Annual Program Review Update Outline
You may also download the below outline from the KCC Program Review webpage.

Kaua`i Community College
Annual Program Review Update for
Facilities Engineering Technology

Web address of your last comprehensive review is at:

http://www.hawaii.edu/offices/cc/arpd/instructional.php?action=quantitativeindicators&year=2017&college=KAU&program=94

Program 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. Quantitative Indicators

Overall Program Health: Cautionary

Majors Included: FENG   Program CIP: 15.9999

Demand Indicators		Program Year			Demand Health Call
		14-15	15-16	16-17	
1	New & Replacement Positions (State)	218	262	225	Healthy
2	*New & Replacement Positions (County Prorated)	20	20	17	
3	Number of Majors	25	13	12	
3a	Number of Majors Native Hawaiian	4	2	3	
3b	Fall Full-Time	11%	7%	25%	
3c	Fall Part-Time	89%	93%	75%	
3d	Fall Part-Time who are Full-Time in System	0%	0%	0%	
3e	Spring Full-Time	0%	9%	0%	
3f	Spring Part-Time	100%	91%	100%	
3g	Spring Part-Time who are Full-Time in System	0%	0%	0%	
4	SSH Program Majors in Program Classes	177	87	88	
5	SSH Non-Majors in Program Classes	152	150	66	
6	SSH in All Program Classes	329	237	154	
7	FTE Enrollment in Program Classes	11	8	5	
8	Total Number of Classes Taught	15	12	7	

Efficiency Indicators		Program Year			Efficiency Health Call
		14-15	15-16	16-17	
9	Average Class Size	9.3	8	9.3	
10	*Fill Rate	66.1%	56.4%	67.7%	
11	FTE BOR Appointed Faculty	0	0	0	
12	*Majors to FTE BOR Appointed Faculty	0	0	0	
13	Majors to Analytic FTE Faculty	19.3	11.6	20.3	
13a	Analytic FTE Faculty	1.3	1.1	0.6	
14	Overall Program Budget Allocation	$69,734	$152,065	Not Yet Reported	**Cautionary**
14a	General Funded Budget Allocation	$67,124	$145,847	Not Yet Reported	
14b	Special/Federal Budget Allocation	$0	$0	Not Yet Reported	
14c	Tuition and Fees	$2,610	$6,218	Not Yet Reported	
15	Cost per SSH	$212	$642	Not Yet Reported	
16	Number of Low-Enrolled (<10) Classes	7	10	4	

*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)	88%	88%	71%	
18	Withdrawals (Grade = W)	1	2	4	
19	*Persistence Fall to Spring	62.9%	71.4%	58.3%	
19a	Persistence Fall to Fall	29.6%	21.4%	33.3%	
20	*Unduplicated Degrees/Certificates Awarded	11	4	5	
20a	Degrees Awarded	0	0	0	
20b	Certificates of Achievement Awarded	0	0	0	
20c	Advanced Professional Certificates Awarded	0	0	0	**Unhealthy**
20d	Other Certificates Awarded	16	8	9	
21	External Licensing Exams Passed	Not Reported	Not Reported	N/A	
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	

Distance Education:	Program Year			
	14-15	15-16	16-17	

Completely On-line Classes				
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	37.50	Not Met
31	**3P1 Student Retention or Transfer**	81.00	46.15	Not Met
32	**4P1 Student Placement**	63.87	93.33	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**	0	0	0
36	**Number of Degrees and Certificates Native Hawaiian**	0	0	0
37	**Number of Degrees and Certificates STEM**	0	0	0
38	**Number of Pell Recipients[1]**	7	1	0
39	**Number of Transfers to UH 4-yr**	0	0	0

*Data element used in health call calculation   **Last Updated: October 29, 2017**
[1]PY 16-17; Pell recipients graduates not majors

Part II. Analysis of the Program

DEMAND: Although industry demand is up, the number of Majors has dropped. Traditionally, the majority of FENG students work full time and take their classes in the afternoons and evenings.

EFFICIENCY: The efficiency indicator is Cautionary this year. This indicator is based on fill rate and major to FTE faculty. One full time faculty instructor and program coordinator was hired for the Carpentry and Facilities Engineering Programs in January 2014. Program concerns are being worked on through a major program consolidation of CARP, FENG, and EIMT. These three programs will be consolidated into one major, Building Construction Technology. The new program will offer one AAS degree, three Certificate of achievements, and three or more Certificate of Competencies. To help

guide the program an advisory board was established in Spring 2015. The FENG Program Coordinator is regularly working with the Advisory Board to update courses, program pathways, and job placement.

EFFECTIVENESS: Fall to Spring Persistence has been a challenge for the last 3 years, but we are currently on an upswing. The program is not graduating quite as many students as it needs to in order to fulfill the work force needs of the community. Many students are on different tracts on course completion which make the data collection very unpredictable.

Based on this data, a reasonable conclusion could be that the program should concentrate efforts on both attracting new students and on keeping current majors interested in FENG and on track in the program. This would improve student persistence, graduate more students, and fill the workforce needs of the community.

PERKINS: We have met the Perkins Core Indicators in the areas of Technical Skills Attainment and Student Placement.

Part III. Goals, Alignment and Action Plan

To improve student enrollment and program efficiency, the Carpentry, Facilities Engineering, and Electrical Installation and Maintenance Programs will be combined into the Building Construction Technology Program. With the Board of Regents approval, the new program will begin Fall 2018 for students who would like to earn an AAS Degree and will have a Certificate of Achievement and Certificate of Competence in Facility Engineering.

Upon Board of Regents approval, a new five year plan will need to be created with new goals established. The Employer Teams from CARP, EIMT, WELD, and FENG will be combined into one, but will meet in their individual disciplines as needed. This will help the building of relationships within the industries that are involved with the program's course content.

The island has a direct need for personnel in both construction projects and the maintaining of these facilities. The new program will offer education and training that will assist these Kaua'i industries to involve local companies. This will help with the growth of these industries in the areas of new and emerging technologies, both Green and Sustainable Construction and Alternative Energy. The projected growth indicates a need for trained individuals.

2016-2021 Strategic Goals

(2016-2017 Priority Goals are underlined)

Note: For reporting year 2015-2016, please address how the program met the Kauai Community College 2008-2015 Strategic Goals, while also using the 2016-2021 Strategic Goals to create your action plan.

Goal Alignment UH System Goals, Kauai Community College Goals, and Strategic Goals	Program Goals
UHCC/KCC Initiative: Hawaii Graduation Initiative	
Strategic Goal 1: Increase the Number of Graduates	Increase the number of graduates to 10 unduplicated certificates or more per year.
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.
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 time necessary.
UHCC/KCC Initiative: Hawaii Innovation Initiative	
Strategic Goal 8: Increase Job Placement for KauaiCC Students	Promote job placement and position advancement for those already employed prior to completion of certificate or degree.
Strategic Goal 9: Increase the STEM Workforce	Promote job placement and position advancement for those already employed prior to completion of certificate or degree.
UHCC/KCC Initiative: Modern Teaching and Learning Environment	
Strategic Goal 11: Increase Campus and Community Sustainability	Demonstrate and implement industry best practices across the curriculum.

Status Report for the prior year requests

No items were requested.

Action Plan and New Resource Request

The FENG, EIMT, and CARP programs anticipate being consolidated into one program starting Fall 2018. Upon Board of Regents official approval, all capital requests for FENG will be through Building Construction Technology Program.

In the mean time, FENG will utilize its current budget and share resources between the CARP and EIMT programs. Perkins Grants and equipment replacement requests will also be made.

Part IV. Resource Implications

We are currently assessing our new program with Carpentry and EIMT and individual course needs. Many of our courses utilize consumable material to teach the course. These materials add up very quickly. So far we have been very successful in partnering with campus initiatives to provide the materials and learning experiences for each course. To address these needs in the future we will need to secure a community partner or secure grant money to cover these expenses.

To further advance our program, specific content area trainers (hands-on modules and computer simulation software) could be identified and purchased to help develop the program and students' understanding of industry standards.

Part V. Program Student Learning Outcomes and Assessment

All PSLO's are assessed throughout the FENG curriculum:

Facilities Engineering Technology Program Student Learning Outcomes (PSLOs)

1. Read and understand blueprints sufficiently to use them to plan a project.
2. Select materials properly for a given project.
3. Maintain and care for the tools required in the construction and maintenance industry.
4. Know and utilize Occupational Safety and Health Administration (OSHA) and State safety regulations to minimize risk and protect self and others.
5. Communicate successfully in writing, orally, and with computer technology.
6. Understand proper mechanical, electrical, and carpentry codes and standards applicable to construction and repair.
7. Understand and demonstrate the craftsmanship standards of dependability, punctuality, and quality

A) Evidence of Industry Validation

An annual Advisory Board meeting was conducted with local employers to indicate that course offerings are meeting the needs and requirements of the State of Hawai'i. Future meetings will be held under the Building Construction Technology with representation for FENG.

B) Expected Level Achievement
PSLOS are assessed generally at 70 percent. However, PSLOs are not directly assessed but rather CSLOs and assessments are translated into PSLO assessment. Since all CSLOs were reviewed in 2014-2015, and mapped to PSLOs.

C) Courses Assessed

All CSLOs are assessed when they are taught.

D) Assessment Strategy/Instrument

1	**Hands-on skills** with hand/power **tools**, meters, **instrumentation**, and **software**; demonstrated by projects, tests, practical labs
2	**Technical knowledge** and **critical thinking** skills as applied to systems, operations and development; demonstrated by projects, tests, practical labs
3	Technical knowledge and **critical thinking** skills as applied to **troubleshooting**; demonstrated in lab environments
4	**Workplace skills**--Work ethic, initiative, leadership, team player; demonstrated in lab and group environments
5	**Communication** demonstrated in projects, computer submissions, oral presentations
6	**Ethics, diversity, awareness** with sensitivity and respect toward others.
7	Life long learning, adaptability, and an ingrained consciousness toward **quality, thoroughness** and attention to detail.

E) Results of Program Assessment

Courses were aligned to PLOs in 2015-2016.

F) Other Comments

Many of the materials that the students use are from sustainability or construction projects on campus. If future projects are unavailable lab cost will increase as students use more consumables in the class room to test hands on exam requirements. The cost of teaching construction technology courses involves costly consumables that have to be purchased prior to many of the FENG classes. The funding we get from the division is not enough to cover these costs. Our solution is to pursue grants to make up the deficiencies in replacing equipment, and possibly charge lab fees for the consumables.

G) Next Steps

As the consolidation of programs and the requirements for licensing changes in the curriculum will need to be updated and the need for online training will need to be increased to accommodate the future training needs of the island. The existing model for training in the community college is designed for transfer students and not "college-to-work" students. New training methods need to be explored to efficiently offer the trades courses to the smaller numbers on the Island of Kaua'i.

Part VI. Programs Cost Per SSH

This will be filled in by the VCAA's office with the help of the Business office and clerk-stenos.

Part VII. Capacity Collect Alternative Measurement

If your program has an externally mandated (e.g. professional accreditation or licensing) capacity of less than 16 students per faculty, the program may be eligible for alternative efficiency health call calculation.