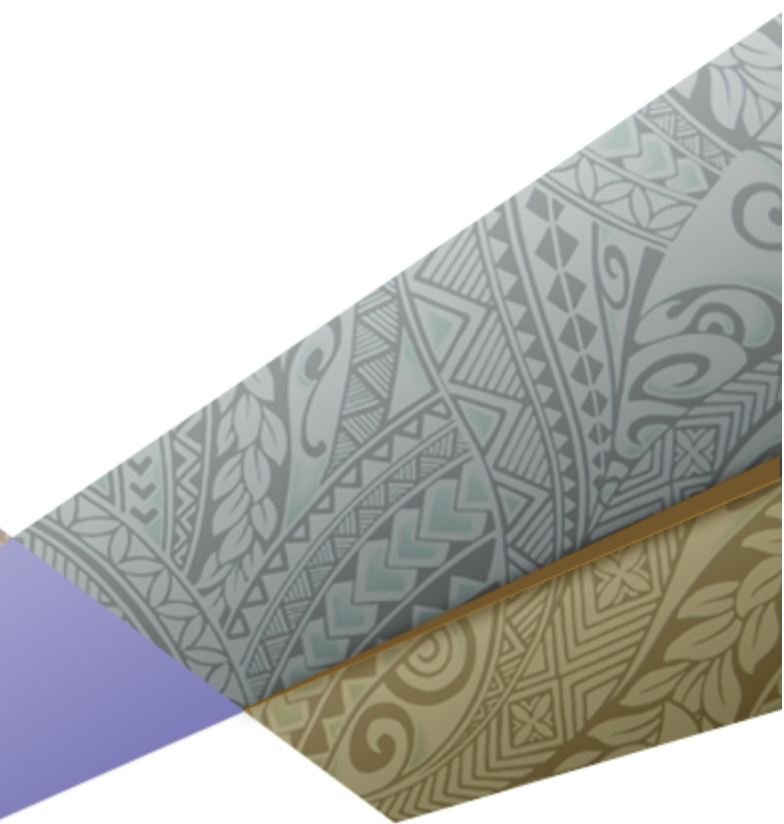


Electrical Installation and Maintenance Technology



ANNUAL REPORT OF PROGRAM DATA 2021



UNIVERSITY of HAWAII®
KAUA'I
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1. Program or Unit Description

The Electrical Installation and Maintenance Technology (EIMT) mission is to provide Kaua'i 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 Hawaii 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. What is the target student or service population?

With the Kaua'i economy changing from the pandemic the decision has been made to consolidate the EIMT, FENG, AEC, and WELD programs with the Carpentry Program to create the Construction Program to match and articulate the program Maui College and West Oahu. As far as the Building Construction Technology proposal it was rejected last year by the Curriculum Committee and the Administration because of problems associated with Banner, Star GPS, Financial Aid and Student Services with the merger of the program. The current proposal was submitted as part of *Ka Papa Hana Holomua: Academic Affairs Plan Fall 2021-Fall 2026* to UHCC. Part of this plan for EIMT and FENG is to stop out starting Fall 2022 and Teach Out completed by Spring 2024. To meet ACCJC standards, the Stop Out can last only 2 years and then must be completed. EIMT and FENG will no longer be available to enroll new students beginning September 1, 2022, for registration of Spring 2023 and a notice will be posted on the Website and with Student Services.

Stop Out will need BOR approval and according to VCAA we will need to create the Construction Program as proposed in *Ka Papa Hana Holomua: Academic Affairs Plan Fall 2021-Fall 2026* the Construction program will seek BOR approval Spring 2024. The Carpentry Program will continue as is until the Construction Program is approved and started to allow students to continue in the building trades. EIMT or FENG, as is, will teach each class one more time after Fall 2022 to allow students a chance to graduate. During the proposal any currently taught course that is part of the Construction Program will convert to course Alpha/Numeric and title that can be matched to the Maui College Construction Program and create those that cannot be modified to match. We are trying to match Maui's program as closely as possible so that there is a higher possibility of approval at the OVPCC and BOR and so we can articulate with Maui College and West Oahu.

Part I.	Program Description
Date of Last Comprehensive Review	10/23/2017
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 construction trade.
External Factor(s) that Affected the Program or Unit	Non-credit Courses offered through KCC OCET and the IBEW compete for the same students to attend the credit program to complete the legislative requirement for education for State of Hawai'i licensure. Currently working on BCT Program consolidation.

2. Analysis of the Program/Unit

Overall Program Health: **Healthy**

Demand Indicators **Healthy**

During the last year, the IBEW 1186 has accepted applications to hire 10 electricians in Kaua'i County into their program and have hired 10 to start the August 2021. Unfortunately, they did not hire any students from the EIMT Program. The IBEW local 1186 has been on the slow side during the last four years with large commercial building jobs down on the island. They try to start a new group of apprentices every four to five years. Because the union jobs are required to train through University of Hawaii of Community College (UHCC) Office of Continuing Education and Training (OCET) Apprenticeships using National Joint Apprentice Training Center (NJATC) Curriculum this will lower the students available for the Credit Program. 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, industry positions have increased over the past year with new jobs being created in remodeling during the Covid-19 shutdown. A few down years with new/ Replacement County positions an overall flat level by one less position, but does not include our largest Solar employer, Rising Sun Solar. We have placed students with them and they are also offering internships to our students. The number of related trades is not taken into account with the number of jobs available. Therefore, the program produces more majors than New and Replacement positions available for Journey-Person Electricians. An increase in Maintenance Electricians will become available when the Hospitality Industry picks up later next 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 have leveled from 62% to 57% then down to 47%. This is because of stability in the faculty teaching courses and the classes being offered on a two-year cycle consistently and an increase of DOE students coming into the program. The number of SSH Program Majors in Program Classes have been up during the three-year cycle with an influx of new students during the initial startup, With a high of 280 and

a low of 210 but is estimated to level off during 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 of getting promotions at work by increasing their skill level. The total number of classes taught has decreased to 5 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 during the last year due to the three-year hiring cycle of IBEW jobs, an increase in Solar jobs, more non-union jobs on the island, and less workers coming from Oahu to work NECA contractors because of Covid-19. Demand Indicators for the EIMT Program for 2020-2021 is **Healthy.**

#	Demand Indicators	2018-19	2019-20	2020-21	Demand Health
1	New & Replacement Positions (State)	979	806	825	Healthy
2.*	New & Replacement Positions (County Prorated)	51	36	35	
3	Number of Majors	20	20	24	
3a	Number of Majors Native Hawaiian	10	10	9	
3b	Fall Full-Time	32%	43%	54%	
3c	Fall Part-Time	68%	57%	46%	
3d	Fall Part-Time who are Full-Time in System	0%	0%	0%	
3e	Spring Full-Time	47%	65%	48%	
3f.	Spring Part-Time	53%	35%	52%	
3g	Spring Part-Time who are Full-Time in System	0%	0%	0%	
4	SSH Program Majors in Program Classes	210	280	261	
5	SSH Non-Majors in Program Classes	15	82	39	
6	SSH in All Program Classes	225	362	300	
7	FTE Enrollment in Program Classes	8	12	10	
8	Total Number of Classes Taught	6	8	5	

Efficiency Indicators Healthy

The Average Class size for the EIMT Program has increased from 9 to 14 over the last three 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. As OCET offered electrical apprenticeship courses numbers still increased even though OCET taught 10 apprentices last year with an EIMT instructor helping with this training. This year three working maintenance electricians or Facility Building Maintenance completed taking classes through EIMT on Tuesday-Thursday nights. One NFPA 70E course was taught for OCET for Electrical Safety for Non-Electrical Workers for Timbers Hotel. 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 this past three years under budget allocation. It should be noted that the FTE is also teaching FENG 30 & 40 courses as part of his teaching assignment.

The number of Low-Enrolled classes has decreased from 7 to 2 by trying to increase 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 semester and students must now start then to begin 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	2018-19	2019-20	2020-21	#Efficiency Health
9	Average Class Size	9	12	14	Healthy
10.*	Fill Rate	48.60%	68.80%	87.70%	
11	FTE BOR Appointed Faculty	1	1	1	
12.*	Majors to FTE BOR Appointed Faculty	20	20	24	
13	Majors to Analytic FTE Faculty	20	20	24	
13a	Analytic FTE Faculty	1	1	1	
14	Overall Program Expenditures	\$0	\$0	\$0	
14a	General Funded Budget Allocation				
14b	Special/Federal Budget Allocation				
14c	Tuition and Fees				
15	Cost per SSH	\$0	\$0	\$0	
16	Number of Low-Enrolled (<10) Classes	3	2	2	

Effectiveness Indicators **Healthy**

In 2019-20 shows that the Successful Completion 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 (5) during the five-year cycle and decreased to one (1) 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 intervention for students to complete and achieve an AAS. More students started the sequence this last year with some still needing to complete General Education Classes. Students this year are interested in the CA certificate and forgoing the AAS Degree to get into the job market faster.

The data on the Certificates of Achievement Awarded is also related to those students who were contacted. A PAR change to Construction Technology in fall 2023 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.

Effectiveness Indicators for the EIMT Program for 2019-2021 are **Healthy**.

#	Effectiveness Indicators	2018-19	2019-20	2020-21	Effectiveness Health
17	Successful Completion (Equivalent C or Higher)	92%	87%	96%	

2021 Kaua'i Community College ARPD
 Program: Enter Program or Unit Name

18	Withdrawals (Grade = W)	0	5	1	Healthy
19.*	Persistence Fall to Spring	67%	64%	79%	
19a	Persistence Fall to Fall	50%	45%	52%	
20.*	Unduplicated Degrees/Certificates Awarded	5	3	6	
20a	Degrees Awarded	4	1	3	
20b	Certificates of Achievement Awarded	5	3	4	
20c	Advanced Professional Certificates Awarded	0	0	0	
20d	Other Certificates Awarded	5	3	7	
21	External Licensing Exams Passed ¹				
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

The EIMT program does not offer Distance Learning at the current time.

#	Distance Indicators	2018-19	2019-20	2020-21	Not Applicable
23	Number of Distance Education Classes Taught	0	0	0	
24	Enrollments Distance Education Classes	0	0	0	
25	Fill Rate	0%	0%	0%	
26	Successful Completion (Equivalent C or Higher)	0%	0%	0%	
27	Withdrawals (Grade = W)	0	0	0	
28	Persistence (Fall to Spring Not Limited to Distance Education)	0%	0%	0%	

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 is incomplete. Nontraditional Participation and Completion has been a priority in the EIMT Program. The three females are currently enrolled in courses. We have had our new Trades Tracking Coordinator working with students to stay on track to graduate. The instructor contacted all students who completed the EIMT courses and three students have returned this semester. Six are expected to complete after spring 2021 with those students currently enrolled to complete required classes.

#	Perkins Indicators	Goal	Actual	Met	
29	1P1 Postsecondary Placement	33	100	Met	
30	2P1 Earned Recognized Credential	33	57.14	Met	
31	3P1 Nontraditional Program Concentration	N/A	N/A	N/A	
32	Placeholder - intentionally blank	N/A	N/A	N/A	
33	Placeholder - intentionally blank	N/A	N/A	N/A	

34	Placeholder - intentionally blank	N/A	0	N/A	
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Performance Indicators

The EIMT Program shows up and down growth in the Number of Degrees and Certificates and Number of Degrees and Certificates Native Hawaiians. The number of Pell Recipients has fluctuated over the past five years, perhaps due to the stronger economy and in direct relation to part-time students funding their own education. The overall cost of the OCET course is the number one reason given for not taking the licensure classes but had 10 students complete 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 student entering the work force.

#	Performance Indicators	2018-19	2019-20	2020-21	
35	Number of Degrees and Certificates	9	4	7	
36	Number of Degrees and Certificates Native Hawaiian	3	2	4	
37	Number of Degrees and Certificates STEM	Not STEM	Not STEM	Not STEM	
38	Number of Pell Recipients ¹	5	0	5	
39	Number of Transfers to UH 4-yr	0	0	0	

Please use the following link to the 2021 Annual Report of Program Data (ARPD)RU 2378:

<https://uhcc.hawaii.edu/varpd/index.php?y=2021&c=KAU&t=CTE&p=2378>

3. Program Student Learning Outcomes or Unit/Service Outcomes

The PSLO's approved by the Assessment Committee for the Building Construction Technology Program in 2017 were used for assessment purposes.

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.

Note: The above PSLO's are for the Building Construction Technology Program. The below assessments PSLO's are for the AY2020/2021 current EIMT Program Assessments were completed using the BCT Program.

PSLO	Assessed During this APRU Cycle (Y or N)	Findings	Improvements Implemented
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
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
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
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.
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
Communicate successfully orally and in writing using computer technology.	Yes	All students passed with 70%	Students are required to write a weekly log.
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.
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

4. Action Plan

The EIMT Program will continue with the current courses and program outline through Spring 2024 to allow students from the EIMT and FENG programs complete their program certificates and degrees while the transition to the Construction Program is being implemented and approved. The instructors feel that moving the new students from these programs to Carpentry will help increase the numbers and justify the continuance of the construction trades. The early

College trades courses will also help with recruitment and job placement as the economy recovers from the pandemic. The growth potential at early college and the permanent hire of three instructors for the offered early college classes will help with additional courses taught in the new Construction Program in AutoCAD, Electrical, HVAC, and Plumbing.

The consolidation of the Carpentry, Electrical Installation and Maintenance, and Facility Engineering programs was created 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 modify the existing AAS Degree to allow pathways to the building construction trades merging all construction programs into a single AAS degree to match the Maui College Program. The Facility Engineering terminal CO has not had student completers as formally noted in the total student graduates and will be Stopped Out by Spring 2024. Program consolidation will involve converting the existing terminal CO into a CA so that completion rates are formally reported by UH.

The Computer Aided Design, Welding, and Construction Academy courses are added to the program to give these stand-alone courses a CO under the Construction Technology Program to help boost enrollment and to budget funds to run the courses through the Trades Division. The Computer Aided Design is articulated with the P-20 DOE Pathways and needs to be included in the proposal so those courses can transfer to the UHCC system. Welding courses will reestablish itself because of public demand with increased AWS training standards to become an addition to the Construction degree.

Recommendations

Consolidation efforts are modeled after the UHMC Construction Technology AAS Degree while building on the strengths of the EIMT and Carpentry programs at KauCC. The following statements are our recommendations:

- Creation of pathways as a replacement for KauCC's Construction Academy for Early College and AEC classes and bring additional secondary students to the College.
- Consolidate these programs with reworked pathways as a revised plan will have full-time faculty teach 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 temporarily not scheduling low enrolled classes.
- Our final recommendation is to teach courses every other year with every other year start dates in areas to better utilize classroom space and staff.

Cost savings will be gained by the elimination of the EIMT Instructor in Summer 2024 through retirement. The majority of courses should be taught by tenure track salaried faculty of the existing CARP and Early College Trades programs. Minimal lecturers should be used on courses for which current faculty for Early College and individual construction courses. The potential for part time night students should be evaluated and the change to the Construction

program begins as well as returning adults seeking an occupational change or a work promotion. KauCC is the only source of training for Kaua'i residents to update their skills in the Hospitality Industry that will rebound in the coming years.

5. Resource Implications

Two Full time tenure track instructors to meet the need of Early College CARP and AEC courses and additional courses that are currently taught by an EIMT instructor and AEC, Construction Academy, FENG, and Welding lectures. This is a future request for AY 2024-2025. Although this request is for Fall 2024 it is important to replace these positions that were eliminated by budget cuts and retirement if the program is expected to continue as is.

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

6. Optional: Edits to Occupation List for Instructional Programs

I am requesting changes to the SOC codes/occupations listed for my program/unit.