HAWAI'I COMMUNITY COLLEGE
PROGRAM ANNUAL REVIEW (APR)

Electronics Technology

Date Nov 17, 2017

Review Period
July 1, 2016 to June 30, 2017

Initiator: Harold Fujii
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Program/Unit Review at Hawai'i Community College is a shared governance responsibility related to strategic planning and quality assurance. Annual and 3-year Comprehensive Reviews are important planning tools for the College's budget process. This ongoing systematic assessment process supports achievement of Program/Unit and Institutional Outcomes. Evaluated through a college-wide procedure, all completed Program/Unit Reviews are available to the College and community at large to enhance communication and public accountability. Please see http://hawaii.hawaii.edu/files/program-unit-review/

Please remember that this review should be written in a professional manner. Mahalo.

PART 1: PROGRAM DATA AND ACTIVITIES

Program Description (required by UH System)

Provide the short description as listed in the current catalog.	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.

Comprehensive Review information (required by UH System)

Provide the year and URL for the location of this program's last Comprehensive Review on the HawCC Program/Unit Review website: http://hawaii.hawaii.edu/files/program-unit-review/	
Year	2014
URL	https://intranet.hawaii.hawaii.edu/filedepot/folder/297
Provide a short summary of the CERC's evaluation and recommendations from the program's last Comprehensive Review. Discuss any significant changes to the program that were aligned with those recommendations but are not discussed elsewhere in this report.	CERC noted that the Department Chair did the best he could due to lack of a program instructor. Main recommendation was to hire a new instructor. Secondary was to focus on assessment. Program did hire a new instructor who is presently teaching the program since fall 2015. New instructor is currently revising the program and developing assessment strategies with the assistance of the Department Chair and the Assessment Coordinator.

<u>ARPD Data: Analysis of Quantitative Indicators</u> (required by UH System)
Program data can be found on the ARPD website: **http://www.hawaii.edu/offices/cc/arpd/**

<mark>**Please attach a copy of the program's data tables**</mark>
<mark>**and submit with this Annual Program Review (APR).**</mark>

a) **If you will be submitting the APR in hard copy, print and staple a copy of the data tables to the submission; the icon to print the data tables is on the upper right side, just above the data tables.**
   OR

b) **If you will be submitting the APR in digital form (WORD or PDF), attach a PDF copy of the data tables along with the digital submission; the icon to download the data tables as a PDF is in the upper right of the screen, just above the data tables.**

Analyze the program's ARPD data for the review period.
Describe, discuss, and provide context for the data, including the program's health scores in the following categories:

Demand	
	The number used for the number of jobs available to our students is inaccurate. The jobs are numerous and tend to be known throughout industry. County is just a fraction of what is out there. I attended an **industry manufacturers conference** and was surprised to find the number of jobs that were immediately available here in the state. This information was collected through personal interviews. The published data is looks fine but is compiled by someone who is at a disadvantage to see the opportunities that exist in a field that has a large expanse of opportunities. The electronics field is huge and would be impossible to have accurate statistics using such a narrow perspective. Just as an example there are 10 sectors in which electronic technicians could find work. Just how many sub sectors would take some time to figure out. The point is, due to the diverse application of electronics it would be very difficult to create an accurate figure. http://uhcc.hawaii.edu/workforce/occupations/profile.php?state=HI&soc=17-3023 The number of majors were problematic as well. The program was on the verge of closure and we lost 12 majors and tainted the pool of future candidates. We are on a mission to reacquaint students with a new updated program

Efficiency	The Efficiency fill rate number is wrong. Year 15-16 there were 2.2 that's due to the near closure. The 16-17 there were 6.0. The program is currently in "Stop Out". Our numbers will get skewed some more.
Effectiveness	For box 19. If 15-16 is 100% 16-17 then has to be 100%. No one has dropped. The program picked up 1 student. For box 19a. persistence should be 100%. The program has not lost any students.
Overall Health	Overall Health should increase. More recruiting and a high retention rate the program should continue to grow. The program has been making efforts to recruit female students into this industry. Reconstruction of program is essential and near complete.
Distance Education	N/A
Perkins Core Indicators (if applicable)	Through the new recruiting efforts an emphasis has been placed on try to introduce more female students to the technology industries.
Performance Funding Indicators (if applicable)	

What else is relevant to understanding the program's data? Describe any trends, internal/external factors, strengths and/or challenge that can help the reader understand the program's data but are not discussed above.	The challenge of this program is the original curriculum was 30+ years out of date. The program has developed new courses with more concise CLO's and PLO's, Objectives and Topics, and a complete program redesign including course resequencing has been submitted to the Curriculum Review Committee for expected implementation in AY18-19. The CRC and Academic Senate have approved the redesign of the program and all 20 courses in Fall 17. We will have a respectable program when complete. Our changes are based on industry needs of today.

PROGRAM ACTIVITIES

Report and discuss all major actions and activities that occurred in the program during the review period, including the program's meaningful accomplishments and successes. Also discuss the challenges or obstacles the program faced in supporting student success and explain what the program did to address those challenges.

For example, discuss:

- Changes to the program's curriculum due to course additions, deletions, modifications (CRC, Fast Track, GE-designations), and re-sequencing;
- New certificates/degrees;
- Personnel and/or position additions and/or losses;
- Other changes to the program's operations or services to students.

With the help of the DC Harold Fujii, Institutional Assessment Coordinator Reshela DuPuis, catalog and curriculum staff Sherrie Straslicka-Walker and Shyann Viernes, we have developed a new and significantly better program for future students. We have been awarded a Perkins grant which will get us new signal generators, oscilloscopes, and programmable logic controllers. There will be emphasis on telecommunication and process and controls. Networking will be a secondary emphasis but is critical to the program.

The curriculum has had to change as well as the material. All has been updated and, as much as possible given the restrictions of the existing (old) curriculum, during AY16-17 the Instructor provided students with industry-current education and experience in the field.

The program has taken part in the reconstruction of the Challenger Shuttle Simulator.

The program has teamed up with the Children's Museum for a 747 aircraft display. Currently we are at the advising stage.

PROGRAM WEBSITE

Has the program recently reviewed its website? Please check the box below that best applies and follow through as needed to keep the program's website up-to-date.

☒ Program faculty/staff have reviewed the website in the past six months, no changes needed.

☐ Program faculty/staff reviewed the website in the past six months and submitted a change request to the College's webmaster on _____ (date).

☐ Program faculty/staff recently reviewed the website as a part of the annual program review process, found that revisions are needed, and will submit a change request to College's webmaster in a timely manner.

> *Please note that requests for revisions to program websites must be submitted directly to the College's webmaster at*
> http://hawaii.hawaii.edu/web-developer

PART 2: PROGRAM ACTION PLAN

AY17-18 ACTION PLAN

Provide a detailed narrative discussion of the program's overall action plan for AY17-18, based on analysis of the Program's AY16-17 data and the overall results of course learning outcomes assessments conducted during the AY16-17 review period.
This Action Plan should identify the program's specific goals and objectives for AY17-18, and must provide benchmarks or timelines for achieving each goal.

Major modifications to the program and all courses were proposed through the Curriculum Review Committee (CRC) process for full implementation in AY18-19.

The number of student enrollment is being addressed by active marketing locally and on Oahu.

The participation from industry has been a challenge. Most are willing to talk about needs but to get them to show up at an advisory meeting is very difficult.

ACTION ITEMS TO ACCOMPLISH ACTION PLAN

For each Action Item below, describe the strategies, tactics, initiatives, innovations, activities, etc., that the program plans to implement in order to accomplish the goals described in the Action Plan above.

For each Action Item below, discuss how implementing this action will help lead to improvements in student learning and their attainment of the program's learning outcomes (PLOs).

Action Item 1:

Update the program:

The program modifications have been proposed and have been approved by CRC and Academic Senate; awaiting Administration final approval. Implementation expected in Fall 2018.

Action Item 2:

Increase student enrollment:

The number of students is being addressed by active marketing locally and on Oahu. The marketing aspect is being addressed by 3 or more career day events at high schools where we display different bread board circuits, projects that we get involved in such as the Space Shuttle Challenger project and the opportunities with the internship from participating companies like Pisces. We also point out the potential places for employment and what salaries generally start at. I travel and stop to talk to counselors and inform them of our new and improved program and leave handouts for students with those interests.

Action Item 3:
Get industry involved:

The participation from industry has been a challenge. Most are willing to talk about needs but to get them to show up at an advisory meeting is very difficult. My plan is to simply explain that "Here's an opportunity to be able to develop a pool of potential employee candidates with desirable skills for the future." I will certainly target companies that show potential for expansion.

RESOURCE IMPLICATIONS

NOTE: General "budget asks" are included in the 3-year Comprehensive Review. Budget asks for the following three categories only may be included in the APR: 1) health and safety needs, 2) emergency needs, and/or 3) necessary needs to become compliant with Federal/State laws/regulations.

Provide a brief statement about any implications of or challenges due to the program's current operating resources.

A big problem for a technology based program is keeping current and that requires funding. I would like to suggest "lab fees" be required for this program. 35 years ago when I was in school I had lab fees. It's not a new concept for sure. Maintaining a level of excellence, we need to stay current on technology and its equipment. Unfortunately, it's in a constant state of change and we need to be proactive about it.

BUDGET ASKS

For budget ask in the allowed categories (see above):	
Describe the needed item(s) in detail.	N/A
Include estimated cost(s) and timeline(s) for procurement.	

Explain how the item(s) aligns with one or more of the strategic initiatives of 2015-2021 Strategic Directions: http://hawaii.hawaii.edu/sites/default/files/docs/strategic-plan/hawcc-strategic-directions-2015-2021.pdf	

PART 3: LEARNING OUTCOMES ASSESSMENTS

For all parts of this section, please provide information based on CLO (course learning outcomes) or PLO (program learning outcomes) assessments conducted in AY16-17.

Evidence of Industry Validation and Participation in Assessment (for CTE programs only)
Provide documentation that the program has submitted evidence and achieved certification or accreditation (if applicable) from an organization granting certification/accreditation in the program's industry/profession. If the program/degree/certificate does not have a certifying body, you must submit evidence of the program's advisory committee's/board's recommendations for, approval of, and/or participation in the program's assessment(s).
Please attach copy of industry validation for the year under review.

Courses Assessed

List all program courses assessed during AY16-17, including Initial and "Closing the Loop" assessments.			
Assessed Course Alpha, No., & Title	**Semester assessed**	**CLOs assessed (CLO#s)**	**PLO alignment (PLO#s)**
The program was on stop-out in AY16-17 so no new Initial assessments were conducted.			
"Closing the Loop" Assessed Course Alpha, No., & Title	**Semester assessed**	**CLOs assessed (CLO#s)**	**PLO alignment (PLO#s)**
	Fall 16	1,2,3,4	1,3,4

ETRO 143			

Assessment Strategies

For each course assessed in AY16-17 listed above, provide a brief description of the assessment strategy, including:
• a description of the type of <u>student work or activity assessed</u> (e.g., research paper, lab report, hula performance, etc.);
• a description of <u>how student artefacts were selected for assessment</u> (e.g., the assessment included summative assignments from all students in the course, <u>OR</u> a sample of students' summative assignments was randomly selected for assessment based on a representative percentage of students in each section of the course);
• a brief discussion of the <u>assessment rubric/scoring guide</u> and the criteria/categories and standards used in the assessment.
Course Alpha/#:   **ETRO 143**   The final exam was the indicator for competency. The final exam consist mostly of writing the answer response to the question. There are some diagram/schematic questions that require observation and calculation.   All students in the course were assessed. The instructor conducted the assessment.

Expected Levels of Achievement

For each course assessed in AY16-17 listed above, state the standard (benchmark, goal) for student success for each CLO assessed AND the percentage of students expected to meet that standard for each CLO.
Example: "CLO#1: The standard for student success is that students will answer 80% of the questions on the final exam related to CLO#1 correctly. The expectation is that 85% of students will meet this standard for CLO#1."
Example: "CLO#4: The standard for student success is that students will be able to perform skills associated with CLO#4 with 80% proficiency. The expectation is that 75% of students will meet this standard for CLO#4."

Assessed Course Alpha, No., & Title	Assessed CLO#	Standard for Success	% of Students Expected to Meet Standard
ETRO 143-CTL	1	80%	80%
	2	80%	80%
	3	80%	80%
	4	80%	80%

Results of Course Assessments

For each course assessed in AY16-17 listed above, provide:
• **a statement of the quantitative results;**
• **a brief narrative analysis of those results.**

Course Alpha/#:

ETRO 143-CTL

No change from the final exam. The initial assessment plan was the same as done here. Some instructional changes were implemented based on results. The results of the changes were good. The idea of changing the course sequencing was of concern because the sequence of the learning was never changed in years. Teaching the 143 and the 120 courses during the same semester allowed more extensive examination of technical concepts in other semesters. Originally, the concern I had with teaching the ETRO 120 and the ETRO 143 in the same semester was that it could possibly be too much tech at once for my students. However, I have found that wasn't so, which was supported by the data. All of my students were successful in the 143 class. All students exceeded my expectations. The lowest score overall grade was 90.83 and the final provided mixed results. 50% of the students exceeded expectations while the other passed the final but did not do as well as expected.

Overall course grade	Final test grade
99.13%	97%
90.75%	90%
90.83%	77%
92.77%	77%
98.84%	99%
93.06%	77%
Class average	Class average
94.23	86.16

The results are odd. The overall grade scored well but the Final test left a question of why did half do really well and the other not so much? I think part of the reason is the number of the potential questions that are available is numerous. I interviewed students to inquire about their results. The reasons were they drew a blank or interpreted the question other than the intent.
 I plan on examining the final document questions and will attempt to clarify the questions for future cohorts. The number of credit hours given towards the 143 course is inadequate to cover the necessary concepts that should be covered and is being addressed in the restructure of the course/program.

Other Comments

Include any additional information that will help clarify the program's course assessment results, successes and challenges.   **N/A**
Discuss, if relevant, a summary of student survey results, CCSSE, e-CAFE, graduate-leaver surveys, special evaluations, or other assessment instruments that are not discussed elsewhere in this report. eCafe has been a challenge to get students to participate in.

Next Steps – ASSESSMENT ACTION PLAN for AY17-18

Describe the program's intended next steps to improve student learning, based on the program's overall AY16-17 assessment results. Include any specific strategies, tactics, activities or plans for improvement to program or course curriculum or instructional strategies, or changes in program or course assessment practices.
The program has not had consistent assessments for quite some time, although the current Instructor has been working with the Assessment Coordinator on assessment plans and analysis of results. The plan is to finish the program redesign and implement the new program in AY17-18, and to continue assessments this year as possible. Then, once the new program is in place, to develop a strategy for the new courses, including a reasonable schedule of assessments.

PART 4: ADDITIONAL DATA

Cost Per SSH <mark>**(to be provided by Admin)**</mark>
Please provide the following values used to determine the total fund amount and the cost per SSH for your program:

General Funds   = $_____
Federal Funds   = $_____
Other Funds   = $_____
Tuition and Fees   = $_____

External Data*

If your program utilizes external licensures, enter:

Number sitting for an exam   _____
Number passed   _____

<mark>*This section applies to NURS only.</mark>

Hawaii Community College
2017 Instructional Annual Report of Program Data
Electronics Technology

Part I: Program Quantitative Indicators

Overall Program Health: Cautionary

Majors Included: ET   Program CIP: 15.0303

Demand Indicators		Program Year			Demand Health Call
		14-15	15-16	16-17	
1	New & Replacement Positions (State)	13	31	16	
2	*New & Replacement Positions (County Prorated)	1	2	2	
3	Number of Majors	10	4	12	
3a	Number of Majors Native Hawaiian	3	0	4	
3b	Fall Full-Time	82%	50%	73%	
3c	Fall Part-Time	18%	50%	27%	
3d	Fall Part-Time who are Full-Time in System	0%	0%	0%	Cautionary
3e	Spring Full-Time	88%	75%	58%	
3f	Spring Part-Time	13%	25%	42%	
3g	Spring Part-Time who are Full-Time in System	0%	0%	0%	
4	SSH Program Majors in Program Classes	151	52	184	
5	SSH Non-Majors in Program Classes	49	6	147	
6	SSH in All Program Classes	200	58	331	
7	FTE Enrollment in Program Classes	7	2	11	
8	Total Number of Classes Taught	10	10	19	

Efficiency Indicators		Program Year			Efficiency Health Call
		14-15	15-16	16-17	
9	Average Class Size	7.8	2.2	5.4	
10	*Fill Rate	56.5%	14.6%	38.2%	
11	FTE BOR Appointed Faculty	0	1	1	
12	*Majors to FTE BOR Appointed Faculty	0	4	11.5	
13	Majors to Analytic FTE Faculty	10.3	4.2	6.2	
13a	Analytic FTE Faculty	0.9	1.0	1.9	Cautionary
14	Overall Program Budget Allocation	Not Reported	Not Yet Reported	$110,857	
14a	General Funded Budget Allocation	Not Reported	Not Yet Reported	$106,899	
14b	Special/Federal Budget Allocation	Not Reported	Not Yet Reported	$0	
14c	Tuition and Fees	Not Reported	Not Yet Reported	$3,958	
15	Cost per SSH	Not Reported	Not Yet Reported	$335	
16	Number of Low-Enrolled (<10) Classes	8	10	18	

*Data element used in health call calculation

Last Updated: October 29, 2017

Effectiveness Indicators		Program Year			Effectiveness Health Call
		14-15	15-16	16-17	
17	Successful Completion (Equivalent C or Higher)	95%	95%	97%	
18	Withdrawals (Grade = W)	0	1	1	
19	*Persistence Fall to Spring	63.6%	100%	90.9%	
19a	Persistence Fall to Fall	28.5%	66.6%	54.5%	
20	*Unduplicated Degrees/Certificates Awarded	9	2	1	
20a	Degrees Awarded	5	2	1	Cautionary
20b	Certificates of Achievement Awarded	0	0	0	
20c	Advanced Professional Certificates Awarded	0	0	0	
20d	Other Certificates Awarded	14	3	0	
21	External Licensing Exams Passed	Not Reported	N/A	N/A	
22	Transfers to UH 4-yr	1	2	0	
22a	Transfers with credential from program	0	2	0	
22b	Transfers without credential from program	1	0	0	

Distance Education: Completely On-line Classes		Program Year			
		14-15	15-16	16-17	
23	Number of Distance Education Classes Taught	0	0	0	
24	Enrollments Distance Education Classes	N/A	N/A	N/A	
25	Fill Rate	N/A	N/A	N/A	
26	Successful Completion (Equivalent C or Higher)	N/A	N/A	N/A	
27	Withdrawals (Grade = W)	N/A	N/A	N/A	
28	Persistence (Fall to Spring Not Limited to Distance Education)	N/A	N/A	N/A	

Perkins IV Core Indicators 2015-2016		Goal	Actual	Met	
29	1P1 Technical Skills Attainment	92.00	100.00	Met	
30	2P1 Completion	51.00	50.00	Not Met	
31	3P1 Student Retention or Transfer	81.00	75.00	Not Met	
32	4P1 Student Placement	63.87	80.00	Met	
33	5P1 Nontraditional Participation	22.00	0.00	Not Met	
34	5P2 Nontraditional Completion	22.00	0.00	Not Met	

Performance Measures		Program Year			
		14-15	15-16	16-17	
35	Number of Degrees and Certificates	5	2	1	
36	Number of Degrees and Certificates Native Hawaiian	2	1	0	
37	Number of Degrees and Certificates STEM	5	2	1	
38	Number of Pell Recipients[1]	3	1	0	
39	Number of Transfers to UH 4-yr	1	2	0	

*Data element used in health call calculation

[1]PY 16-17; Pell recipients graduates not majors

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