

# ECE Curriculum Committee Meeting Minutes for February 11, 2010

**Members present:** Tanguil Basar, Stephen Bishop, Donna Brown, Andreas Cangellaris, Kent Choquette, Erhan Kudeki, Stephen Levinson, Steven Lumetta, Jonathan Makela, Sean Meyn

**Guests:**

Charles Tucker, College of Engineering Associate Dean for Undergraduate Programs; Laura Hahn; Karen Hyman

1. Dean Tucker began by describing some of the historical involvement of the College of Engineering with teaching and curriculum enhancement, then discussed the purpose of the current "core conversation" visits to engineering departments (including some outside of CoE) and undergraduate organizations as a complement to these earlier efforts. His goal was to discuss a set of [ten points on engineering education](#); these were distributed at the meeting. After the visits are complete, his team will produce a summary of the themes that arose and convene cross-departmental groups to determine what actions, if any, should be taken. We began with a discussion of the first point. There was disagreement as to whether universal modes of thought existed and as to whether the focus should be on complex concepts or on simple, motivational ideas and approaches. Most agreed that the process of helping students to gain confidence in their own ability and training is a slow one, and that while most of us do make a conscious effort to help our students to achieve this goal, they are often slow to warm to the idea until they have had an opportunity to compare themselves with those trained at other schools, for example in the context of an internship. Most also agreed that becoming an engineer takes a significant personal investment of effort, and that students must be encouraged to understand and accept this need in order to succeed. Approaches that empower the students to take charge of their own education, such as the MIT (graduate) student seminar, seem promising. The idea of spending student time on generic, domain-independent materials (as articulated in point #1) was less well received. Dean Tucker wanted to cover more than one point, and thus pushed onward to the question of covering all material. Some fields are now changing slowly, while others are still changing rapidly, and thus see the need to constantly distill away superfluous information. The general consensus of the ECE faculty seemed to be that we have been, are currently, and plan to continue refining our core to meet the evolving needs of our future alumni. It is up to us to help the students differentiate the key concepts from the material added for interest. Historical context and an understanding of how engineering advances were also viewed as important. Dean Tucker pointed out that our tuition is relatively high for a public university. Andreas Cangellaris pointed out that the state has failed to provide, and we are forced to view ourselves as a national university, a prerogative of our reputation ranking us amongst the world's finest. Dean Tucker agreed. Steve Levinson pointed out that even if the points are valid, a need for action is not necessarily implied. Quality, intensity, and style vary widely from instructor to instructor, and students can pick and choose to meet their needs and goals. Sean Meyn commented that our dialogue was nonetheless useful.
2. The Committee adjourned at 2:50 PM.

These Minutes created by S. Lumetta, February 11, 2010; Last updated February 17, 2010