

ECE Curriculum Committee Meeting Minutes for April 1, 2010

Members present: Tanguil Basar, Stephen Bishop, Donna Brown, Kent Choquette, Lynford Goddard, Douglas Jones, Erhan Kudeki, Stephen Levinson, Steven Lumetta, Jonathan Makela, Sean Meyn, Michael Oelze, Sanjay Patel, Nitin Vaidya, Pramod Viswanath

1. The Minutes of the March 11, 2010 meeting were approved with typographical corrections.
2. The course ECE 498 GH, "Computer Cluster Challenge", proposed by William Gropp and Wen-Mei Hwu, was discussed. The discussion noted that courses related to external competitions or opportunities (e.g., solar car, solar house, cubesat) are common in the College and departments. The Committee was favorably disposed toward the spirit and outline of the course, but noted that the lab hours needed to course credit hour guidelines included competition hours, which the Committee felt were inappropriate to require or include, particularly in light of the fact that not all students may be selected to compete. The Committee suggested that three credit hours would be more appropriate. Sanjay Patel volunteered to convey the Committee's discussion to Wen-Mei Hwu and to report back to us on his response the following week.
3. The Chair initiated a discussion about confirming the placement of courses in the EE Core and Advanced Core. He proposed a [set of criteria and a checklist](#) for evaluating whether material and courses belong in the core; the Committee seemed to agree that the proposed guidelines formed a good basis for evaluating the placement of material and courses in the core. The Committee chose to defer discussion of the computing-related courses (ECE 190, 290, 385, 391 and CS 225) in the EE core to the ongoing work on this subject. The Committee agreed that ECE 329 should remain in the Core. It was decided that ECE 342 should remain in the advanced core, but that ECE 343 should become a technical elective allowed for EE lab credit. The Committee decided that ECE 310 should remain in the advanced core, that the one-credit-hour "ECE 311" (or "320") lab would be a technical elective **not** allowed for EE lab credit, as it is initially largely a simulation and software laboratory. Jones suggested that ECE 340 perhaps should be in the advanced core; he argued that in this day of billion-transistor chips and complex electronic systems, relatively few electrical or computing engineers design or create at the device physics level, and that a sizable fraction will not require a mastery of semiconductor device physics. Kudeki suggested that a single course combining elements of ECE 329 and ECE 340 in the core would serve our students better, but that nobody has come forward to create such a course. Sanjay Patel suggested that ECE 340 would belong in an advanced core for computer engineers. Others argued that this is fundamental material and that it is dangerous to predict that our students won't need it to succeed in their careers.

Erhan Kudeki, Sean Meyn and others noted (echoing previous discussions) a certain lack in communications and control systems in the advanced core. Sean Meyn suggested an alternative approach that defines several advanced core categories (e.g. systems, computing), each containing several courses from which students make a selection. He promised to make a specific suggestion to discuss the following week.

4. The Committee adjourned at 2:55 PM.

These minutes drafted by D.L. Jones, April 8, 2010; Last updated April 8, 2010