

Program Review – Annual Program/Discipline Update
Administrative Response and Follow Up
2020-2021

Program/Discipline:

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Other Division Dean(s): N/A

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This section is for Administration to provide feedback.

To be prepared by Division Dean(s) and reviewed by DOI(s).

1. Strengths and successes of the program as evidenced by the data, analysis and reflection:

Thanks to the EET SAC for successfully completing this continued pilot of the new Annual Program Updates. This is a new format for all of us, and it is clearly a learning time for all involved in changing over to this new yearly format and questions. This EET Annual Program review landed on top of the continued challenge of teaching remotely throughout the academic year '20-'21 after quickly pivoting to remote instruction from a program that previously taught all but one 1-credit course (EET 188) on-the-ground. After teaching remote labs during Spring '20, the EET SAC realized they could teach hands-on EET labs much more effectively if students had equipment to work with in their own homes. The Perkins-funded student equipment project enabled the SAC to send equipment to students with free-shipping provided by the CARES Act. EET Faculty worked hard to re-develop labs over the summer and throughout this academic year to teach successful in-home, hands-on, remote labs in all of their classes where possible with this equipment. Kudos for the dedication and hours of work this took to complete!

EET enrollment overall was largely sustained over 2019-2020 despite the effects of COVID-19 closures. Remote instruction actually provided an opportunity for EET faculty to get experience teaching with D2L shells and Zoom virtual classrooms which positions them to move forward successfully with their goals of developing hybrid and online cohorts in the future.

The EET Advisory Committee is a strong group that has supported the program throughout our remote operations and offered input/feedback into how industries were operating during COVID-19. Their advisory board includes good representation from a variety of industry partners including aerospace, biomedical, etc.

2. Areas of challenge or concern, if any:

After reviewing the EET Annual Program Update and its accompanying data, there are several areas of challenge for the EET SAC to look into in the coming year:

A. EET 111 and EET 112

- a. The assessment data around the degree outcome to “predict and characterize analog behavior by applying analog circuit analysis techniques” was gathered through the final exam in EET 112. While the success stated in this report was 84% for this outcome, the SAC did not call for specific actions to improve this. The report did state that this was a lower rate compared to the other pass rates of 94%, 100% and 90% respectively, and that this was noted by instructors. This is an area that the SAC should focus on in their Learning Assessment work next year and identify specific follow-up actions. It would be helpful to look at where this outcome is taught in both EET 111 and EET 112, and consider revamping the existing materials for this content and/or adding supplemental learning opportunities for this content in these two classes. Please consider researching culturally inclusive changes/additions to your EET 111 classes in this. As part of your ongoing Learning Assessment work, it is vital that you put actions into place and then reassess the outcomes to see if your changes have a positive effect. For example, you could put changes into place in EET 111/112 during the '21-'22 academic year, continue them in '22-'23 and reassess them in the final exam in EET 112 in '22-'23. All of this would be reported out in your Learning Assessment reports and your future APU reports.
- b. It is concerning that the pass rate for EET111 is sitting at 80.6% (one of the lowest for EET classes). This is coupled with more than 1/3 of students choosing not to enroll in EET 112 – significantly higher than students who did not pass the course.
 - i. Due to the timing of this data, some of this could be attributed to the effects of COVID-19, and the challenges our students are facing during this time period. In that, some of the loss of enrollment could be attributed to students who prefer to only take in-person classes.
 - ii. It would be helpful to research the demographics of the students who did not enroll in EET 112. Are there disproportionate outcomes here?
 - iii. This could be linked to the co-requisite of MTH 111 for EET 111. While the SAC suggested a collaboration with the math department to provide more EET concepts for math instructors to incorporate into their classes, the collaboration should look at where concepts that are needed to be successful in EET 111 are being taught in MTH 111 and how they are being reinforced in EET 111. Is the timing of this in-synch or out of synch? How can you work together to address this? Is this a significant factor in EET students' success (both in passing grades and in feeling they are being successful in their EET courses) in EET 111? Consider taking a look at what students are most challenged by in the final exam or

a final lab project in EET 111 – how can this be improved? Does this have to do with MTH 111?

- B. Underrepresented students in EET program – While 29.5% of EET students identify as non-white, this is not reflective of race distribution across our communities in the larger Portland metropolitan area. High school students have the opportunity to take Dual Credit PCC EET classes currently at the following schools: Glencoe High School, Health & Science High School, and Hillsboro High School. The percentage of non-white students at these schools is 46% at Glencoe, 55% at Health & Science, and 62% at Hillsboro. Since the EET program already has a presence at these local high schools, this should be seen by your SAC as an opportunity to outreach to under-represented students at these schools and help them see themselves as potential students in EET. It would be great if the SAC could brainstorm ways to outreach to these schools with the help of both the Dual Credit and Admissions departments at PCC during '21-'22 and report back on this in next year's APU. It would also be helpful to examine if there are any barriers to PCC program entry for the students who take your Dual Credit classes at these high schools as well.
3. Reflection on goals and resources:
- A. One of the program goals stated in the APU was to offer a hybrid cohort as soon as we return to campus. Along with figuring out logistics of having on-campus and off-campus class sessions and how best to schedule lectures and hands-on labs, it will be imperative for the SAC to look at assessment data for individual EET classes: what are the success rates for students in on-the-ground and remote sections in each class? Where were there differences? How do you plan to address this in hybrid classes moving forward? What changes do you need to make in assignments, modality, etc.?
 - B. Another program goal is the development of possible degrees in Imaging Serving Technicians and Biomedical Information Technology. SAC next steps for these proposed degrees will be the layout of courses in the degree, gathering advisory committee input and help in developing classes, conducting a market analysis of available jobs in these fields with two-year degrees, and identifying equipment needs for these proposed programs. Including all of this in future APUs will be essential.
 - C. It is exciting that EET wants to continue to explore educational opportunities for students in mechatronics, robotics, artificial intelligence, etc. Once the EET program is reorganized into the new pathway structure, there will be many opportunities to collaborate with other programs around the best approaches to develop new classes, certificates and possibly degrees in these areas. Researching current and upcoming trends along with getting regular updates from advisory committee members should be ongoing work.
 - D. Since all EET students were just provided with hands-on equipment for remote labs, more specifics are needed around what “funds for equipment for students and faculty” is referring to that has not already been purchased for new and replacement equipment.

Since this was a one-time funding opportunity from Perkins, the SAC will need to work on a plan for these next purchases and discuss whether they will be on-going student costs or department expenditures. It will be critical that specifics around this are discussed with your SAC liaison next year and dollar amounts with details are provided in next year's APU report for the next biennium budget planning.

- E. It is important to realize that this yearly APU is a vital way of a program planning ahead for anticipated budget needs. Your SAC will need to work with your dean liaison next year to provide dollar amounts with details in next year's APU report

4. Recommended next steps:

Proceed as planned on program review schedule

Follow up conversation needed with SAC, Dept Chair(s) and Dean

5. Additional comments/questions:

We plan to revisit the needs for IAA support once the EET program is reorganized into a pathway division. Advising needs will also be revisited once our pathway reorganization is in-place.