

HAWAI‘I COMMUNITY COLLEGE ANNUAL PROGRAM REVIEW (APR)

ELECTRICAL INSTALLATION AND MAINTENANCE TECHNOLOGY PROGRAM

Date January 18th, 2019

Review Period
July 1, 2017 to June 30, 2018

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

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

PART 1: PROGRAM DATA AND ACTIVITIES

Program Description (required by UH System)

<p>Provide the short description as listed in the current catalog.</p>	<p>This program prepares students for employment with electrical appliance shops, utility companies, and electrical constructions, and maintenance companies. Learning will center on planning, designing, constructing, installing, and maintaining electrical wiring and equipment.</p>
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Comprehensive Review information (required by UH System)

<p>Provide the year and URL for the location of this program's last Comprehensive Review on the HawCC Program/Unit Review website:</p>	
<p>Year</p>	<p>2016</p>
<p>URL</p>	<p>http://hawaii.hawaii.edu/files/program-unit-review/docs/2016_eimt_comprehensive_program_review.pdf</p>
<p>Provide a short summary of the CERC's evaluation and recommendations from the program's last Comprehensive Review.</p> <p>Discuss any significant changes to the program that were aligned with those recommendations but are not discussed elsewhere in this report.</p>	<p><u>Summary of CERC's evaluation:</u></p> <ol style="list-style-type: none"> 1. Is it possible for carpentry program to assist with building two modified double duplex structures? <ul style="list-style-type: none"> ~ The EIMT program would be grateful to be working with the Carpentry Program, like we currently do on the DHHL Model Home Projects. Concerns for this potential project that are currently being discussed with the current EIMT Advisory Council Members. 2. Seems as if an off-grid PV system used only for training in lab would not be prudent because of limited battery life when batteries are sitting idle. <ul style="list-style-type: none"> ~ The program feels that if this request is granted, the batteries would be used throughout the year which would keep the batteries charged and discharged regularly. The purchasing of maintenance type batteries could also be considered so that the maintenance tasks could be incorporated as part of the student training. 3. Is it possible to tie in an ASNS lab with an off-grid PV system and have EIMT maintain? <ul style="list-style-type: none"> ~ This could possibly be another worthy option to consider, however, having a system that the program "owns" would be more advantageous because students would be able to maintain and

discharge units with no repercussions due to maintenance power shut down procedures. This suggestion will be kept in mind if the program is unable to purchase their own PV system.

4. The previous comprehensive review was difficult to read and included irrelevant information.

~The instructor will write multiple drafts in the future and ask for assistance with proofreading from colleagues as well as the assessment coordinator in order to avoid grammatical errors as well as irrelevant information.

5. References to increased enrollment and two cohorts is inaccurate and the only difference is that the students have the same instructor for both the first year and second year, but not an increase in enrollment.

~ Due to the Academic Freedom to Teach, instructors within the EIMT Program have a different teaching vision. The EIMT Program currently consists of two separate cohorts with two different instructors. The wording in the last Comprehensive Review should have specified that student retention has increased not enrollment.

6. No discussion of why the program has a high demand but an unhealthy demand call.

~ This will be addressed in this AY 2017-18 Annual Program Review.

7. Popularity should not be listed as a strength of the program.

~ A better description of the demand for the Program will be discussed in the current APR.

8. Sentence structure and grammar are inappropriate for a college document; asking someone to edit document is recommended.

~This recommendation has been addressed and the instructor has received assistance from colleagues and the Assessment Coordinator.

9. Decision to work on the model home project is a positive step forward and allows students to gain valuable work experiences through an active live job.

~ The EIMT program agrees with CERC and will continue to work on the Model Home Project, and to seek avenues for program improvements and student success.

10. No explanation of why funding is being requested for upgrading equipment and facilities when Building 391 is being renovated. Need for more equipment and space requires further justification.

Program might consider altering class days for first and second year students instead of having both sets of students attending EIMT M,T,W,R,F.

~ The approval of the facility renovations have been approved and we look forward to utilizing the remodeled facility, which will provide separate classroom and laboratory areas. The request for separate supply areas will enable equipment to be placed in storage rooms in separate shop areas. In the future we will provide more descriptive justification for requests.

11. Advised to discuss time limits and whether carpentry/apprenticeship programs can be involved in renovations.
~ The decision has been made to put the renovations out to bidders, the carpentry and apprenticeship programs will not be involved.
12. Program commended on effort to recruit female students.
~ The EIMT Program will continue in its efforts to participate in DOE Career Fairs and to support methods that promote female enrollment.
13. Larger discussion of what the program is doing well is needed.
~ In writing current and future reviews, the program will focus on documenting challenges and improvements and agrees with CERC in the necessity of this documentation in order to provide and accurate idea of how the program is doing, and identifying areas that need improvement as well as areas that are working well for the program.
14. Discussion of renovation, and accommodations/locations for storage for Renee should be deliberated.
~ Because POM has been designated the responsibility to address this challenge, the EIMT program entrusts that proper consideration and planning are currently being taken care of.
15. Great work on conveying the program's strengths, accomplishments, as well as deficiencies.
~ As discussed in #13 above, the EIMT program will continue in its efforts to strive for improvements for students retention and success.
16. How does knowledge of ESIM and AHJ requirements relate to ILO 3, respecting diversity and Hawaiian culture? What does the program do to help graduates "make contributions to our community in a manner that respects diversity and Hawaiian culture?" The program needs to reconsider how it meets ILO: 3, it undoubtedly does since PLO: 8 includes cultural awareness,

	<p>however review infers that the program teaches students to respect diversity by teaching them about electrical code requirements, principles, theory and skills along with photovoltaic knowledge. Although this knowledge is important, it alone, does not teach students about respecting diversity or the Hawaiian culture.</p> <p>~Because all of the assessments are currently being revised, alignments from the CLO's to the PLO's and to the ILO's will be more clear in the future and the Assessment Coordinator will be overseeing the alignments prior to submission of the APR and all assessment reports forth coming. The instructors will take care to word more responsibly the alignments so that the connections are as transparent as possible.</p> <p><u>ADDITIONAL CERC COMMENTS:</u></p> <ul style="list-style-type: none"> • There is concern about future since enrollment and graduation rates do not allow for the anticipated 5% per year increase in graduates by the UHCC system. <ul style="list-style-type: none"> ~ This is something that cannot be changed unless the size of the facilities are increased and other changes are made. As of now, all the trades have a cap for enrollment. The program will continue to work on ways to ensure that enrollment is at its capacity. • Unclear assessment results, and results should be used to support how the program aligns with the College's mission and ILOs. <ul style="list-style-type: none"> ~ Assessments are currently being revised so that all results are clear in supporting the alignment between the assessments and College's mission and ILOs. • In the CLO section of the assessments, no documentation is shown to whether or not changes or improvements have been identified or implemented for "changes for better student outcomes." Documenting these conversations is recommended. <ul style="list-style-type: none"> ~Documentation will be shown in the future APR.

ARPD Data: Analysis of Quantitative Indicators (required by UH System)

Program data can be found on the ARPD website: <http://www.hawaii.edu/offices/cc/arpd/>

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

Analyze the program's ARPD data for the review period. Describe, discuss, and provide context for the data, including the program's health scores in the following categories: http://hawaii.hawaii.edu/files/program-unit-review/	
Demand	<p>Demand indicators are based on the "New & replacement Positions (County Prorated) listed on line #2 divided by the Number of graduates listed on line #20. Bench marks: Healthy = > 0.75, Cautionary: 0.5 – 0.74 and</p> <p>Unhealthy < 0.5 Healthy \geq 1.5</p> <p>Currently the EIMT Program's Demand Indicator for 2017-18's outcome is at an "unhealthy" status.</p> <p>According to the scoring rubric, this indicator should be "healthy." The EIMT program has a score of 7.42 which is higher than the 1.5 needed in order to be deemed healthy. This indicator is most likely a typo.</p> <p>Line #2: $126+113+110 = 349/3 = 116.33$ Line #20 $18+10+19 = 47/3 = 15.66$</p> <p>If you take the rolling average of the of line #2 and divide by line #20: 116.33 divided by $15.66 = 7.42$</p> <p>Despite the believed "healthy" call, the following is data of the graduates' employment history after graduation in the Spring 2018:</p> <p>Out of the 18 graduates from Spring 2018, fifteen are currently employed full time and one student is employed part time in the electrical field for a total of sixteen out of eighteen students, or 89%, are currently employed in the electrical industry. The two remainder students are not currently employed; one was injured on the job and the other is seeking employment between companies.</p> <p>The EIMT Program perceives that due to the past EIMT graduate(s) job placements, the demand indicator should be considered "healthy."</p> <p>Note: The CIP code has been changed in 2018.</p>

Efficiency	<p>Efficiency Indicators are based on the “Fill Rate” listed on line #10. Bench Mark: Healthy: 75-100%, Cautionary: 60 – 74%, unhealthy: < 60 %.</p> <p>Currently, the EIMT’s Efficiency Indicator for 2017-18, is “Healthy” due to the 88% Fill Rate. The majors to FTE BOR Appointed Faculty is 2. Majors to FTE BOR Appointed Faculty is 24. Upon review of the rubric used to determine the health score, the EIMT Program’s score of 24 falls between the 15-35 health score bracket and the EIMT Program has consistently held enrollment at higher than the 75% benchmark which would support that this health indicator is correct.</p>
Effectiveness	<p>In reviewing the effectiveness score for the EIMT program, we find that the program is considered “healthy.” The score for this demand indicator has decreased but is still well within range of being healthy. The completion rate for EIMT is currently at 94%, and lines #19 (persistence Fall to Spring) has decreased but remains above 75%, at 80%.</p> <p>“Unduplicated Degrees/Certificates Awarded,” line #20, reflects the 18 degrees awarded to the EIMT students that have graduated in Spring 2018. This graduation rate is actually 90% with 18 graduates out of the initial 20 enrolled students and has increased 47% from the year before, where only 10 degrees were reported.</p>
Overall Health	<p>The overall health of the program, although “cautionary,” is believed to be “healthy.” Demand indicators are thought to be flawed, possibly a typo.</p> <p>The efficiency indicator is “healthy,” and the effectiveness indicator is “healthy.”</p>
Distance Education	N/A
Perkins Core Indicators (if applicable)	<p>The EIMT Program had received “Met” rating for; Technical Skills Attainment, Completion and Student Placement. However, we have not for: Student Retention or Transfer, Nontraditional Participation, and Nontraditional Completion.</p> <p>The Student Retention was not met by .33, the goal was 81.81 and the actual was 81.48. With this small of a margin, we are content to believe that for all intents and purposes, we feel we met this indicator.</p> <p>In response to the Nontraditional Participation & Completion indicators, the second graduating cohort contained no female students, which explains the “Not Met” rating.</p>

	<p>The EIMT Program will continue to participate in DOE Career Fairs to advertise and promote the program to all genders. Having a female EIMT Instructor helps to break the gender bias that jobs in the Electrical field are comprised by the male gender only.</p>
<p>Performance Funding Indicators (if applicable)</p>	<p><u>Number of Degrees and Certificates</u></p> <p>EIMT contributed 5.7% or 33 out of the 576 *Degrees and Certificates awarded at Hawaii Community College. This program’s effectiveness in contributing to this area equated to 165%.</p> <p>NOTE: The program’s effectiveness measure was figured out by dividing Number of Degrees and Certificates by graduating class capacity.</p> <p>Over the last three years, we averaged 88% capacity. After analyzing our data, roughly 89% of these graduates received both their AAS Degree and CA. We always encourage our students to pursue the AAS Degree, and the majority do. Unfortunately, a small percentage do not obtain their AAS Degree in EIMT due to personal obligations or challenges.</p> <p><u>Number of Degrees and Certificates Native Hawaiian</u></p> <p>EIMT contributed 9% or 21 out of 233 *Degrees and Certificates awarded to Native Hawaiians at Hawaii Community College. We do not control who enters the program, the best way to measure the effectiveness of this program’s contributions is to compare the Number of Native Hawaiians that enter the program versus the Number of Degrees and Certificates Native Hawaiian. The EIMT program averages a large percentage of Native Hawaiian success rate. By participating in multiple high school career fairs each year has substantially contributed to the success rate of Native Hawaiians, who enter in to the EIMT program.</p>

	<p><u>Number of Degrees and Certificates STEM</u></p> <p>EIMT is not a STEM program.</p> <p><u>Number of Pell Recipients</u></p> <p>EIMT contributed 6% or 15 out of 256 *Pell Recipients that graduated at Hawaii Community College.</p> <p>The way we measure the effectiveness of this program's contributions is to compare the Number of Pell Recipients that enter the program versus the Number of Pell Recipients. Currently we do not have the Number of Pell Recipients that enter the program, we will look into a way to start tracking this number. Based on our data, this program is doing its part contributing to this measure.</p> <p><u>Number of Transfers to UH 4-yr</u></p> <p>EIMT contributed 0 out of 289 *Transfers to UH 4-yr at Hawaii Community College. EIMT is not a transfer program. In the past three years we able to contribute three transfer students to this data and are doing above average in this area. EIMT students who contemplate moving towards an engineering or other 4-year degrees will be supported and directed toward the appropriate courses to transfer.</p> <p>*Data from John Morton's Hawaii CC Fall 2017 Campus Report</p>
<p>What else is relevant to understanding the program's data? Describe any trends, internal/external</p>	<p>During the year of 2014 it was announced that the EIMT Program would be modified. Each of the two FTE BOR Appointed Faculty would have their own cohorts.</p>

<p>factors, strengths and/or challenge that can help the reader understand the program's data but are not discussed above.</p>	<p>In Spring 2016, the instructor had her first EIMT Cohort graduate with 18 students. In Fall, 2016, the instructor had her second new EIMT cohort begin with 20 students. In Spring 2018, the instructor had her second EIMT Cohort graduate with 18 students.</p> <p>These numbers are significant when considering that the initial student enrollment cap is 20, which is a 90% fill rate. (See Line #20 "Unduplicated Degrees/Certificates Awarded). This is not the case for other EIMT cohorts with lower enrollment and/or graduation success rates.</p> <p>The fluctuating numbers reflect trends of attrition rates and vary for each instructor.</p>
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PROGRAM ACTIVITIES

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

For example, discuss:

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

- During July 2017, the EIMT Program was undergoing changes with class room, lab and storage facilities. Building 391 was being cleaned out and became semi vacant due to the preparation of the upcoming renovation for the building. This placed a burden on the students and the instructor due to having a temporary classroom, (located across campus on the North side), while having storage placed on the opposite end of our classroom (South Side) of campus and the lab workstations were utilized in the lab area of building #391 (West Side) location of campus. Due to having three different locations on campus, the walking and gathering of tools and materials was time consuming and cut into instruction time.

Another factor that hindered this cohort was the timing of the DHHL Model Home project that this cohort was assigned to work on in the Spring 2018. During that time, building # 391 was still semi-vacant and prepped to undergo renovations. There was an overall feeling of chaos as a result of having these two projects take place at the same time. This particular Model Home Project entailed more work than previous

projects due to the type of Photovoltaic system (PV) that complied with Hawaii Electric Light Company's (HELCO) Customer Self Supply (CSS). This CSS program was created to allow the public to tie the PV systems to the HELCO grid despite utility lines being at full capacity and as long as the PV system had a contactor to disconnect the PV system from HELCO's grid in the event the PV system over produced more than the customer was consuming. Another challenge were the type of batteries. This type of system included Enphase Lithium AC batteries which consumed more time for the students to install than past projects and which also entailed more conduit bending, calculations and layout prep work than any other past Model Home projects. This new type of PV system was chosen for the benefits of the students, which made it rewarding despite the extra work involved for both the students and the instructor. As a result, two of the 2018 graduates have gained employed with two different PV companies. The instructor found this last cohort to be full of challenges, and not because of the students, because of the above mentioned, but challenges can turn out to be rewarding. Although this was a very stressful two years, with extra hours dedicated over the summer and occasional extended class scheduled end times, the instructor and students, were just able to finish the DHHL Model Home #51 on time for the May 10, 2018 Dedication ceremony. These challenges were met with 100% commitment, and the Model Home Project prevailed.

PROGRAM WEBSITE

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

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

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

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

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

PART 2: PROGRAM ACTION PLAN

AY18-19 ACTION PLAN

Provide a detailed narrative discussion of the program's overall action plan for AY18-19, based on analysis of the Program's AY17-18 data and the overall results of course learning outcomes assessments conducted during the AY17-18 review period.

This Action Plan should identify the program's specific goals and objectives for AY18-19 and must provide benchmarks or timelines for achieving each goal.

- 1.) Continue with Department of Model Home project with Photovoltaic Installation.
- 2.) Revise CLO for EIMT 22 due to the shift of having the DHHL Model Home Project being moved to the third and fourth semesters. The instructor was informed of this after the fact and will correct alignments and make modifications accordingly with the help of the Assessment Coordinator.
- 3.) Modify Assessment procedures and rubrics to ensure correct alignment and accurate outcomes.
- 4.) Adjust PLO and SLO alignments to align with ILO.

ACTION ITEMS TO ACCOMPLISH ACTION PLAN

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

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

Action Item 1:

Continue with Department of Model Home project with Photovoltaic Installation.

The EIMT Program will continue to work closely in alliance with the Carpentry Program, Architectural Engineering CAD Technologies Program, Agriculture Program, Diesel Program, Hawaiian Life Styles Program and all associated instructors and programs involved. Due to

possible inflation of materials, the EIMT instructors will be cautious of purchases for materials and will plan accordingly to be within set budgets to ensure monies will be available to install a complete Photovoltaic System, in compliance to Hawaii Electric Light Company's guidelines.

Action Item 2:

Revise CLO for EIMT 22 due to the shift of having the DHHL Model Home Project moved to third and fourth semester

https://docs.google.com/document/d/1bmEqab7GgyrdtzzR_oODy5U1Nr4FZFB5ftQaaGZfTe0/edit

EIMT 22 - ELECTRICITY THEORY & PRACTICE

- "CLO 1: Apply concepts of design, network and point to point wiring circuitry."
- "CLO 2: Demonstrate an understanding of basic photo voltaic (PV) principles and complete a residential PV system installation."
- "CLO 3: Demonstrate proper wiring in accordance with the theory of low voltage systems."
- "CLO 4: Demonstrate basic skills in conduit bending."
- "CLO 5: Install various permanent residential single phase service systems."
- "CLO 6: Demonstrate a complete residential rough in and trim out of a double wall project."
- "CLO 7: Demonstrate safety procedures in the use of personal protective equipment, tools/equipment, and fall protection."

The instructor will rewrite the CLO's # 2 and #6 due to the non-existent DHHL MH project in the second semester (EIMT 22). Assistance from the Assessment Coordinator will be sought in order to analyze any other potential changes that might need to be made.

Action Item 3:

Modify Assessment procedures and rubrics to ensure correct alignment and accurate outcomes.

Prior to the separation of the EIMT program into two separate cohorts, it was suggested by colleagues that partial CLO's and PLO's were legitimate to assess. Now that each instructor

has their own cohort, it's imperative to cover all PLOs and SLOs per assessment in order to meet the requirement of having each PLO and SLO reviewed within the five year time allotment and to reassess, in order to "Close the Loop" with accurate results. The instructor will continue to conduct assessments in order to gauge student learning outcomes, and will include all CLOs for this particular cohort.

Action Item 4:

Adjust PLO and SLO alignments to align with ILO.

<http://hawaii.hawaii.edu/eimt>

PROGRAM LEARNING OUTCOMES

Upon successful completion, students are prepared to:

- Accurately demonstrate entry-level skills in residential, commercial, and industrial electrical installation and maintenance.
- Practice safety on the job and recognize potential hazards.
- Interpret and comply with the National Electrical Code NFPA 70 book and local codes.
- Read and interpret all sections of blueprints and draft electrical circuits.
- Integrate carpentry, masonry, plumbing, and HVACR systems with electrical installation and maintenance.
- Produce take-off lists, perform layout, and install new materials for existing and new projects.
- Think critically, do research, calculate minimum requirements, and solve problems.
- Demonstrate the qualities of an apprentice electrician: positive attitude and behavior, discipline, promptness and attendance, ability to work alone or with others, with cultural awareness, and good communication skills.

The EIMT Program will review and possibly reword and reduce the PLO's for the program to better align with the ILOs.

Course Learning Outcomes will be reviewed to better align with ILO's and rubrics used for assessment will be modified as well.

RESOURCE IMPLICATIONS

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

BUDGET ASKS

For budget ask in the allowed categories (see above):	
Describe the needed item(s) in detail.	No budget requests at this time.
Include estimated cost(s) and timeline(s) for procurement.	N/A
Explain how the item(s) aligns with one or more of the strategic initiatives of <u>2015-2021 Strategic Directions</u> : http://hawaii.hawaii.edu/sites/default/files/docs/strategic-plan/hawcc-strategic-directions-2015-2021.pdf	N/A

PART 3: LEARNING OUTCOMES ASSESSMENTS

For all parts of this section, please provide information based on CLO (course learning outcomes) or PLO (program learning outcomes) assessments conducted in AY17-18.

Evidence of Industry Validation and Participation in Assessment (for CTE programs only)

Provide documentation that the program has submitted evidence and achieved certification or accreditation (if applicable) from an organization granting certification/accreditation in the program's industry/profession. If the program/degree/certificate does not have a certifying body, you must submit evidence of the program's advisory committee's/board's recommendations for, approval of, and/or participation in the program's assessment(s).

Please attach copy of industry validation for the year under review.

Courses Assessed

List all program courses assessed during AY17-18, including Initial and "Closing the Loop" assessments.			
Assessed Course Alpha, No., & Title	Semester assessed	CLOs assessed (CLO#s)	PLO alignment (PLO#s)
<u>EIMT 43</u>	SP 2018	CLO: 1	

Direct & Alternating Current and Photovoltaic Power Systems		CLO: 4 CLO: 5	Alignment in progress
“Closing the Loop” Assessed Course Alpha, No., & Title	Semester assessed	CLOs assessed (CLO#s)	PLO alignment (PLO#s)
<u>EIMT 41</u> Conduit Calculation	Fall 2017	CLO: 3	PLOs: 1,3,6 & 7

Assessment Strategies

For each course assessed in AY17-18 listed above, provide a brief description of the assessment strategy, including:

- a description of the type of student work or activity assessed (e.g., research paper, lab report, hula performance, etc.);
- a description of how student artefacts were selected for assessment (e.g., the assessment included summative assignments from all students in the course, OR a sample of students’ summative assignments was randomly selected for assessment based on a representative percentage of students in each section of the course);
- a brief discussion of the assessment rubric/scoring guide and the criteria/categories and standards used in the assessment.

Course Alpha/#: EIMT 43 Direct & Alternating Current and Photovoltaic Power Systems

The instructor assessed every student with a rubric with five competencies. The total maximum score for all five competencies for this rubric totaled 15 points. The instructor anticipated that the overall combined score for this assessment would be 80% or higher, with at least 15 out of 18 students meeting the benchmark of 80%, or 12 out of 15 points.

Course Alpha/#: EIMT 41, Conduit Calculation

The course had 19 students, assessors randomly selected work from 3 students each, or a total of 8 among the 4 assessors, because some assessors chose the same students work some of the work was duplicated.

The four assessors were all from or are currently employed or retired from industry; one of the four is currently on the EIMT Advisory Council. The assessors scored the students work with a rubric with three competencies, worth 9 points total.

Expected Levels of Achievement

For each course assessed in AY17-18 listed above, state the standard (benchmark, goal) for student success for each CLO assessed AND the percentage of students expected to meet that standard for each CLO.

Example: “CLO#1: The standard for student success is that students will answer 80% of the questions on the final exam related to CLO#1 correctly. The expectation is that 85% of students will meet this standard for CLO#1.”

Example: “CLO#4: The standard for student success is that students will be able to perform skills associated with CLO#4 with 80% proficiency. The expectation is that 75% of students will meet this standard for CLO#4.”

Assessed Course Alpha, No., & Title	Assessed CLO#	Standard for Success	% of Students Expected to Meet Standard
<u>EIMT 43</u> Direct & Alternating Current and Photovoltaic Power Systems	CLO: 1 CLO: 4 CLO: 5	80% proficiency, or 12 out of 15 points	80% of the students would meet the benchmark
<u>EIMT 41</u> Conduit Calculation	CLO: 3	80% proficiency or 7 out of 9 points	85% of the students would meet the benchmark

Results of Course Assessments

For each course assessed in AY17-18 listed above, provide:

- a statement of the quantitative results;
- a brief narrative analysis of those results.

Course Alpha/#: EIMT 43 Direct & Alternating Current and Photovoltaic Power Systems

In analyzing the results of this assessment, the instructor found that the overall combined score was 98% and 18 out of 18 students met the benchmark score of 80% or higher.

The students worked in a very tight timeframe but completed the system on time and in a professional manner, completely meeting my expectations and those of the Advisory Council members who were guests and came to observe the work in progress.

Course Alpha/#: EIMT 41, Conduit Calculation

The four assessors scored the students as meeting all course goals for CLO3. The overall combined scores were 94% for assessed the students, which exceeded the instructor's expectations.

This cohort of students did really well, as one assessor noted, "Students worked diligently, with caution ad showed confidence that they knew what was expected for completing the project."

Other Comments

Include any additional information that will help clarify the program's course assessment results, successes and challenges.

For the EIMT 43 course, the instructor will assess CLOs: 2 & 3 in Spring 2020. The instructional timeline was restricted due to the model home project and the displacement of lab/shop areas on campus.

Discuss, if relevant, a summary of student survey results, CCSSE, e-CAFE, graduate-leaver surveys, special evaluations, or other assessment instruments that are not discussed elsewhere in this report.

The instructor is pleased with the e-Café results. For Fall 2018, EIMT 41 all of 19 students had participated in the E Café Survey, which is 100% of my students. The comments were very positive however I did receive a few comments that I will address. Highlighted in yellow are student comments, bullets are my responses to some of the comments.

Commercial Wiring - Fall 2017

Renee Dela Cruz

CRN: 15338, Section: 0

Hawaii Community College

Electrical Installation & Main

14. Any suggestions to improve this course?

"improve on talking more"

- I try to keep lecture time to not extend past an hour of instruction at a time. This I find keeps students more engaged and I give them a mini break at the top of the hour to ensure that students are not disengaged.

“for group assignments or projects, such as as the model home next semester, having some directive or assigned jobs for each student i believe will help our class be efficient on a timely manner rather than students standing around not sure what to do, especially when time is a big factor or variable.”

- To build leadership and communication, I assigned introverted students along with stronger personalities so the group can improve on communication and team work. There were some groups that did not work well together and basically disband from some individuals within their assigned groups. This statement may sound like the outcome was a disappointment, but I feel that this is “real world” issues and outcomes that they will be faced with in the field. This experience had allowed them to experience diversity.

Commercial Wiring - Fall 2017

CONTINUATION

Renee Dela Cruz

CRN: 15338, Section: 0

Hawaii Community College

Electrical Installation & Main

12. Overall, the instructor was effective.

Results from...	Mean	N-Size	Std Dev	Strongly Disagree(1)	Disagree(2)	Neutral(3)	Agree(4)	Strongly Agree(5)	N/A()
Hawaii Community College	4.52	3762	0.97	55(1%)	54(1%)	211(6%)	729(19%)	2655(71%)	20(1%)
Applied Technical Education	4.66	206	0.88	2(1%)	0(0%)	4(2%)	34(17%)	162(79%)	2(1%)
Construction Technology	4.58	121	1.04	1(1%)	0(0%)	4(3%)	19(16%)	93(77%)	2(2%)
Electrical Installation & Main	4.9	20	0.31	0(0%)	0(0%)	0(0%)	2(10%)	18(90%)	0(0%)
Crn (Sec): 15338 (0)	4.89	19	0.32	0(0%)	0(0%)	0(0%)	2(11%)	17(89%)	0(0%)

13. What did you like about this course, such as activities, projects, assignments, etc.?

n/a
hands on lab for sure
Bending conduit at the 8x64 and having live labs.
activities, projects
Love the labs
practical applications of in-class assignments which helps people like me who get a better understanding of things through physically applying what is thought in class.
like all the live projects we had and learning how to bend conduit.
EVERYTHING!
Has a lot of hands on labs, paperwork encapsulating electrical knowledge for the labs.
Great preparation for my career
Fun activities, good labs, hard worksheets, whats not to love
Live jobs
she likes to challenge us the students to be the best that we can
N/A
Fun
Pretty good labs this semester.
Great hands on and class work She gives better understanding on electrical understanding
i liked all mapping and drawing diagrams we did and all the labs.
I liked all the labs we did cause I learned more during the labs.

14. Any suggestions to improve this course?

more hand's on lab and maybe work that can assist our lab work.
More live labs.
none
improve on talking more
for group assignments or projects, such as as the model home next semester, having some directive or assigned jobs for each student i believe will help our class be efficient on a timely manner rather than students standing around not sure what to do, especially when time is a big factor or variable.
NOTHING
More live jobs

No
Good job
Less hard worksheets and drawings whats not to love
n/a
N/A
No
None
Less drawing please.
No keep up the good work
all was good.
n/a

15. Other comments:

N/A
instructor is very approachable, and method of instruction is easiest to work with compared to instructors ive learned from in the past.
HI MRS. THIS IS KEONI THANKS FOR ALL YOU DO FOR US HAPPY HOLIDAYS
Great class.
no other comments
best teacher i had and i feel like shes will always be there for her students
N/A
None
No.
Great teacher
looking forward to net semester.
n/a
See you next semester!
none

Industrial Wiring - Spring 2018 (EIMT 43)

Renee Dela Cruz

CRN: 16140, Section: 0

Hawaii Community College

Electrical Installation & Main

6. The instructor was well prepared.

Results from...	Mean	N-Size	Std Dev	Strongly Disagree(1)	Disagree(2)	Neutral(3)	Agree(4)	Strongly Agree(5)	N/A()
Hawaii Community College	4.57	3094	0.88	41(1%)	48(2%)	187(6%)	536(17%)	2259(73%)	11(0%)
Applied Technical Education	4.77	179	0.57	0(0%)	3(2%)	4(2%)	24(13%)	148(83%)	0(0%)
Construction Technology	4.69	94	0.66	0(0%)	3(3%)	1(1%)	18(19%)	72(77%)	0(0%)
Electrical Installation & Main	4.88	16	0.34	0(0%)	0(0%)	0(0%)	2(13%)	14(88%)	0(0%)
Crn (Sec): 16140 (0)	4.88	16	0.34	0(0%)	0(0%)	0(0%)	2(13%)	14(88%)	0(0%)

There were 16 out of 18 students who participated in this E Café Survey, which averaged 88%. I guess I had made improvements from the suggestions made from last semester’s ECafe in regards to improving on “talking more”. This Spring EIMT 43 suggestions now say, “*Enough talk and send us to lab for Christ's sake. Talk too much*” . (see Question #14 below)

I really enjoyed working with this cohort. After interacting for four semesters full time with them, we got to bond with each other and have similar values, and goals.

Another comment made in question #14 stated, “*more hands on for motor control and solar.*” Due to the re shifting of *having the DHHL Model Home Project scheduled for third and fourth semester, it conflicts with the course catalog listing contents for EIMT 41 and EIMT 43.* Hence, it’s not surprising that we have limited time to complete the active DHHL Model Home project and limited time to cover all CLO’s. The EIMT program is requesting to have a “Photovoltaic “Off Grid” system so we would have more flexibility to cover the various photovoltaic exercises at various times throughout the two years.

12. Overall, the instructor was effective.

Results from...	Mean	N-Size	Std Dev	Strongly Disagree(1)	Disagree(2)	Neutral(3)	Agree(4)	Strongly Agree(5)	N/A()
Hawaii Community College	4.51	3094	0.99	52(2%)	51(2%)	194(6%)	527(17%)	2222(72%)	15(0%)
Applied Technical Education	4.68	179	0.91	0(0%)	3(2%)	5(3%)	19(11%)	148(83%)	0(0%)
Construction Technology	4.68	94	0.85	0(0%)	0(0%)	3(3%)	14(15%)	75(80%)	0(0%)
Electrical Installation & Main	4.56	16	1.26	0(0%)	0(0%)	0(0%)	2(13%)	13(81%)	0(0%)
Crn (Sec): 16140 (0)	4.87	15	0.35	0(0%)	0(0%)	0(0%)	2(13%)	13(87%)	0(0%)

13. What did you like about this course, such as activities, projects, assignments, etc.?

i like the real experiences we had in class to help me in the field
 Everything
 The model home was a good experience
 activities
 Appropriate work load
 Model Home, Hands on work, on the job learning.
 the course has a lot of activities that challenges you and makes you use the skill you learned from previse semester.
 everything she thought me
 Hands on activities.
 i learned alot
 Working on model home was real world, helped me understand applying the bookwork that was learned, especially loved the solar pv,
 The model home helped me prepare for the job industry and know what to expect.
 Everything
 A lot of experience for those interested in working in this field.

14. Any suggestions to improve this course?

keep pushing to get the point across even if it takes months. like how you pushed us on grounding in the 1 semester. i never got it until a month or so, but because you push it on everyone to get it i got it as well.

 Enough talk and send us to lab for Christ's sake. Talk too much

n/a

none

Present work study option as available for all students for the fourth semester early in the 3rd semester or sooner.

N/A

I suggest to keep the co-hart together so everyone moves at same time. more hours in class room and lap

N/A

more hands on for motor control and solar.

Though the labs might be repetitious they are very helpful so having more labs would be good

N/A

Nothing cause I liked everything about it

15. Other comments:

thank you for teaching this course i learn so much and appreciate you and all you done for us.

Very good informational class
going to miss mrs.Dela Cruz
Great instructor.

N/A

Hey Mrs! hope you have a great summer and thank you for giving me the option of being able to head out into the electrical field and work. I couldn't have made it this far without you and i can't thank you enough for Teaching me all that i have learned in the past two years in this program. I hope to see you around!

Mrs Dela Cruz was not only awesome in teaching/instructing in pertaining info she is great at being PC and guiding students in being better with work ethics. Thank You for everything!

Thanks for these past 2 years! It was rough, but very rewarding.

Next Steps – ASSESSMENT ACTION PLAN for AY18-19

Describe the program’s intended next steps to improve student learning, based on the program’s overall AY17-18 assessment results.

Include any specific strategies, tactics, activities or plans for improvement in program or course assessment practices, methods or tools, rubrics, schedules, etc.

Please see the following from above with explanations:

Action Item 2:

Revise CLOs for EIMT 22 due to the shifting of the DHHL Model Home Project moved to third and fourth semester.

Action Item 3:

Modify Assessment procedures and rubrics to ensure correct alignment and accurate outcomes.

Action Item 4:

Adjust PLO and CLO alignments to align with ILOs.

PART 4: ADDITIONAL DATA

Cost Per SSH (to be provided by Admin)

Please provide the following values used to determine the total fund amount and the cost per SSH for your program:

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

External Data*

If your program utilizes external licensures, enter:

Number sitting for an exam _____
Number passed _____

***This section applies to NURS only.**

AY 17-18 Student job Placement

student	Employer(s)	position
1. K.B.	Family Business Gutters	Installer
2. N.P.	Mattos Electric	Apprentice
3. S.	Family Generator Business	Apprentice in Oahu-Electrician
4. W.Z.	Sun Run	Apprentice-Installer-Electrician
5. J.D.	American Electric	Apprentice
6. M.K	808 Telecom Electric	Apprentice
7. D.	Mattos Electric	Apprentice
8. C.T.	Iwamoto Electric, Hi. Elect. Service	Apprentice
9. Z.	808 Telcom Electric	Apprentice
10. N.	Home Depot (applying @ HELCO)	Associate
11. R.	? Applying for Elect. Co.	Out of Country
12. D.Y	Revoluson (Solar Co.)	Apprentice-Electrical
13. K.	Hirayama Brothers Elect. Inc.	Apprentice
14. L	Hirayama Brothers Elect. Inc.	Apprentice
15. R.H	?	Injured Apprentice
16. J.T.	HELCO	Apprentice
17. T.O	Landscaping Co.	Associate
18. I.S.	?	?

EIMT Advisory Council Meeting Notes

Thursday, March 01, 2018

4:00pm-5:30 pm

Attendees: Pete Stasey, Troy Haspe, Dean Oshiro, Renee Delacruz

Facilitator: Tiana Koga

1) Assessment

- a. Results in program and course assessment
Upcoming motor controls re-test and closing (*action item for advisory groups)
- b. Review of PLOs, CLOs – verify that achievement by a student will meet entry level employment
 - i. Review in projects in the model home
 - ii. Promptness, accountability, attention and awareness, ability to communicate what you are saying, good attitude, retention, don't be afraid to ask questions
 - iii. Theory of operation. Transformer, insulation.
 - iv. Schematics (automation), software booklets, etc.
 1. Logical Diagrams
 2. Instruments: know how to operate and understand
 3. Software booklet: read and understand manuals
 - v. The ability to troubleshoot at any level
 - vi. Basic Computer Skills
 1. Excel
 2. Word
 3. File: Saving and moving (i.e. Save vs. Save As)

2) Review of current courses and curriculum

- a. Updates made/new direction for program this year
 - CSS: Customer Self Supply Photovoltaic System being installed on Model Home #51

3) Industry Report

- a. Industry needs and trends: Trends – what's new in industry? How this affects our program? (new skills, procedure, technology changes, etc.) – short term (ST) and long term (LT)
 - Schematics/ automation LT
 - Hilti (cloud based app) LT
 - Computer and software LT
 - iPad replacing books
 - Instant updates
- b. Employment forecast – Jobs available – short term (ST) and long term (LT)
 - Current jobs are booming; based on economy ST
 - Contracting based on government LT

- Journeyman; experience and cost needed, not something that the college can help with

4) Feedback regarding curriculum in alignment with industry needs

- a. Is program meeting current needs/trends?

Yes, by covering:

I think (If I'm not mistaken) that they said "YES", but the trend is branching into: networking-data, communications, fiber optics, CISCO, PLC being more computerized than analog.

- i. Electronics and networking
- ii. Communications, fiber optics, CISCO
- iii. Programmable logic controls

- b. How best to meet the needs and trends

- i. Basic Computer
Microsoft Programs
Google
Basic computer operation
- ii. Soft skills
- iii. Basic Trouble shooting
Industry
Everyday life
Logic/ problem solving
- iv. Implementing the "Basics"
Work ethics
Drive/motivation to learn, "strive for the highest"

What can you share now that you wish you knew then?

- Remain teachable
- Understand and build a strong foundation
- Teaching them to have a vision
 - What do you see yourself doing?
- Know a little bit of everything
 - "Jack of all trades"
 - Fix car, houses, work-related, etc.