

ECE Curriculum Committee Meeting Minutes for April 11, 2008

Members present: Jont Allen, Stephen Bishop, Donna Brown, Matthew Frank, Kuang-Chien Hsieh, Douglas Jones, Erhan Kudeki, Stephen Levinson, Xiuling Li, Jonathan Makela, Michael Oelze, Pramod Viswanath

Guests: Jean-Pierre Leburton, Dick Blahut

1. The Minutes of the April 4, 2008 meeting were approved.
2. The Chair presented the following tentative schedule for our curricular review and revision effort, which the Committee accepted as a working schedule.
 - **Spring 2008 (4/11, 4/18, 4/25):** Finish initial review of advanced core courses and discuss changes with course directors
 - ECE 410 done
 - ECE 440: 4/11, 4/18 as needed
 - 430: Meet w Pete Sauer on 4/18
 - 329/450 on 4/18 or 4/25 (Kudeki)
 - 442 and 443: Meet with Elyse Rosenbaum, David Zhang and colleagues on 4/25
 - Wrap up revision of technical electives list
 - **Fall 2008**
 - Make final decisions on which (revised) courses to retain, remove, or add to the required core and "M of N" advanced core for EE curriculum
 - Decide which revised courses to include in CompE curriculum
 - Review EE core courses (110, 210, 313)
 - **Spring 2009**
 - Submit revised courses, curricula to College, University for approval
 - Review CompE core courses (190, 290, 385, 391)
 - Monitor progress on advanced core course revisions
3. Dick Blahut informed the Committee of a proposal by Andrew Muehlfeld, a current undergraduate EE major, to promote study abroad by encouraging or requiring honors students to complete such an experience. The formal proposal will be forwarded to the Curriculum Committee for comment in the near future.
4. The Committee discussed various options for positioning physical electronics material in the core EE curriculum. Jones presented a list of seven possible options, and summarized arguments in favor of each of these options as well as possible concerns. Jean-Pierre Leburton, Chair of the Microelectronics and Quantum Electronics Area Committee, attended the meeting and discussed efforts in the Area to address the curriculum revision goals. He stated that the area has reached a consensus in favor of the proposal to develop an ECE 340 course targeted at juniors to replace ECE 440 in the required core; however, he said that the exact form and content of the course remains under discussion and has not converged to a unanimous agreement. He said that considerable reflection on the difficulties students have with the current ECE 440 suggests that students' physics background entering the course is not at the level assumed by the current syllabus, and that current thinking on revising the course centers around addressing these fundamentals. He believes that a firm grasp of the fundamental physics will allow students to quickly master its application to various electronic devices. Erhan Kudeki emphasized that juniors cannot be expected to have synthesized all material, and that considerable review of these fundamentals and drawing connections between them is needed for the course to be effective at this point in the curriculum. Jones emphasized that the course should serve the needs of the entire department, that the students must be reasonably happy

with it for it to play its proper role in the curricula, and that we have to teach effectively to our current undergraduates, whether or not their background and interests are what we expect or hope for.

Due to time constraints, the discussion ended before all Committee members were able to resolve their preferences on the various options, so discussion will continue next week.

5. The Committee adjourned at 11:58 AM.

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