What is ECE120?

◦ 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

ECE Culture and Goals

◦ We want to enable our students to change the world.
◦ There are plenty of smart people.
◦ Being smart is not enough.
◦ If you want to have an impact, you also need hard work. 1% inspiration and 99% perspiration.
◦ ECE's target: 3.5 hours per week per credit hour
◦ That means 3x lectures, discussion, and 10 hours per week of ECE120
◦ Not 10 hours every week, but 10 on average for an average student.
◦ You may need less time.
◦ Or you may need more time.
◦ If you need help with study habits, the college has classes.

Lifelong Learning Necessary

◦ Most of the systems and interfaces
　◦ that you will use in 5-10 years
　◦ Do not exist today
◦ Our job is to help you learn how to learn
　◦ How systems are designed
　◦ The reasons for the design (including the mathematical basis)
　◦ And to learn about new systems
◦ Actually, we want you to be the ones that define the future systems.

Understand and Identify Tradeoffs

◦ As an engineer, you will rarely have the luxury of "optimal" designs.
◦ Rather, you will have to deal with many different ways of evaluating goodness, sometimes including metrics that have neither a quantitative nor a rational basis.
◦ You'll learn a lot about tradeoffs in four years, but we want you to start thinking about them in our class.

International Group—Leverage It!

◦ How many of you grew up outside the US? [ask]
◦ Look around the room.
◦ Most companies are global. Your team will be spread around the world, and people will be from different cultures, and will have different ways of interacting.
◦ Illinois ECE is also global.
◦ It doesn't matter where you're from: take the time to get to know people from other cultures while you're here so that you have an advantage when you graduate.
◦ For the international students, be careful: it's easy to feel lonely and isolated in a strange place. There are lots of people and lots of resources, so force yourself to take advantage of them. And if English is not your native language, be sure to get as much practice as you can.
◦ We have an international program that gives you free food if you show up to mingle. How can you go wrong with free food?
◦ One last note: technical terms don't always translate [there are lots of implications].

Academic Reality and Grade Philosophy

◦ Half of every group is under average!
◦ You're already in an elite group.
◦ Don't stress about it.
◦ Not everyone is going to get an A.
◦ People build their egos around their strengths.
◦ You were probably the person to whom all your friends turned with math and science questions.
◦ So was everyone else in the room.
◦ When you get out on internships and meet people from other schools, you'll realize that you're still at the top.
◦ Until then, though, not being the best may bother you a lot. Do something outside of class to give you perspective.
◦ We decided to make the 110 and 120 grading scales easier so as not to shock people too much.
◦ Later classes will be harder, but by then you will know that grades aren't everything.