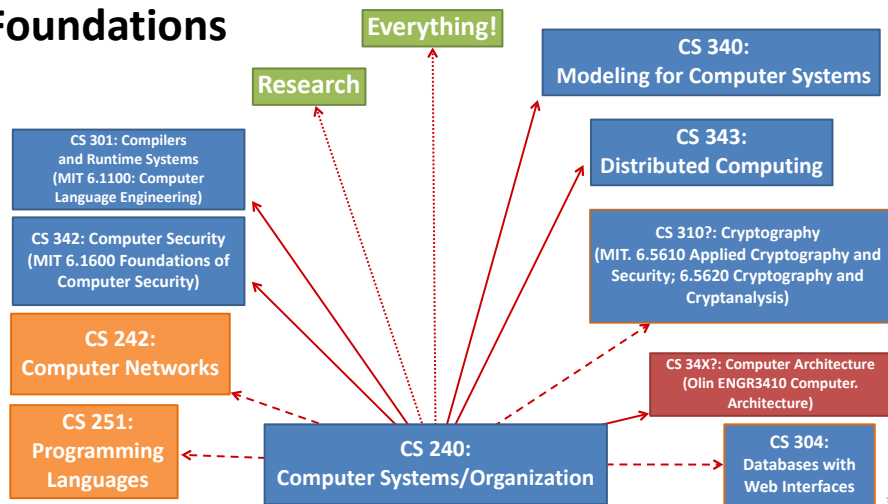


# Beyond CS240

Think about how much more you know about *how computer work* compared to the start of the semester!



## Foundations



## 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.

#### Translation

Between layers of abstraction. Structured computation.

#### Performance

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

#### Security + Reliability

Trickiest exploits & errors involve multiple layers, even hardware!

These things matter more every day.

Thank you for thinking and learning with me this semester!