

System Design with Microcontrollers

- ▶ This is a design course. You will need to:
 - ▶ Use creativity, resourcefulness and persistence
 - ▶ Read long and often confusing datasheets
 - ▶ Apply material from previous courses
 - ▶ Find solutions from incomplete specifications
- ▶ I will treat you like *real* engineers. I expect you to perform like *real* engineers.

System Design with Microcontrollers

- ▶ This class is really about *Embedded Design*
- ▶ Embedded design covers toothbrushes to entertainment systems
- ▶ Our focus will be small *bare-metal* systems
- ▶ Our code dances gently upon the silicon.
- ▶ SW controls HW, HW controls SW, asynchronously

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- ▶ Labs won't have step-by-step instructions
- ▶ Labs vary in difficulty and are weighted accordingly. Expect from 3 hours on lab 1 to 30+ hours on the final lab
- ▶ Lab is the place where we gather as smaller groups and get things working. Ideally, you come to lab with half your work already done
- ▶ Share design approaches, philosophy, coding ideas; but don't copy code
- ▶ Commit to using a programming editor: *vim* or *emacs*
- ▶ *NO! Try not! Do or do not. There is no try. -Yoda*