

ECE Curriculum Committee Meeting

Monday, May 11th, 2022

Attendance: Arabshahi, Chen, Elberier, Hauck, Kirschen, Moritz, Overly, Sathe, Swanson, Sykes, Vardhan, Wilson

Minutes from meeting of May 4th, 2022: Approved

Agenda:

1. Consent Agenda
 - Prerequisite changes for Embedded Computer Systems concentration courses related to restructuring of the CSE Intro to Programming series.
 - EE 478 - Change of EE 332 from prerequisite to corequisite.
2. Neural Engineering concentration annual ABET review (Moritz)
3. Digital Signal & Image Processing concentration annual ABET review (Riskin)
4. Embedded Computer Systems concentration annual ABET review (Hauck)

Consent Agenda

Item 1: Prerequisite changes for Embedded Computer Systems concentration courses related to the restructuring of the CSE Intro series

([See Proposal](#))

Approved: No dissents

Item 2: EE 478 - Change of EE 332 from prerequisite to corequisite.

([See proposal](#))

Approved: No dissents

Neural Engineering concentration annual ABET review (Moritz)

([See slides](#))

Moritz presented the annual ABET review for the Neural Engineering concentration. See slides for main review.

- Courses in the concentration have had healthy enrollment with generally strong course evaluations.
- The EE 466 lab, started in 2019, has required extra effort with moving to online during remote instruction, to hybrid. Even so, Orsborn has kept the course very successful and has received strong reviews.
- All end-of-quarter reviews have been completed.
- Kirschen asked if any changes were planned. Moritz responded that the current structure was stable and no changes are currently planned.

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Digital Signal and Image Processing concentration annual ABET review (Riskin)

([See slides](#))

Riskin presented the annual ABET review for the Digital Signal and Image Processing concentration. See slides for main review.

- Almost all end-of quarter reports have been completed. EE 241 had issues with set-up in the report system that is being worked out.
- Asked about whether ethics in relation to machine learning was discussed in any of the courses, Riskin replied she would discuss it with the group faculty and report back.
- In regards to the new EE 241/242/342 revision to the signal processing series that was implemented starting in autumn 2021, one end-of-quarter report suggested that the department consider making EE 241 a prerequisite for EE 242 rather than a corequisite, believing students were not well enough prepared in the Python concepts needed each week in the EE 242 labs.
- Swanson raised another issue with EE 241, noting that instructor/TA needs for EE 241 are a fair amount higher than originally proposed when the course was approved.
- Arabshahi recommended a meeting with the 2 course instructors who have taught the course so far. (Autumn 2021 and Winter 2022)

Embedded Computing Systems concentration annual ABET review (Hauck)

([See slides](#))

Hauck presented the annual ABET review for the Embedded Computing Systems concentration. See slides for main review.

- Enrollments in all classes very strong.
- Getting end-of-quarter reports for the courses when taught by CSE faculty has always been difficult, but does seem to be improving.
- ABET outcomes look good.
- The concentration uses EE 475 to assess students' use/consideration of standards, with a specific section in reports where students must discuss standards.
- Staffing of courses is getting difficult, and a lot of courses need to be taught by faculty from outside the group. Would be good to have more tenure track instructors in the group.
- Hussein has developed a remote lab for use in EE 371. When asked by Overly about the possibility of creating a remote lab for EE 271 to help scale to number needed for new degree, Hauck stated that he did not think it was a good idea, that it was extremely important for students to have a hands on lab. Many other members of the committee agreed.

Additional Note:

- A side discussion occurred during one of the presentations around the previous ABET report from the 2019-2020 review that mentioned a weakness in the assessment of students' use/consideration of engineering standards. The department was able to show it was addressing the weakness in a follow-up submission for a winter offering of EE 475 which implemented new

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required sections in student reports in which students discussed their consideration of standards in their designs. It is extremely important that the department implement methods for assessment of this area in the capstone courses. The Neural group has already put in place assessments similar to EE 475, requiring students to include how they have considered and use engineering standards in their design process.