ECE Curriculum Committee Meeting Thursday, May 19th, 2023

Attending: Arabshahi , Chen, Hauck, Hwang, Kirschen, Makhsous, Mizell, Overly, Suresh, Swanson, Thomas, Van Fossen, Wilson

Minutes of May 11th, 2023: Approved

Consent Agenda:

1. Grad Section Proposal for EE 482: Approved

Main Agenda:

- 1. Continuation of EE 271 discussion (Arabshahi)
- 2. Review of Revisions to Capstone Design Requirements (Chen)
- 3. Presentation of Intro to Robotics course pilot (Makhsous)

Continuation of EE 271 discussion:

- Hussen provided report on use of remote lab for course prior to meeting.
- Arabshahi stated link will be provided to committee members for review, but he did not feel qualified to present it.
- Review of process for revision of MCDs
 - Group members must first approve MCD change proposals, then bring to the ECE Curriculum Committee (ECE CC) for departmental approval.
- Majority of members prefer consistent offering of the physical kits.
- Kirschen requested the committee affirm the EE 271 will use physical kits.
- Mizell provided some background on student concern around the different lab approaches:
 - At the time, students were unaware of other methods, and the remote lab worked fine, and it wasn't until some way through that the concern arose among students when sharing course experiences.
 - Mizell did see the benefits of using a remote lab.
 - For ENGINE, Mizell believed it was important to have had experience working with physical hardware.
 - Some students felt there was a conflict of interest since Prof. Hussein has a "stake" in the implementation.
 - And "opt-in" model might be better, with students being allowed to choose which lab format they preferred.
- Swanson stated her understanding was that there is a desire to have consistency in classes, and if students are allowed to choose, this may impact consistency in teaching of a core class.
- Hauck expressed concerns over using a hybrid model
 - In 271, labs 1-5 are all fairly similar in difficulty, with basic elements introduced in both lab formats.
 - Lab 6 starts to work on "system"
 - Lab 7 get more complicated and lab 8 is a project.

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- Introducing a new system just before the labs get more complicated will make it even more difficult for students.
- Mizell enjoyed the physical version of final project
- Makhsous mentioned he had a student who tried to jump to the virtual lab after a problem with their physical FPGA board. The learning curve was difficult
- Arabshahi requested a motion on the following:
 - Motion to reiterate instructors are to follow course MCDs and, if there is a desire to change how a course is taught, it can be changed through the proper process:
- Motion Approved

Review of Revisions to Capstone Design Principles (Chen)

- Proposed Document
- New document is for the ECE program, which needs to have its own version.
- The proposed document is almost identical to the current version for the BSEE program.
- With flexible structure of the new BSECE degree, more outcomes need to be captured by the capstones.
- Motion to approve: Approved

Presentation on Introduction to Robotics course pilot (Makhsous)

- <u>Slides</u>
- Makhsous presented to the committee looking for suggestions for future offerings.
- Provides a hands-on course at the junior level
- Enrollment is healthy
- Discussion of the projects
- Prereqs are EE 241/242
- Discussion of pursuing a full-time robotics lab in the department, but no solution for space at this time.