

Electronics Technology



2019

ANNUAL REPORT OF PROGRAM DATA



UNIVERSITY of HAWAI'I®
HAWAI'I
COMMUNITY COLLEGE

1. Program Description

PROGRAM DESCRIPTION

This program prepares students for employment in telecommunications, medical electronics, computers, and consumer electronics. The electronic technician fabricates, installs, maintains, and repairs electronic equipment.

Students applying to the electronics program should have two years of high school math including geometry or algebra, and two years of high school science including chemistry or physics.

PROGRAM LEARNING OUTCOMES (PLOS)

Upon successful completion, students are prepared to:

- Specify, design, build, install, program, operate, troubleshoot, analyze, and modify electronics systems, automated test, and manufacturing control systems.
- Specify, install, program, operate, troubleshoot, and modify computer systems.
- Have effective written, interpersonal, presentation, and team building skills.
- Have the necessary leadership and management skills to effectively complete a project.
- Have a well-developed sense of work ethics and personal discipline to succeed in their chosen profession.
- Have attitudes, abilities, and skills required to adapt to rapidly changing technologies and a desire for life-long learning.

2. Analysis of the Program

Strengths and weaknesses in terms of demand, efficiency, and effectiveness based on an analysis of the Quantitative Indicators. CTE programs must include an analysis of Perkins Core indicators for which the program did not meet the performance level. Include Significant Program Actions (new certificates, stop outs, gain/loss of positions, results of prior year's action plan).

Conditions of various indicators are as follows.

- Demand. The demand numbers are actually improving. The reason for improvement is due to the greater involvement of employers. More companies are contacting me via email looking for technicians and willing to hire recent graduates. Most of the employers I am working with have been recruiting from the mainland. I started out with one employer and now work with eight. The employers are talking with each other and finding our program to be effective. They are starting to look to us first. I'm happy to hear that. The County jobs numbers on line 2 indicate that

there are only 4 jobs available. This is incorrect, I know for a fact that all of my graduated students have a job or are at University of Hawaii finishing a Bachelorette degree.

- Efficiency. This number is greatly improving as well. The program had a problem with one CRN section in which a large number of our students took the course from a different program. If the section had been offered using a CRN linked to the ETO program, we would have had 17 students in that course. This problem is caused by having two ETRO120 sections, one is for the technician program and the other is for the EMIT program. The confusion for students was because the two existing sections were offered during the same semester. With any luck that will no longer be a problem. Our overall efficiency rate is improving due to the recruiting efforts put forth. Recruiting now starts with middle school students and again at the high school level, which allows exposure to our program and presents an alternative to construction-based programs.
- Effectiveness. This number is distorted. The program runs a cohort that is 2 years long therefore we graduate a cohort every other year. Every year we experience either a high number or low number of graduates. Therefore, as our students move on, we show a seeming discrepancy in retention rates. In general, I have a good retention and a very good success rate. Lines 17-22b are highly questionable numbers and I believe they are not accurate.
- Perkins Core Indicators. The 1P1 numbers on display are not accurate. I have lost 2 students since the beginning of the current cohort. This is the highest loss the program has experienced, but the indicator would make you think we are a total failure in this area. That would be incorrect.
- The 2P1 again is an incorrect number due to the program being a 2-year cohort.
- The 3P1 retention rate seems about right due to losses of the 2 students.
- The 4P1 student placement is a difficult number to produce. Most of our students have found work or gone onto UH for computer science. I don't believe that the 4P1 number is accurate. My students are getting jobs.
- The 5P1 is listed as N/A. This does not make any sense and needs to be looked at.
- The 5P2 numbers are difficult to change. I am unable to control the number of women students who will consider technology as a path of study if they don't care for that path. Culture seems to be the main hurdle. However, our overall degrees and certificates number has tripled since the program modifications began four years ago.
- General. Overall, the program is improving and the future is looking bright from where I see it. A point to pay attention to is that the current cohort is the first official cohort with the newly adapted courses and program design. The courses now can be assessed with real direction as to where that course is to take our students. I think more changes are to come just because this is rev. 1.0. Recruiting has been a priority and has been working. Our numbers are up and I believe the program will

continue to grow. Currently, I am still moving in (organizing) from our physical move last semester to a new facility. In addition, we are in construction of what will be the most industry-complete and high-tech lab in the state for this type of technician program. I will be having an open house when the new facility is complete to attract more students to our program.

- Weakness. The weakness is still numbers of students and that are being addressed and showing good improvement. I think the most difficult weakness is assessment and keeping up with required reports and reviews. I give priority to the students' academics, lab construction and NASA projects. These could be strengths as well. I am the only instructor in this program and spread myself thin.

3. Program Student Learning Outcomes

a) PROGRAM LEARNING OUTCOMES (PLOS)

Upon successful completion, students are prepared to:

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- Have effective written, interpersonal, presentation, and team building skills.
- Have the necessary leadership and management skills to effectively complete a project.
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b) Program Student Learning Outcomes that have been assessed in the year of the Annual Review of Program Data.

c) Assessment Results

d) Changes that have been made as a result of the assessments.

The past year I have not completed any assessment. This is primarily due to the fact that the current cohort is the first to use the new adapted curriculum and I am still getting a sense of where areas of attention are required.

Other duties like moving into our newly renovated building also have taken up my time. since we again did the move ourselves. I am still trying to get the lab and the fabrication area organized to a point where we can use our space.

My tenure/promotion document also has required much of my attention this last few months. Again, I would like to reiterate that teaching and testing the new curriculum will take some time and assessment will continue as the courses are completed. I would like to point out that the changes that have been implemented have received positive remarks from our advisory committee employers.

4. Action Plan

Include how the actions within the plan support the college's mission. In addition to the overall action plan for the program, include specific action plans for any Perkins Core Indicator for which the program did not meet the performance level.

My primary action plan is simple: Recruit more students.

More assessments also need to happen to align with the College's and UHCC System requirements. I formatively assess on a daily basis to understand how my students are comprehending the information that I give them. Summative assessment reporting is still a challenge when I'm still trying to find the balance in the point structure for grades and just how much information can be passed successfully and efficiently. Now with the current program changes, I think I can be more productive and effective in designing and conducting new assessments. The Perkins numbers should improve just because there will be more information accrued. The students that I have graduated in the past all have been successful either finding work or continuing on for a higher degree.

5. Resource Implications

(physical, human, financial)

An item that would be most helpful would be to attend an industrial professional development conference either for communication technology or industrial controls on an annual or biannual basis.