

ECE Curriculum Committee Meeting Minutes for December 10, 2009

Members present: Tanguil Basar, Stephen Bishop, Donna Brown, Kent Choquette, Todd Coleman, Douglas Jones, Erhan Kudeki, Stephen Levinson, Steven Lumetta, Sean Meyn, Michael Oelze, Pramod Viswanath

Guests: Elyse Rosenbaum, Naresh Shanbhag, Andy Singer

1. The Minutes of the December 3, 2009 meeting were approved.
2. Elyse Rosenbaum and Naresh Shanbhag joined the meeting to respond to questions the Curriculum Committee had about the ECE 342 revision. In response to a question about changes from ECE 442, Elyse said that core material (such as the design of operational amplifiers) had been removed so that more time could be spent on fundamentals. Nonlinear circuit models for certain devices are introduced. Linear but non-ideal circuit models are developed. The material in italics in the [syllabus](#) is instructor-optional in that individual instructors can choose whether or not to cover it in a given semester, depending on the capabilities of the particular class that semester and the instructor's interest; that is, that subsequent courses for which ECE 342 is a prerequisite (e.g., ECE 482 and ECE 483) do not assume it was covered. Elyse stated that this two-week flexibility reflects the natural variability she has observed between different classes and instructors. Elyse stated that ECE 210 is a prerequisite, ECE 329 is not, and that prior or concurrent enrollment in ECE 340 is recommended but not required.

The Curriculum Committee approved the ECE 342 revision from ECE 442, and thanked Elyse and the other faculty for their work and responsiveness. The Curriculum Committee recommends that the ECE 343 revisions be undertaken, that careful efforts to synchronize it to the material and timing of ECE 342 be made, and that it be taught by the faculty who teach ECE 342 so as to maintain the strong connection.

3. In response to the Curriculum Committee's request for the removal of certain material in the proposed ECE 310 outline and reduction to three credit hours, Andy Singer returned with a proposal with the requested deletions and a reduction of the lecture content to three hours per week, and with a fourth credit hour software laboratory component (Matlab and/or Labview based at least initially). He explained that the group has been adding more and more such exercises to the course in recent years to enhance both students' understanding and their ability to apply the material, to the point that it has become a substantial, distinct, and valuable component of the course that should be recognized as such as a distinct laboratory component. He believes this to be very much in the spirit of the Curriculum Committee's initiative to make the Core courses more relevant to students from all areas. He said that the workload including these exercises corresponds to four credit hours, so he presented a revised four-hour ECE 310 proposal with three lecture hours per week on the theory, and a distinct set of laboratory exercises that run in parallel through the semester. (Previously, they were packaged as additional homework problems.) Andy stated that he prefers to keep these together as a single four-hour ECE 310, but is also open to the idea of a three-hour ECE 310 in the advanced core and a separate one-credit-hour "ECE 311" if the Curriculum Committee strongly prefers it that way. He says that the group intends that the ECE 310 and ECE 311 instructors would in any event be the same.

A straw vote found that the Curriculum Committee likes the new outline and lab concept, but the Committee wishes to discuss on more general terms the implications of the unified four-hour or three-hour plus optional one-hour lab before deciding which format is preferred. Donna Brown expressed

concern that students taking ECE 311 might have an advantage over the ECE 310 only students. Doug Jones noted that this is true with any course; students with additional relevant coursework would always be expected to benefit from it. The Committee thanked Professor Singer for leading the development of ECE 310 and for working with the Curriculum Committee to refine the proposal to meet our core curriculum objectives.

4. The Committee adjourned at 2:14 PM.

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