CES/EE Curriculum Committee – MINUTES
September 30, 2021
12:30 – 1:30pm
CP 303 / Zoom (for those who cannot make it in-person): https://washington.zoo.us/j/99809987578

Attendance:

- **Faculty:** Vahid Dargahi, Debasis Dawn, Max Laddomada, Thillainathan Logenthiran, Michael McCourt, Jie "Jenny" Sheng, Nafiul Siddique, Matthew Tolentino
- **Non-Voting Faculty:** Hossein Pedram
- **Staff:** Rachel Long, Kira King, Beth Jeffrey, David Ross
- **Absent:** Orlando Baiocchi

Items:

1) Motion 1: Approve the minutes of our last meeting held on September 15, 2021

> **Moved: M. Tolentino**
> **Seconded: V. Dargahi**
>
> *Eligible to vote: 9*
> **8 in favor, 0 against, 0 abstained, 1 absent**

2) Vote on changing the name of the BS in CES to BS in CE
This committee discussed changing the name of the degree program from "B.S. in Computer Engineering and Systems (CES)" to "B.S. in Computer Engineering (CE)" in May, but didn't take a vote. The reason for this name change is in regards to our upcoming ABET accreditation visit. Our current degree (CES) is more so a Computer Engineering Degree than it is a Computer Engineering and Systems degree, and we don't have any systems components in our curriculum. ABET will require us to be evaluated using both the CE **and** Systems criteria if this name isn't changed.

The committee was reminded that when this degree was created, it was named CES with the intention to eventually expand into systems, but since that hasn't happened we are proposing changing the name to better reflect what we do offer. It was also mentioned that this name change will help us compete with other CE programs nationally.

Motion 2: To change the name of the degree program from B.S. in Computer Engineering and Systems to B.S. in Computer Engineering

> **Moved: M. McCourt**
> **Seconded: M. Tolentino**
>
> *Eligible to vote: 9*
> **8 in favor, 0 against, 0 abstained, 1 absent**

3) Discussion of the ABET assessment data from AY 2020-2021
In order for a Student Outcome to be considered as met, the score must be above **70%**. Faculty used

these outcomes to rate students as either Novice, Apprentice, Proficient, or Expert. Outcomes 2,3,4,5 and 7 are what we are focusing on today for both EE and CE.

Electrical Engineering:
- **Student Outcome 2: "An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors."**
  - Note: TCES 230, 312, and 330 could not assess students based on last 5 indicators (P2.5 – P2.9) since these indicators are mostly related to Senior Design courses, which is why they are labeled as "N/A"
  - All results are above 70%, except for some indicators in Senior Design 1 and 2 (TCES 480 and 481)
  - For TCES 480 and 481, scores are slightly just below the 70% threshold (score received: 69%) for indicator P2.8, "Consideration of Risks." The rationale for this was because several teams did not include a risk analysis. These students were encouraged to include this analysis in their projects going forward, which is reflected in the increased score in TCES 482.
  - TCES 480 just barely missed the 70% threshold (score received: 69%) for indicator P2.5 "Consideration of factors such as public health, safety, and welfare in the engineering design." The reasoning for this lowered score is that some students were missing or did not provide documentation related to this indicator, which is resulted in a lower score.
  - Overall, Student Outcome 2 was met since students mastered performance indicators (meaning above 70% threshold) before they graduated.
- **Student Outcome 3: "An ability to communicate effectively with a range of audiences."**
  - Outcome was met since all indicators are above the 70% threshold
- **Student Outcome 4: "An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgements, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts."**
  - Outcome was met since all indicators are above the 70% threshold
- **Student Outcome 5: "An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives."**
  - For the senior design courses, P5.4 ("Inclusiveness") was mainly measured by overall team interaction and feedback from individual members. The pandemic certainly had an impact on students/team interactions, which could possibly explain why the results are lower than years previous. Another factor is that every group of students and how they interact with each other is different.
  - Student Outcome 5 was met since all indicators are above the 70% threshold
- **Student Outcome 7: "An ability to acquire and apply new knowledge as needed, using appropriate learning strategies."**
  - Outcome was met since all indicators are above the 70% threshold

Computer Engineering:
- **Student Outcome 2: "An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors."**

- o All results are above 70%, except for some indicators in Senior Design 1 and 2 (TCES 480 and 481). The indicators that are below the 70% threshold are:
  - P2.5 "Consideration of factors such as public health, safety and welfare in the engineering design" (TCES 480 was scored at 69%)
  - P2.8 "Consideration of Risks" (both TCES 480 and 481 scored 69%)
  - P2.9 "Incorporation of Engineering Standards" (TCES 480 was scored 56%)
  - o For P2.9, students were unable to point back to the standards that their projects were impacted by. This indicators improved after students received feedback and progressed through the program.
  - o Another factor is that in years previous, there was typically a guest speaker to discuss risks. Unfortunately, that didn't happen last year due to the pandemic, which could have impacted the lower score for P2.8 "Consideration of Risks."
  - o Overall, Student Outcome 2 was met since students mastered performance indicators (meaning above 70% threshold) before they graduated.
- **Student Outcome 3: "An ability to communicate effectively with a range of audiences"**
  - o Outcome was met since all indicators are above the 70% threshold
- **Student Outcome 4: "An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgements, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts."**
  - o Outcome was met since all indicators are above the 70% threshold
- **Student Outcome 5: "An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives."**
  - o The only indicator below the 70% threshold is P5.6 "Plan project tasks" (TCES481 was scored at 69%). This is due to some students focusing only on prototyping. However, this indicator significantly approved in TCES 482 (which was scored 100% for P5.6).
- **Student Outcome 7: "An ability to acquire and apply new knowledge as needed, using appropriate learning strategies."**
  - o Outcome was met since all indicators are above the 70% threshold

The meeting closed with a reminder for everyone to take a look at the Exit Interview survey responses from students before our next meeting, which will take place on **Thursday, October 21st from 12:30 – 1:30pm.**