

- Courseware (/courses/UTAustinX/UT.6.01x/1T2014/courseware)
- Course Info (/courses/UTAustinX/UT.6.01x/1T2014/info)
- Discussion (/courses/UTAustinX/UT.6.01x/1T2014/discussion/forum)
- Wiki (/courses/UTAustinX/UT.6.01x/1T2014/course_wiki)
- Progress (/courses/UTAustinX/UT.6.01x/1T2014/progress)
- Questions (/courses/UTAustinX/UT.6.01x/1T2014/a3da417940af4ec49a9c02b3eae3460b/)
- Syllabus (/courses/UTAustinX/UT.6.01x/1T2014/a827a8b3cc204927b6efaa49580170d1/)

Help

APPROACH

The approach taken in this course is to learn by doing in a bottom-up fashion. One of the advantages of a bottom-up approach to learning is that the student begins by mastering simple concepts. Once the student truly understands simple concepts, he or she can then embark on the creative process of design, which involves putting the pieces together to create a more complex system. True creativity is needed to solve complex problems using effective combinations of simple components. Embedded systems afford an effective platform to teach new engineers how to program for three reasons. First, there is no operating system. Thus, in a bottom-up fashion the student can see, write, and understand all software running on a system that actually does something. Second, embedded systems involve real input/output that is easy for the student to touch, hear, and see. Third, embedded systems are employed in many every-day products, motivating students to see firsthand, how engineering processes can be applied in the real world.

LEARNING PHILOSOPHY



JONATHAN VALVANO: So, Dr. Yerraballi, do you suppose we have a philosophy that guides us in our teaching?

RAMESH YERRABALLI: I'd like to think there's three parts to it.

The first is we urge you to try.

Try till use succeed.

We believe education is about mastering skills.

It's not a race to the top.

Therefore, we allow you multiple attempts on quizzes and labs.

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UT.6.01x Courseware

JONATHAN VALVANO: Yes.

Realizing that it is OK to try and fail leads to risk taking and

exploring alternative paths.

Ultimately, with this approach, you will develop a creative mind.

RAMESH YERRABALLI: Second, we believe in a bottom up approach to education.

This means we start with simple concepts.

JONATHAN VALVANO: And once you've mastered those simple concepts, you'll

be able to put them together to develop higher level tasks.

This means that in the early part of this class, the labs

may seem very easy.

But once you've mastered these concepts, you'll be

able to put them together.

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