

ECE CURRICULUM COMMITTEE

TO: Tangu Basar, Jennifer Bernhard, Dick Blahut, Steve Boppart, Donna Brown, Seth Hutchinson, Wen-Mei Hwu, Doug Jones, Steve Levinson, Daniel Liberzon, Tom Overbye, Mary Parsons, Sanjay Patel, Narayana Rao, Dilip Sarwate, Naresh Shanbhag, Greg Timp, Bruce Wheeler

FROM: Erhan Kudeki

SUBJECT: Curriculum committee meeting minutes

DATE: October 9, 2003

Minutes of the Curriculum Committee October 9, 2003

- 1) Members present:
Tangu Basar, Jennifer Bernhard, Seth Hutchinson, Wen-Mei Hwu, Doug Jones, Steve Levinson, Sanjay Patel
- 2) The committee debated on issues concerning the "advanced math" requirement:
 - a) The minutes of October 2, 2001 meeting claims that a consensus was reached to add a requirement to the EE curriculum that students take one of Math 315, Math 280, Math 346 or an applied math course for EE's to be developed. However, there was some disagreement amongst the present committee members whether such a consensus was actually reached during the October 2, 2001 meeting.
 - b) An "alternative" to the 2001 recommendation --- described in item (a) above --- is to require the students to take Math 243 instead of Math 242 and Math 286 instead of Math 285. Math 243 is a 4 hr course that is the same as Math 242 plus 1 hr additional material on vector calculus. Similarly, Math 286 is a 4 hr course which is Math 285 plus 1 hr additional material on matrices and linear systems.

The advantage of this alternative is that exposure to vector calculus and linear algebra is not delayed until an arbitrarily late semester in the student's program. Instead, the topics are covered in the sophomore year just before they are needed in junior year courses such as ECE 229.

Furthermore, it may be possible to drop the Math 315 requirement for CompE's in view of Math 286, homogenizing the math requirement for EE's and CompE's. Committee members in CompE were asked look into that possibility in consultation with CompE Area Committee members.
 - c) In view of the advanced math applications course ECE 271MM being developed by Levinson et al., alternative (b) above can be combined into a "two path" option for ECE students: (i) Take the sequence Math 243 (4 hrs) and Math 286 (4 hrs) prior to ECE 229, or, (ii) Take the current sequence of Math 242 (3 hrs) and Math 285 (3 hrs) followed by ECE 271MM (3 hrs) prior to ECE 229. Either path prepares the student for ECE 229 and followup courses with exposure to crucial topics of vector calculus and linear algebra. Students taking path (ii) also gain exposure to complex variables covered in ECE 271MM (at the cost of one additional credit hr and potentially a delay in reaching ECE 229 depending when they are able to take ECE 271MM.)
 - d) In view of alternative (c) it would make sense to make "Math 286 or ECE 271MM" a prerequisite for ECE 229. This prerequisite would ensure that new math concepts are seen early on since ECE 229 cannot be delayed into the senior year because of other dependencies in the curriculum.
 - e) In CompE curriculum the additional 2 hrs needed to adopt Math 243 and Math 286 would

be gained from hours liberated by dropping ECE 315. In EE, the hours would have come from Tech Electives and/or Free electives.

At the end of the meeting there was a "sense of consensus" between the committee members about option (c), but the debate will continue next week after we get some feedback from the CompE Area Committee.

- 4) The next meeting is planned for 3 pm Thursday, October 16, 2003 in 312 EH.