



# Electrical Installation and Maintenance (EIMT)



UNIVERSITY of HAWAII®  
**KAUA'I**  
COMMUNITY COLLEGE

## Kaua'i Community College Five Year Comprehensive Program Review (CPR)

**Program Name: Electrical Installation and Maintenance Technology (EIMT)**

**Assessment Period: (e.g., 2017-2022) AY's 2017-2018 through 2022-2023**

### **Program or Unit Mission Statement (UHCCP 5.202)**

The Electrical Installation and Maintenance Technology (EIMT) mission is to provide Kaua'i CC open access, postsecondary education to qualified students. This will provide island employers with a trained workforce having entry-level electrical installation and maintenance skills. To provide Students with a certificate or degree that fulfills education requirements of HRS 448E of the State of Hawai'i the Hawai'i Department of Commerce and Consumer Affairs: Professional & Vocational Licensing.

Electrical Installation and Maintenance fulfills its mission by incorporating the following practices. The Program:

- Makes classes available through credit/non-credit to meet State licensure requirements;
- Delivers classes for entry level, working apprentice adults and experienced journey-people in small classes that meet the island population size;
- Provides a valuable program that contributes to the island's workforce and community needs;
- Prepares and supports electrical students by providing training that otherwise would not be available except by traveling to the mainland or other islands;
- Encourages students to stay and work on the island of Kaua'i to provide economic growth to the community.

### College Mission Statement (UHCCP 5.202)

Kaua‘i Community College is a kahua that inspires, engages, and empowers learners and educators to enrich our community and our world.

Ke kū nei ke Kulanui Kaiāulu ma Kaua‘i ma ke ‘ano he kahua e  
ho‘oulu, ho‘ā, a ho‘oikaika ‘ia ai ka ‘ike a me ka na‘auao o nā  
kānaka a‘o aku a a‘o mai no ka ho‘owaiwai ‘ana i ke kaiāulu a  
me ka honua.

‘O ke kahua ma mua, ma hope ke kūkulu.  
First comes the foundation, then comes the building.  
(‘Ōlelo No‘eau, number 2459)

## Part I. Executive Summary of Program Status

With a changing Kaua‘i economy coupled with low enrollments, a decision was made to consolidate the EIMT, FENG, AEC, and WELD programs with the Carpentry Program to create the Construction Program. This re-envisioned program was intended to align and articulate with the programs at both Maui College and West Oahu. However, there were various implementation challenges to that proposal. As a result, a new proposal was submitted as part of *Ka Papa Hana Holomua: Academic Affairs Plan Fall 2021- Fall 2026* to UHCC. Part of this plan is for EIMT and FENG to stop-out in Fall 2022 and complete a Teach-Out plan by Spring 2024. This proposal was abandoned because the program was able to successfully increase enrollment, and there is sufficient evidence of the skilled workforce needed as articulated by island employers. During the last two (2) years the program has been healthy and has continued to grow.

A more prudent decision was made to consolidate the Electro-Mechanical CO of FENG with the EIMT program and the Facility Maintenance CO combined with the Carpentry and keep the two programs separate. The Facilities Engineering program was closed to future enrollment and will be stopped out by Spring 2023. The program is working to align with Maui’s courses so that articulation agreements can be established and a pathway created for those students who will transfer to Maui College or West Oahu for a degree in Construction Management.

Electricians are highly paid, skilled craftsmen with average journeyman electrician salary in Hawai‘i is \$87,750 per year or \$42.19 per hour. Entry level positions start at \$15.75 per hour or \$32,563 per year with an increase of 5% of average wage with each completion of six month period of apprenticeship. While most experienced workers make up to \$107,250 per year. Beginning students learn about construction and maintenance environments, bending conduit, running wire, installing electrical devices, and servicing and distributing equipment. The students begin with the fundamentals of electricity and wiring of simple circuits, then progresses to residential interior wiring, commercial interior wiring, three phase AC power, and wiring of motor controls and photovoltaic renewable power. Electrical safety is required as an essential part of each individual task. This job field is currently in very high demand nationwide as the

current workforce is nearing retirement. There are around 700,000 electricians working in the country today, and the Bureau of Labor Statistics estimates that there will be around 80,000 new electrician jobs available every year until 2031 — and that most of those jobs will just be in replacing the existing workforce.

This program prepares students for employment with electrical, facility maintenance, communication, utility companies, electrical construction, and maintenance companies. Learning will center on designing, blueprint reading, constructing, installing, and maintaining electrical wiring and equipment. Journey-Person Electrician CIP Code 46.0302 is the one used for all documentation for EIMT. The following are seven occupations associated with the EIMT program and possible employment opportunities on Kaua’i:

1. Linemen and Utility Engineers
2. Journey-Person Electrician
3. Security, Fire, and Telecommunication Installer Technicians
4. Residential Wireman
5. Solar Installation Technician
6. Maintenance Electricians and Facility Engineers
7. HVAC (Heating, Ventilation, & Air Conditioning) and Refrigeration Repair and Maintenance Technician

The EIMT program was developed to meet the preparatory needs of individuals who are not yet employed or currently working in the field. The Solar Energy Technology Certificate of Completion is designed as a P20 Renewable Energy Pathway to allow high school and adult students to gain knowledge and hands-on experience with the addition of lifelong skills needed throughout life. These degrees and certificates lead students to the required State of Hawai’i DCCA HRS-448E Electrician training in the state. Electrical Installation and Maintenance and Solar Energy Technology CO offer entry level employment with additional State of Hawai’i required continuing education as required for Licensing.

**Part II. Program Description (UHCCP 5.202)**

<b>Number of Faculty and Staff</b>	Faculty (FT): 1
	Faculty (Lecturers): 1
	Staff: 0
<b>Date Website Last Reviewed/Updated</b>	10/31/2022
<b>Brief History of Program</b>	The Electrical Installation and Maintenance Technology (EIMT) program is comprehensive, fulfilling the requirements for entry level positions in the many job opportunities in the electrical field; providing technical knowledge needed as well as the essential hands-on skills

	<p>that meet the condition for achieving success in the electrical field at an entry level. The EIMT Program is a Career Technical Education (CTE) program. Emphasis is placed on wiring in accordance with both the provisions contained in the National Electrical Code and the energy conservation codes. Successful completion of the Electrical Installation and Maintenance Technology program, will prepare an individual to take the State of Hawai'i DCCA HRS-448E Electrician License exam upon completion of the required experience (working hours) in the trade.</p> <p>The program was modeled after the EIMT program at Honolulu Community College with more emphasis in residential and commercial wiring and less in industrial wiring and solid-state controls. This decision was made because of the strong rural presence and tourism type buildings on the island. Addition of the Plumbing and Refrigeration classes added to the variety of classes offered to allow students to gain skills as a maintenance electrician.</p> <p>The EIMT program was developed to meet the preparatory needs of individuals who are not yet employed or currently changing occupations. The Electrical Installation and Maintenance Technology offer an (AAS) Associate of Applied Science degree, Certificate of Achievement (CA), and Certificate of Achievement (CO) in Solar Energy Technology and Mechanical, Electrical, and Plumbing to allow high school and adult students to gain knowledge and hands-on experience with the addition of lifelong skills needed throughout life.</p>
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**For Instructional Programs ONLY**

<p><b>Graduate Occupation or Transfer Options</b></p>	<p>Students with a certificate or degree that fulfills education requirements of HRS 448E of the State of Hawai'i the Hawai'i Department of Commerce and Consumer Affairs: Professional &amp; Vocational Licensing. Graduating students may also continue their education in the OCET (Office of Continuing Education) apprenticeship program with the various union trades and receive partial credit.</p>
<p><b>Special Admission Requirements</b></p>	<p>Program prerequisites: (1) Qualified for ENG 106 and either qualified for MATH 82X or concurrent enrollment in MATH 75X or higher; or (2) approval of instructor.</p>
<p><b>Credentials Offered</b></p>	<p>Electrical Installation and Maintenance Technology Associate in Applied Science Degree (AAS)</p>

	Electrical Installation and Maintenance Technology Certificate of Achievement (CA) Electrical Installation and Maintenance Technology Certificate of Competence (CO) Mechanical, Electrical, And Plumbing Certificate of Competence (CO) Solar Energy Technology Technician Certificate of Competence (CO)
<b>Current Program Articulation Agreements (Institution and Expiration Date)</b>	Institution: Honolulu Community College
	Expiration Date: N/A
	Institution: Maui College
	Expiration Date: N/A
	Institution: Hawai'i Community College
	Expiration Date: N/A
<b>Distance Education Courses Offered</b>	None
<b>Early College Courses offered (total number of sections/high school)</b>	None
<b>Distance Education Programs offered</b>	None
<b>Current Advisory Board Members/Employer and last meeting date</b>	Member Name: Richard Jose; Terry Uyehara
	Employer: IBEW 1186
	Last Meeting Date:09/18/2022
<b>Employer Internships</b>	AMPT Solar, IBEW1186, Nathan Wood Construction

### Part III. Analysis of Quantitative Indicators

This year report is located and shared at the following url:

<https://uhcc.hawai'i.edu/varpd/index.php?y=2022&c=KAU&t=CTE&p=2603>**The Overall Program Health is Healthy.**

Academic Year	AY 2017-18	AY 2018-19	AY 2019-20	AY 2020-21	AY 2021-22
<b>Overall Health</b>	Cautionary	Cautionary	Healthy	Healthy	Healthy
<b>Demand</b>	Unhealthy	Healthy	Healthy	Healthy	Healthy
<b>Efficiency</b>	Cautionary	Progressing	Healthy	Healthy	Healthy
<b>Effectiveness</b>	Healthy	Progressing	Progressing	Healthy	Healthy

**Demand Indicators Healthy.**

During the last five years, the IBEW 1186 has graduated nine Journey-person Electricians, accepted applications to hire ten electricians in Kaua’i County into their program, and have hired ten to start in August 2021. These students were taught by the OCET and by the instructors in the EIMT Program. Unfortunately, the IBEW local 1186 Union did not hire any students from the EIMT Program. The IBEW local 1186 has been on the slow side during the last five years with large commercial hotel developments down on the island. Graduates are not given preferential treatment but are given credit for their first year of schooling that is required by the NJATC Training Alliance.

Because of the economic climate, Non-union residential jobs positions have increased over the past two years with 35 - 40 new jobs being added countywide due to remodeling during the Covid-19 shutdown. We have placed students with Rising Sun Solar and they are also offering five internships to our students. The number of electrical related trades jobs are not listed in the data available from the county because of how information is collected and assigned. Therefore, the program produces more majors than New and Replacement positions available for Journey-Person Electricians. An increased demand from the outer islands and working with UHCC OCET on Credit/Noncredit classes, the faculty has been involved in teaching the classes for Kaua’i and the Hawai’i CC and Maui College with classes running each year.

During the last year, the number of majors has increased slightly at 24. The data also shows a substantial number of full-time students have increased from 32% to 43% with this year at 54%. While the number of part-time students has leveled from 62% to 57% then down to 47%. This is because of stability in the faculty teaching courses, classes being offered on a two-year cycle consistently, and an increase of DOE students entering the program. The number of SSH Program Majors in Program Classes has been up during the three-year cycle with an influx of new students during the initial startup, a high of 280, and a low of 210, but is estimated to level off next year at 261. FTE Enrollment in Program Classes peaked in AY19-20 at 362 and are trending to level off at approximately 300 over the next five years. More non-majors have increased during the last year as adults have been attending courses and getting promotions at work by increasing their skill level. The total number of classes taught has decreased to five this year, mainly due to creating a standard two-year pathway asked for by the administration. Demand for the EIMT Program in 2021 is Healthy due to the three-year hiring cycle of IBEW jobs, increase in Solar jobs, and more non-union jobs on the island coupled with less workers coming from Oahu to work with NECA (National Electrical Contractors Association) (because Covid-19 decreased travel options). Demand Indicators for the EIMT Program for 2021-2022 is Healthy.

#	Demand Indicators	2017-18	2018-19	2019-20	2020-21	2021-22
1	New & Replacement Positions (State)	1058	1035	806	825	805
2.*	New & Replacement Positions (County Prorated)	66	66	36	35	35

#	Demand Indicators	2017-18	2018-19	2019-20	2020-21	2021-22
3	Number of Majors	19	20	20	24	24
3a.	Number of Majors Native Hawaiian	5	10	10	9	11
3b.	Fall Full-Time	45%	32%	43%	54%	62%
3c.	Fall Part-Time	55%	68%	57%	46%	38%
3d.	Fall Part-Time who are Full-Time in System	0%	0%	0%	0%	0%
3e.	Spring Full-Time	47%	47%	65%	48%	83%
3f.	Spring Part-Time	53%	53%	35%	52%	17%
3g.	Spring Part-Time who are Full-Time in System	0%	0%	0%	0%	0%
4	SSH Program Majors in Program Classes	205	210	280	261	418
5	SSH Non-Majors in Program Classes	33	15	82	39	49
6	SSH in All Program Classes	238	225	362	300	467
7	FTE Enrollment in Program Classes	8	8	12	10	16
8	Total Number of Classes Taught	7	6	8	5	9

### Efficiency Indicators *Healthy*

The Average Class size for the EIMT Program has increased from nine to 14 over the last five years, and hopefully shows a future upward trend. The Fill Rate increased over last year up to 87.8% from 68.8% and 48.6% in preceding years respectively. As OCET offered electrical apprenticeship courses, the numbers still increased, even though OCET taught ten apprentices last year. FTE BOR Appointed faculty remains at one, and Majors to Analytic FTE Faculty has stayed steady over the last five years. Several sections of data were not provided in the past three years under budget allocation. It should be noted that the FTE is also teaching FENG 130 & 140 courses as part of the single faculty member's teaching assignments.

The number of Low-Enrolled classes has decreased from seven to two. Successful efforts were made to increase the recruitment rates by offering tours and speaking at the Construction Academy classes at the High Schools. The number of entry level courses has been limited to fall semesters and students must now start at the beginning of the cycle. The number of students taking EIMT on Kauai's is at 5.0 per ten thousand people while it is at 0.65 on Oahu and 1.75 for the Big Island. Efficiency Indicators for the EIMT Program for 2020-2021 is *Healthy*.

	Efficiency Indicators	2017-18	2018-19	2019-20	2020-21	2021-22
9	Average Class Size	9	9	12	14	13
10.*	Fill Rate	58.10%	48.60%	68.80%	87.70%	74.10%



11	FTE BOR Appointed Faculty	1	1	1	1	1
12.*	Majors to FTE BOR Appointed Faculty	19	20	20	24	24
13	Majors to Analytic FTE Faculty	19	20	20	24	24
13a.	Analytic FTE Faculty	1	1	1	1	1
14	Overall Program Expenditures	\$0	\$0	\$0	\$0	\$0
14a.	General Funded Budget Allocation	\$0	\$0	\$0	\$0	\$0
14b.	Special/Federal Budget Allocation	\$0	\$0	\$0	\$0	\$0
14c.	Tuition and Fees	\$0	\$0	\$0	\$0	\$0
15	Cost per SSH	\$0	\$0	\$0	\$0	\$0
16	Number of Low-Enrolled (<10) Classes	6	3	2	2	1

**Effectiveness Indicators *Healthy***

Year 2019-20 shows that the Successful Completion for students has increased slightly to 96%, which is down from the highest of 100% and low of 87% in the past three years. Withdrawals have also been low overall with five during the five-year cycle and decreased to one last year. Persistence fall to spring indicates an upward trend from 64% to 79% once again over last year, although the Persistence fall to fall has stayed steady from 59% to 45% to 52%. While the number of Unduplicated Degree/Certificates Awarded and Degree Awarded increased, this is due to faculty encouraging students to complete and achieve an AAS by completing their General Education courses. More students started the sequence this last year with some still needing to complete General Education Classes. Students this year are more interested in the CA certificate and forgoing general education courses and forgoing the AAS Degree to get into the job market faster.

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. Effectiveness Indicators for the EIMT Program for 2019-2021 is Healthy.

#	Effectiveness Indicators	2017-18	2018-19	2019-20	2020-21	2021-22
17	Successful Completion (Equivalent C or Higher)	100%	92%	87%	96%	93%
18	Withdrawals (Grade = W)	0	0	5	1	1
19.*	Persistence Fall to Spring	78%	67%	64%	79%	61%
19a.	Persistence Fall to Fall	59%	50%	45%	52%	41%
20.*	Unduplicated Degrees/Certificates Awarded	6	5	3	6	11
20a.	Degrees Awarded	3	4	1	3	2

#	Effectiveness Indicators	2017-18	2018-19	2019-20	2020-21	2021-22
20b.	Certificates of Achievement Awarded	1	5	3	4	6
20c.	Advanced Professional Certificates Awarded	0	0	0	0	0
20d.	Other Certificates Awarded	3	5	3	7	11
21	External Licensing Exams Passed <sup>1</sup>	0	0	0	0	0
22	Transfers to UH 4-yr	0	0	0	0	0
22a.	Transfers with credential from program	0	0	0	0	0
22b.	Transfers without credential from program	0	0	0	0	0

### Distance Education

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

### Perkins Core Indicators

The EIMT Program met the Perkins Core Indicators for Postsecondary Placement and Earned Recognized Credential. It is difficult to ascertain why the other four core indicators were not met as the data provided are incomplete. Nontraditional Participation and Completion have been a priority in the EIMT Program. The single EIMT instructor contacted all students who completed some of the EIMT courses and three students have returned this semester.

#	Perkins Indicators Met	2017-18	2018-19	2019-20	2020-21	2021-22
29	1P1 Postsecondary Placement	Met	Met	Met	Met	Met
30	2P1 Earned Recognized Credential	Not Met	Not Met	Not Met	Met	Met
31	3P1 Nontraditional Program Concentration	Not Met	Not Met	Not Met	N/A	N/A
32	Placeholder - intentionally blank (First 3 Years 4P1)	Met	Not Met	Met	N/A	N/A
33	Placeholder - intentionally blank (First 3 Years 5P1)	Not Met	Not Met	Not Met	N/A	N/A
34	Placeholder - intentionally blank (First 3 Years 5P2)	Not Met	Not Met	Not Met	N/A	N/A

### Performance Indicators

The EIMT Program shows slow steady growth from four to eight students in the Number of Degrees and Certificates and Number of Degrees and Certificates for Native Hawaiians from one to five. The number of Pell Recipients has fluctuated over the past five years in a positive trend, perhaps due to the stronger economy and in direct relation to part-time students funding their own education. The overall cost of \$3,695.00 the OCET course is the number one reason given for not taking the licensure classes, but there were ten students who completed the Non-Union Electrical Journeyman 240 Hour course in 2021. The number of Transfers to UH 4-year was at zero as expected with most students entering the workforce.

#	Performance Indicators	2017-18	2018-19	2019-20	2020-21	2021-22
35	Number of Degrees and Certificates	4	9	4	7	8
36	Number of Degrees and Certificates Native Hawaiian	1	3	2	4	5
37	Number of Degrees and Certificates STEM	Not STEM	Not STEM	Not STEM	Not STEM	Not STEM
38	Number of Pell Recipients <sup>1</sup>	2	5	0	5	6
39	Number of Transfers to UH 4-yr	1	0	0	0	0

#### Part IV. Assessment Data (EP 5.202)

The PSLO's approved by the Assessment Committee for the Building Construction Technology Program in 2017 were used for assessment purposes for Academic Years 2017 through 2021 as the program was preparing to merge with the Carpentry Program.

1. Examine blueprints sufficiently to use them to plan a project.
2. Select proper materials for a given project that comply with building standards and codes.
3. Maintain the tools required in the Construction Technology Industry.
4. Utilize Occupational Safety and Health Administration (OSHA) and State safety regulations necessary to assess a task for hazards and the steps required to minimize risks, protecting self and others.
5. Know the application of codes and regulations in the mechanical, electrical, and carpentry fields to construct or repair and maintain these systems within a facility.
6. Communicate successfully orally and in writing using computer technology.
7. Understand, integrate, and utilize knowledge in the professional environment.
8. Demonstrate professionalism with attitudes, conduct, ethics, and work practices.

After the program was redirected, the PSLO's for AY 2022-23 reverted to the approved 9/17/2014 PSLOs by the Assessment Committee and the Building Construction PSLO's were discontinued. The EIMT Program was last assessed with the below PSLO's in 2016.

EIMT	Instructions: Indicate all ISLOs (column C) that apply to each PSLO. More than 1 may be listed.	
	<a href="#">Link to refer to ISLOs (use the number associated with the ISLO that applies to each PSLO)</a>	
PSLO #	PSLO - approved 09/17/2014	ISLO #(s)
1	Read and understand blueprints sufficiently to use them to plan a project.	3, 5, 6
2	Select materials properly for a given project that comply with published codes and deliver energy efficient outcomes.	4, 5, 6
3	Maintain and care for the tools required in the electrical industry.	7
4	Utilize Occupational Safety and Health Administration (OSHA) and State safety regulations to minimize risk and protect self and others.	5, 6, 9
5	Communicate successfully orally and in writing using computer technology.	1, 2
6	Demonstrate the craftsmanship standards of dependability, punctuality, and quality.	4, 8, 9
		Completed 9/29/2022

EIMT	Need to link ISLOs 3, 8, and 9 to at least one PSLO.	
	Revised by JDA	10/3/2022
	Completed	10/3/2022

The last completed Assessment data gathered before the revision are listed below using the AY2020-2021 data:

PSLO	Assessed During APRU Cycle 2021 (Y or N)	Findings	Improvements Implemented	Next Assessment Date
Examine blueprints sufficiently to use them to plan a project.	Yes	All students passed with 70%	Work on “Just in Time” Math and implemented the QM course for Trades. Students are in the second year of the course offerings and we are continuing to evaluate the results. Students who have completed the course have improved in program completion.	Annually
Select proper materials for a given project that comply with building standards and codes.	Yes	All students passed with 80%	Work on identifying proper building materials. Students are required to select and calculate the proper amount of materials needed per projects. This has cut down on waste materials and decreased the need to purchase additional materials.	Annually
Maintain the tools required in the Construction Technology Industry.	Yes	All students passed with 90%	Students can improve on maintaining basic hand tools more efficiently. Broken or worn out equipment has been tagged and taken out of service and the next step is to implement a preventive maintenance program.	Annually
Utilize Occupational Safety and Health Administration (OSHA) and State safety regulations necessary to assess a task for hazards and the steps required to minimize risks, protecting self and others.	Yes	All students passed with 90%	Additional Training and PPE Equipment required in the shop area. This is to eliminate accidents in the lab area. OSHA and lab rules will now be enforced for all students	Evaluated on a daily basis

PSLO	Assessed During APRU Cycle 2021 (Y or N)	Findings	Improvements Implemented	Next Assessment Date
			in the lab area. Students are now aware of the job requirements for safety.	
Know the application of codes and regulations in the mechanical, electrical, and carpentry fields to construct or repair and maintain these systems within a facility.	Yes	All students passed with 100%	Constant monitoring, students are evaluated and graded on the application of working in a neat and workman like manner. This eliminates bad habits and improves the learning environment.	Evaluated on a daily basis
Communicate successfully orally and in writing using computer technology.	Yes	All students passed with 70%	Students are required to write a weekly log. This is to help increase communication skills and to handle the completion of workorders and billing materials. This also creates documentation for the work done. Also, students need to validate their work experience for their EJ license for five years.	Annually
Understand, integrate, and utilize knowledge in the professional environment.	Yes	All students passed with 80%	Students are required to make up for tardiness after class, cleaning up and only allowed in the lab area if they have proper PPE on. The skills in the classroom will mimic what the students will do on the job. This prepares students to be successful on the job.	Daily
Demonstrate professionalism with attitudes, conduct, ethics, and work practices.	Yes	All students passed with 80%	Students were evaluated with off campus instructor evaluation on job site. We gauge how students are on the jobsite outside of the classroom and how they interact with other workers and how they complete assigned tasks.	Weekly

## Part V. Curriculum Revision and Review

Minimum of 20% of existing courses are to be reviewed each year so that within the timeframe of the CPR, all courses will be reviewed and revised as appropriate. Indicate when all courses within the program will be reviewed during the next five years.

Course Prefix and Number	Date Last Reviewed	Next Review Date
EIMT 121	2017/18	2022/23
EIMT 123	2017/18	2022/23
EIMT 131	2017/18; 2021/22	2026/27
EIMT 135	2017/18; 2021/22	2026/27
EIMT 145	2017/18; 2021/22	2026/27
EIMT 147	2017/18; 2021/22	2026/27
EIMT 151	2017/18; 2021/22	2026/27
EIMT 153	2018/19	2023/24
EIMT 170	2017/18; 2021/22	2026/27
EIMT 175	2017/18; 2021/22	2026/27
FENG 123	2017/18; 2021/22	2026/27
FENG 130	2021/22	2026/27
FENG 140	2017/18	2022/23

## Part VI. Survey Results

The use of information gathering and surveys is an area that we need to address and work on in future APRU and CPR documents. We have depended on the college Institutional Researcher to provide this information. Although we contact our students and check on employment and status, no formal surveys have been completed.

## Part VII. Financials

Provide your program or unit's budget for each year of this review.

<b>Fiscal Year</b>	<b>Budget</b>
Budget AY 2018/19	\$4,500.00
Budget AY 2019/20	\$4,500.00
Budget AY 2020/21	\$3,375.00
Budget AY 2021/22	\$3,500.00
Budget AY 2022/23	\$3,500.00

Describe any changes that have occurred regarding services, functions, personnel, facilities, or stakeholders served.

Provide the program or unit's current resources.

<b>Category</b>	<b>Current Resource(s)</b>	<b>What is needed?</b>	<b>Justification</b>
<b>PERSONNEL</b>			
Positions (Faculty)	1 Tenured	1 Replacement Tenured Faculty	The tenured instructor will be retiring within the next 18 months and may need to leave by the end of the semester. A replacement instructor will be needed if the program is to be continued. Currently 16 students are in the first year, first semester and will require three more semesters to complete.
	1 Lecture	1 Lectures	Currently one lecture is team teaching with the Instructor. With the amount of credit hours that need to be taught to have students complete within two years, an additional lecture will be required.
Positions (Staff)		1 APT Teaching Assistant	APT Teaching Assistant to manage lab areas and supplies for all Carpentry and EIMT areas.

Category	Current Resource(s)	What is needed?	Justification
<b>OPERATING</b>			
Supplies	\$3,500.00	\$6,000.00	With the supply shortages copper wire has increased so that replacement wire is cost prohibitive under the current budget. The current wire is being collected to be recycled, but does not cover the replacement cost. This is an ongoing yearly budget item for the program and the prices have increased three fold since last year.
Equipment		2 HVAC Trainers 1 Conduit Trainer	Replacement Trainers have been budgeted, but have not been purchased. A current super quote is being done but final authorization and purchasing needs to be done. With the changes to the EIMT Program these trainers formally under FENG are under the EIMT Budget. The Conduit Trainer has also been approved but because of purchase rules the materials have not been purchased. The materials are planned to be purchased under Alu Like Grant and student-built and would not need capital expenditure.
Space/Facilities			
<b>TECHNOLOGY</b>			
Hardware	16 Desktop Computers 1 Teaching Station 1 Zoom Station		The current Technology meets the program needs. If the trainers above are purchased the software would need to be added to the existing computers.
Software		HVAC Software Interplay Learning	The software currently meets the needs of the program. Future Windows updates may require that the software be updated and/or replaced. In the past Perkins funds have been used to replace software as it becomes out of date.



Category	Current Resource(s)	What is needed?	Justification
			Interplay Learning is used throughout the program. We are still having trouble having students purchase the software through the UH Bookstore. The program requires an annual renewal for the LMS KCC Licence.

**Part VIII. Results of Prior Year Action Plans (UHCCP 5.202)**

The EIMT Program has continued with the current courses and program outline through fall 2022 to allow students from the EIMT and FENG programs to complete their program certificates and degrees while transitioning to the revised EIMT Program and preparing for the elimination of the FENG Program. During the previous Academic Year, the creation of the Building Construction Program was suspended and the merger of the EIMT Program. With the elimination of the Facilities Engineering Program the Mechanical, Electrical, and Plumbing Certificate of Competence (CO), 21 credits were moved under the EIMT Program. Carpentry Technology: Facilities Maintenance Technology Certificate of Competence (CO), 19 credits was merged under the Carpentry Program.

The consolidation of the Carpentry, Electrical Installation and Maintenance, and Facility Engineering programs was suggested to help the college justify the building trades on the island of Kaua'i by making it possible to meet the minimum numbers required by the UH BOR Executive Policy 5.229 Programs with Low Number of Degrees Conferred. The decision was made to allow similar courses to be combined for a more efficient use of resources and to allow pathways to the building construction trades. These tasks were completed and approved by the administration and Curriculum Committee.

The Computer Aided Design, Welding, and Construction Academy courses were moved to the Carpentry Program to give these stand-alone courses a program to boost enrollment and to budget funds to run the courses through the Trades Division. The Computer Aided Design early college at the DOE was encouraged to seek a P-20 DOE Pathway through HonCC and those courses can then transfer to the UHCC system. The creation of an AEC (Architecture, Engineering & Construction Technologies) CO at Kaua'i CC was postponed. Welding courses will be placed under the Carpentry Program with the beginning courses placed in the Carpentry PAR. Public demand with increased AWS (American Welding Society) training standards needs to be evaluated each year and as the job market changes and there may be a future need for the program.

The consolidation efforts that were modeled after the UHMC (Maui College) Construction Technology AAS Degree while building on the strengths of the EIMT and Carpentry programs at

KauCC has been discontinued. The following action plan tasks were modified and completed by both the EIMT and CARP programs:

- Creation of pathways as a replacement for KauCC's Construction Academy through Early College and AEC classes at Kaua'i High School to bring additional secondary students to the College. Evaluation of Early College at the Kaua'i DOE will be reviewed as requested by their CTE Director.
- Evaluate and modify these programs with reworked pathways was completed and a plan for a two full time tenured faculty to teach building courses in as many disciplines as possible, eliminating lecturers and additional staff, and combine courses that are similar under one program.
- Realizing the Hotel Industry will rebound and that a review of what courses will be needed in the future, a restructuring of course offerings and temporary scheduling was offered for low enrolled classes to complete as many certificates as possible.
- Implemented a plan to offer courses every other year with every other year start dates in areas to better utilize classroom space and staff.

Lecturers will be used on courses for which current faculty for Early College and individual construction courses. The potential for part time night students was evaluated and courses are being offered to allow returning adults seeking an occupational change or a work promotion. Most EIMT first year classes are offered in the afternoon and evenings. With second year students attending in the morning hours. KauCC is the only source of training for Kaua'i residents to update their skills in the Hospitality Maintenance Industry and offering those courses at a time when employees can attend is being evaluated each semester.

## **Part IX. Analysis of Program**

In setting goals for the future of the Electrical Installation and Maintenance Program the program will need to update its curriculum and training for the new technology that electricians are now required to install. Energy management and wireless controls are becoming a major component for the residential installation. New NFPE 70 National Electrical Code requirements include Surge Suppression, Renewable Energy, and the requirements for Electric Vehicle (EV) charging are now required.

To keep the program in a healthy status it will be important to continue to recruit from the DOE graduates for those seeking to enter the job market and stay on the island. As students progress through their first year we should encourage students to complete Math, English and physics to gain a foundation to be successful. As students complete the program, we have a great developed a school to job by having potential employers come and visit students and take applications from them.

Goal	Strategic Goal/Priority (List number)*	Benchmark	Desired Outcome	Unit of Measure	Year(s) Implemented
Maintain Successful Completion Rate	Goal 1	80%	80%	ARPD Effectiveness Indicators	Annually
Increase Persistence Fall to Fall	Goal 1, 3	80%	80%	ARPD Effectiveness Indicators	Annually
Increase Degrees and Certificates	Goal 1, 2, 3	10	10	ARPD Effectiveness Indicators	Annually
Increase Workforce and Job Placement	Goal 4	10	10	ARPD Perkins Core Indicator	Annually

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

**Part X. Resource Request(s) for next year (Year 1 of the 5-year Plan for your unit or program).**

I am NOT requesting additional resources for my program/unit.

<b>Program Goal</b>	Increase student hands-on-training in HVAC and Split Systems
<b>Resource Requested*</b>	T7130 Residential Mini-Split Heat Pump Learning System R-410a
<b>Cost and Vendor</b>	\$27,185.00 plus \$3,250 Shipping, \$1,280.00 Taxes Amatrol (Klein Educational Supplies)
<b>Annual Recurring Cost</b>	\$500.00 Replacement Refrigerant
<b>Useful Life of Resource</b>	20 Years
<b>Person(s) Responsible and Collaborators</b>	Jim Andrews
<b>Timeline</b>	2022: 6-month delivery time

\*An approved ITAC Request Form must be attached for all technology requests

<b>Program Goal</b>	Increase student hands-on-training in HVAC and Split Systems
<b>Resource Requested*</b>	T7032 Refrigerant Recovery and Charging Learning System for R-410a
<b>Cost and Vendor</b>	\$10,991.00 plus \$3,250 Shipping, \$520.00 Taxes Amatrol (Kline Educational Supplies)

<b>Annual Recurring Cost</b>	\$500.00 Replacement Refrigerant
<b>Useful Life of Resource</b>	20 Years
<b>Person(s) Responsible and Collaborators</b>	Jim Andrews
<b>Timeline</b>	2022: 6-month delivery time