Facilities Engineering

2019
ANNUAL REPORT OF PROGRAM DATA

UNIVERSITY of HAWAI'I®
KAUA'I
COMMUNITY COLLEGE

At a minimum, each program or unit Annual Program Review Update shall include measures described in UHCCP 5.202. Additional measures may also be used for program or unit assessment.

1. Program Description

Program or Unit Mission Statement

The Facilities Engineering Technology (FENG) program will prepare individuals for employment in jobs requiring multiple maintenance competencies. These competencies will allow graduates to obtain general maintenance positions in a variety of industries. Graduates will have gained knowledge in electrical applications and practices; refrigeration and air conditioning systems; basic plumbing installations and repair; and drywall, painting, and construction methods. The program has been revised in response to industry needs.

Part I. Program Description

Date of Last Comprehensive Review	10/31/2018
Date Website Last Reviewed/Updated	8/16/2019
Target Student Population	Current Kaua'i DOE High School Seniors and 20 to 40 year olds looking to change occupations to learn a building mainitenance trade. Military students looking to utilize their GI Bill. Part Time evening students
External Factor(s) that Affected the Program or Unit	Touriset and hospitality industry trends. Construction Acadamy at DOE, Alu Like program "Kai kai a' o' Program", and internships with various contractors on island.

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).

Include the Annual Review of Program Data (ARPD; all Instructional programs and Academic Support programs - Library, Technology Resources, Testing Center, Tutoring, and Financial

Aid), program-developed metrics (Institutional Effectiveness programs, Office of Continuing Education and Training, campus committees), or metrics required by UHCCP 5.202 that are not provided as ARPD (Administrative Service programs and some Student Support programs) under review in table format below (EP 5.202 and UHCCP 5.202).

The Overall Program Health is Cautionary

Describe and discuss demand, efficiency, effectiveness, and overall health categories. What has been the trend over the past three years in each of these categories? What factors (internal or external) may have contributed to the program or unit health categories? For Career and Technical Education (CTE) programs, provide a discussion on any unmet Perkins Core Indicator that includes contributing factors (UHCCP 5.202).

Based on this analysis, what are the program's strengths and areas to improve regarding demand, efficiency, and effectiveness?

Describe any significant program actions that occurred in the prior year (e.g., new certificate(s), stop outs, gain/loss of position(s), reduction in funding, new or completed grant(s), etc.).

Career and Technical (CTE) programs should provide an analysis for any unmet Perkins Core Indicators.

Demand Indicators		2016 - 17	2017 - 18	2018 - 19	Demand Health
1.	New & Replacement Positions (State)	51	52	46	**Unhealthy** Insufficient Data County Level
*2	New & Replacement Positions (County Prorated)	1	1	1	
3.	Number of Majors	12	14	18	
3a.	Number of Majors Native Hawaiian	3	1	5	
3b.	Fall Full-Time	25%	8%	28%	
3c.	Fall Part-Time	75%	92%	72%	
3d.	Fall Part-Time who are Full-Time in System	0%	0%	0%	
3e.	Spring Full-Time	0%	0%	0%	
3f.	Spring Part-Time	100%	100%	100%	
3g.	Spring Part-Time who are Full-Time in System	0%	0%	0%	
4.	SSH Program Majors in Program Classes	88	41	136	
5.	SSH Non-Majors in Program Classes	66	87	43	
6.	SSH in All Program Classes	154	128	179	
7.	FTE Enrollment in Program Classes	5	4	6	
8.	Total Number of Classes Taught	7	6	7	

	Efficiency Indicators	2016 - 17	2017 - 18	2018 - 19	Efficiency Health
9.	Average Class Size	9	9	10	Cautionary
*10.	Fill Rate	67.7%	61.5%	75%	
11.	FTE BOR Appointed Faculty	0	0	0	
*12.	Majors to FTE BOR Appointed Faculty	0	0	0	
13.	Majors to Analytic FTE Faculty	0	0	0	
13a.	Analytic FTE Faculty	1	0	1	
14.	Overall Program Budget Allocation	$183,605	$161,267	$0	
14a.	General Funded Budget Allocation	$151,629	$151,436	$0	
14b.	Special/Federal Budget Allocation	$0	$0	$0	
14c.	Tuition and Fees	$31,976	$9,831	$0	
15.	Cost per SSH	$1,192	$0	$0	
16.	Number of Low-Enrolled (<10) Classes	4	4	5	

	Effectiveness Indicators	2016 - 17	2017 - 18	2018 - 19	Effectiveness Health
17.	Successful Completion (Equivalent C or Higher)	71%	91%	93%	Healthy
18.	Withdrawals (Grade = W)	4	0	1	
*19.	Persistence Fall to Spring	58%	92%	89%	
19a.	Persistence Fall to Fall	33%	33%	50%	
*20.	Unduplicated Degrees/Certificates Awarded	5	1	6	
20a.	Degrees Awarded	0	0	0	
20b.	Certificates of Achievement Awarded	0	0	0	
20c.	Advanced Professional Certificates Awarded	0	0	0	
20d.	Other Certificates Awarded	9	2	10	
21.	External Licensing Exams Passed	0	0	0	
22.	Transfers to UH 4-yr	0	0	0	
22a.	Transfers with credential from program	0	0	0	
22b.	Transfers without credential from program	0	0	0	

	Perkins Indicators	Goal	Actual	Met
29.	1P1 Technical Skills Attainment	93	100	Met
30.	2P1 Completion	55	0	Not Met
31.	3P1 Student Retention or Transfer	81.9	50	Not Met
32.	4P1 Student Placement	66.25	60	Not Met
33.	5P1 Nontraditional Participation	23.5	12.5	Not Met
34.	5P2 Nontraditional Completion	23	0	Not Met

	Performance Indicators	2016 - 17	2017 - 18	2018 - 19
35.	Number of Degrees and Certificates			
36.	Number of Degrees and Certificates Native Hawaiian			
37.	Number of Degrees and Certificates STEM			
38.	Number of Pell Recipients[1]			
39.	Number of Transfers to UH 4-yr			

The Facility Engineering Program has been listed as a CIP Code: 15.9999 for other types of Engineers since 2008. The reasoning from former instructors was to try and attract students through the title and to use these students in the STEM counts at the college. The actual CIP Code for this occupation is 46.0401 Building/Property Maintenance and Management or on O*NET Online the code is 49-9071.00 - Maintenance and Repair Workers, General. Because of this the actual jobs available is not accurate with the Demand Indicators for jobs in Hawaii and Kauai is incorrect. With the jobs from indeed.com for this occupation there is 4 to 5 job openings per week with many jobs unfilled for three months or more

Demand Indicators
Using the SOC Code 49-9071 Maintenance and Repair Worker there were 8,139 replacement jobs with 344 new jobs projected for this year. During the last year many local employers have contacted us about job referrals for our students. Recruiting at the DOE and through the Construction Academy our efforts are beginning to pay off. Also local employers are encouraging their employees to update their skills through our night program. More adults are taking the program to gain better skills to make themselves more marketable to the local employers. Because of economic climate, larger commercial and industrial positions have decreased slowly over the past five years which forces those employees to look into the tourist/ hospitality maintenance area for employment. The number of related trades is not taken into account with the number of jobs available. Therefore, the program produces enough majors for

New and Replacement positions available for entry level Building/Property Maintenance and Management positions. The overall health in Demand Indicators would be HEALTHY if the correct data was available.

During the last year, the number of majors has increased, and class size has averaged over ten students per class. The data also shows a low number of full-time students, but our target students are part time at nights. While the numbers of part-time students have held steady from 75% to 75%. This is because of stability in the faculty teaching courses and the classes being offered on a two year cycle consistently. The emphases and request in HVAC courses has increased and has been a needed area for improvements in instructor and lab accessibility. The number of SSH Program Majors in Program Classes have been up and increased during the three year cycle with an influx of new students during the last semester, With a high of 179 and a low of 88 but is estimated to level off during next few years at 160. FTE Enrollment in Program Classes peaked in AY17-18 and is trending to level off at approximately 10 over the next five years. Additional recruitment can be used to increase these numbers. The total number of classes taught has stayed the same at 7 each year, mainly due to creating a standard two-year pathway asked for by the administration. Demand for the overall health would be HEALTHY if the correct data was available, and this is a program where the enrollment can grow to meet the needs of the local economy and job seeking students.

Efficiency Indicators
The Average Class size for the FENG Program has increased slightly from 9 to 10 over last three years, and hopefully shows a future upward trend with the help of the full time faculty and Career Track Coordinator. The Fill Rate slightly increased over last year up to 75% from 61.5%. Demand for HVAC has required that the course be scheduled for spring 2020 so that eight students can complete their certificate early. FTE BOR Appointed faculty remains at 0, with Full time faculty from Carpentry and Electrical teaching courses with lectures teaching remaining classes. Majors to Analytic FTE Faculty has no data available. Several sections of data were not provided in this past three years under budget allocation. The number of Low-Enrolled classes has increased from 4 to 5 by with the majority of the courses around 9 students enrolled. The number of entry level courses has been limited to fall semester and students must now start then to begin the cycle.

Effectiveness Indicators
In 2017 shows that the Successful Completion has increased from 71% to 93% in 2019, which is up from the past three years. The majority of these students have either had scheduling conflicts or have taken jobs locally. Withdrawals have also been low overall with five during the five year cycle and one last year. Persistence fall to spring indicates an upward trend from 58% to 89% with a peak of 92%, although the Persistence fall to fall has increased from 33% to 50%, part of that may be attributed to high number of students starting that year trying to use their enrollment

to qualify for entrance programs and increased recruitment. While the number of Unduplicated Degree/Certificates Awarded and Degree Awarded rose, this is due to faculty intervention. The move to the new Building Construction Technology degree and certificates will allow us to count these student's as completers.
A PAR change to Building Construction Technology in fall 2020 will address this issue of low enrollment, and will allow students to select from other course offerings. The number of Transfers with and without credential from the program is nonexistent; and is not a measured positive outcome for this CTE program that has historically been a terminal degree.

Distance Education (Completely On-line Classes)
The FENG program does not offer Distance Learning at the current time.

Performance Indicators
Since the most students are part time and only CO's are currently given no data for this section is available.

Perkins Core Indicators
The FENG Program did meet the Perkins Core Indicators for Technical Skills Attainment at 100% but the Completion, Student Retention/Transfer and Student Placement goals were not met. It is difficult to ascertain why the other six core indicators were not met as the data provided is incomplete. Nontraditional Participation and Completion has been a priority in the FENG Program. We have had our new Trades Tracking Coordinator working with students to make sure opportunities are given to the nontraditional students that are interested in the program. Recruitment to housekeeping and custodial staffs at the local employers to show advancement is available may help increase these numbers

The last CPR (Comprehensive Program Review) was in 2018 and was reviewed by the college cabinet.

3. Program Student Learning Outcomes

a) List of the Program Student Learning Outcomes
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.

Report on PSLO assessment for the prior year.

1. List of the PSLOs.
2. Indicate PLSOs that were assessed in the year of this APRU.
3. Assessment findings.
4. Changes that have been made as a result of the assessment findings.
5. Next planned assessment date.

PSLO	Assessed During this APRU Cycle (Y or N)	Findings	Improvements Implemented	Next Assessment Date
Read and understand blueprints sufficiently to use them to plan a project.	Yes	All students passed with 70%	Work on "Just in Time" Math	Annually
Select materials properly for a given project.	Yes	All students passed with 80%	Work on identifying proper building materials	Annually
Maintain and care for the tools required in the construction and maintenance industry	Yes	All students passed with 90%	Students can improve on maintaining basic hand tools more efficiently	Annually
Know and utilize Occupational Safety and Health Administration (OSHA) and State safety regulations to minimize risk and protect self and others.	Yes	All students passed with 100%	Constant monitoring	Evaluated on a daily basis
Communicate successfully in writing, orally, and with computer technology.	Yes	All students passed with 70%	Students are required to write a weekly log.	Annually

Understand proper mechanical, electrical, and carpentry codes and standards applicable to construction and repair.	Yes	All students passed with 80%	Apply the use of building cades and standards in working on in-class projects.	Annually
Understand and demonstrate the craftsmanship standards of dependability, punctuality, and quality.	Yes	All students passed with 80%	Students are required to make up tardiness after class, cleaning up.	Daily

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.

Action Plan	**Anticipated Outcome**	**Actual Outcome**
Update and maintain equipment to industry standards and train students using up and coming technologies	Carpentry Shop: (1) Shop Compressor (1) Table Saw Welding Shop: Welding Shop (1) Metal Band saw (1) Shop Compressor (1) Hydraulic Shear (1) Iron Metal Worker (7) Welders Misc. tool boxes and hand tools	Items were purchased using Perkins Funds and installed using existing budgets from Electrical and Carpentry budget.
Increase Welding Budget by $2100.	Purchase additional welding supplies that are currently from other classes	No funds were available.

List any additional significant actions that impacted your program (e.g., new certificate, loss or gain of faculty or staff, stop outs, etc.).

Programs are still under individual programs and still in the process of being combined.

Analysis of Alignment with CPR

List the goals that were identified to be initiated, continued, or completed during this APRU cycle, in your last CPR, and if they were achieved. Be sure to include the benchmark, desired outcome, actual outcome, and unit of measure. If you completed your last CPR prior to 2018, please refer to * in this section.

Goal/Strategic Goal or Priority**	Achieved (Y or N)?	Benchmark	Desired Outcome	Actual Outcome	Unit of Measure
Strategic Goal 1: Increase the Number of Graduates	Yes	10	5	6	ARPD
Strategic Goal 5: Eliminate Access and Success Gaps		Promote job placement and position advancement for those already employed prior to completion of certificate or degree.	63%	60%	Perkins Indicator 1 year delay
Strategic Goal 6: Reduce the Time to Degree: Accelerate College Readiness		Offer course scheduling that allows students to complete their certificates and degrees in the least amount of	n/a	n/a	MYPO

Goal/Strategic Goal or Priority**	Achieved (Y or N)?	Benchmark	Desired Outcome	Actual Outcome	Unit of Measure
Strategic Goal 11: Increase Campus and Community Sustainability		time necessary. Demonstrate and implement industry best practices across the curriculum.	n/a	n/a	Livetext Data

**All Strategic Goals and Priorities are Aligned to the College Mission.

Describe any impacts these goals had on your health indicator(s).
Class enrollment increased fall 2019 from previous years from recruiting and construction academy at the DOE. Items 3 and 4 were goals from previous program coordinator. No data was collected to measure.

*Based on findings in Parts I – IV, develop an action plan for your program or unit from now until your next CPR date. This should include goals that align with the College Mission, measurable outcomes, benchmarks, and alignment to the College's Strategic Priorities, and/or Strategic Goals. Be sure to focus on weaknesses identified in ARPD data, PSLO outcomes, results of survey data, and other data used to assess your unit or program. This plan should guide your program and subsequent APRUs, but may be amended based on new initiatives, updated data, or unforeseen external factors.

Goal	Strategic Goal/Priority (List number)	Benchmark	Desired Outcome	Unit of Measure	Year(s) Implemented
Combine all Building Construction Programs into one program	Strategic Goal 1: Increase the Number of Graduates	10	10	ARPD	2020-2021

5. Resource Implications

Resource Request(s) for next year (from CPR Plan for your program or unit, or one(s) developed in Part V above if CPR was completed prior to 2018).

X☐ I am NOT requiring resources for my program/unit.