Attachment 1 –A
Revised July 2007

UNIVERSITY OF HAWAI`I COMMUNITY COLLEGES
ANNUAL INSTRUCTIONAL PROGRAM REVIEW
PROCEDURES, COMPONENTS, AND MEASURES

HAWAIʻI COMMUNITY COLLEGE ELECTRICAL INSTALLATION AND MAINTENANCE TECHNOLOGY

NOVEMBER 30, 2007

Introduction:
Program Mission Statement and brief description of the program including a listing of program level student learning outcomes.

- **Mission**
  Our endeavor is to provide the maximum learning opportunity for students to build proficiency in electrical installation and maintenance technology, current NEC National Electrical Code NFPA 70 interpretations and comprehension, current construction field and industry methodology, related field manual dexterity, and sound work ethics; in alignment with UHCC's and HawCC's mission to serve all segments of our Hawaiʻi Island Community.

- **History**
  In response to the growing demands of the Big Island's electrical industry, the Electricity Program at Hawai'i Technical School began in the fall of 1955. At that time the program had one full time instructor and 12 students. The program first offered a Certificate of Achievement to those students who satisfactorily completed the two-year program.

  In 1970, the institution was renamed Hawai'i Community College, University of Hawai'i at Hilo. As one of the state's community colleges, the program began offering an Associate of Science Degree in Electricity in addition to the Certificate of Achievement.

In 1982, the program title was changed to Electrical Installation and Maintenance Technology. The reason for the change was to bring about a closer fit with the program objectives; to articulate with program titles with other community colleges in the state having similar objectives and curricula; and to reduce confusion with the Electrical programs/courses offered by the Department of Education.

In the fall of 1988, through joint cooperative efforts with the Hawai'i State Corrections Center and Hawai'i Community College, the EIMT program extended its offerings by initiating a Certificate of Achievement program to Kulani Correctional Center. The program courses were modularized, on an experimental basis, to allow them to be offered at that institution. The arrangement allowed inmates who began the program at Kulani to receive credit for classes taken at the center, and transfer to UHH following their release. Thus, the former inmates were able to complete the requirements for the Certificate or go on to receive the Associate of Science degree. The first class offered at Kulani enrolled ten students. One of these students enrolled in the EIMT program at HawCC and graduated in spring 1990 with an A.S. degree.

Our trade Advisory Committee helped to broaden the program's content to increase skills required for electrical installation and maintenance entry level positions. This new curriculum articulates with other community college programs and expansion of course content better meet the needs of Hawai'i Island employers and improves the employment opportunities for graduates.

- **Program SLO's**
  - Demonstrates entry-level skills for accuracy in residential, commercial, and industrial electrical installation and maintenance services.
  - Demonstrates competence in work attitude and attendance.
  - Demonstrates competence in practicing safety always, and recognizing potential hazards that needs to be corrected.
  - Demonstrates competence in understanding and interpreting the National Electrical Code NFPA 70 book.
  - Demonstrates competence in blueprint reading and drafting.
  - Demonstrates competence in material take-off and layout on new and existing projects.

- Demonstrates competence in recognizing related building parts and materials in carpentry, masonry, plumbing, and HVAC systems.

- Demonstrates computation, communication, critical thinking, research, and problem solving skills as well as an appreciation for the diversity of cultures, community, and the environment.

- Maintain physical and mental fitness and a drug-free lifestyle.

Take pride in the quality of projects and performance, possess responsible work ethics and standards, and model attitudes of professionalism and appearance.

The EIMT Program is part of the Construction Trades Department in the Applied Technical Education Division. The Construction Trades Department has a unique and exceptional capstone project that is used as an assessment tool. This project is the collaboration of State and County Agencies, Community Partners, Hawai‘i Community College, and the Department of Hawaiian Home Lands. This forty-year old partnership for a four bedroom residential dwelling involves the planning, designing, obtaining proper electrical permits for County of Hawai‘i, material take-off, roughing-in, and trimming-out.

There is a need for all programs participating in this capstone project to meet as a committee to overhaul their respective curriculum to make it possible to benefit all programs. The project is tailored for some programs. Historically, it does not fit in the EIMT Program. The second-year fourth semester lessons were always interrupted and disrupted, due to work that was done on the capstone project. By the time lessons resumed, the students lost their train-of-thought. Lessons had to be taught all over and repeated, which wasted precious teaching and learning time. Due to time running out at the ending of the semester, important lessons could not be taught. The result is, concerned students complain about the curriculum not being delivered.

Unfortunately, with liability issues concerning Instructors using personal State of Hawai‘i Electrical Journeyman & Electrical Contractors’ Licenses for obtaining County of Hawai‘i electrical permits, the EIMT Program is no longer involved with the aforementioned capstone project. The EIMT Program will reassess its Capstone goals before the next Program Review.

Part I. Quantitative Indicators for Program Review

C. Table 8—Data Elements

	AY 04-05	AY 05-06	AY 06-07
EIMT			
1. Annual new and replacement positions in the State	2834	2834	2834
2. Annual new and replacement positions in the County	61	61	61
3. Number of majors	57	76	80
4. Student Semester Hours for program majors in all program classes	432	432	384
5. Student Semester Hours for Non-program majors in all program classes	0	0	0
6. Student Semester Hours all program classes	432	432	384
7. FTE Program enrollment	28.8	28.8	25.6
8. Number of classes taught	2	2	2
9. Determination of program's health based on demand (Health, Cautionary, or Unhealthy)	Healthy	Healthy	Healthy
10. Average Class Size	18	18	16
11. Class fill rate	90%	90%	80%
12. FTE of BOR appointed program faculty	2	2	2
13. Student/Faculty ratio	28.5:1	38:1	40:1
14. Number of Majors per FTE faculty	35.63	47.5	50
15. Program Budget Allocation (Personnel, supplies and services, equipment)	$82,506.00	$82,140.00	$81,852.00
16. Cost Per Student Semester Hour	$190.99	$190.14	$213.16
17. Number of classes that enroll less than ten students	0	0	0
18. Determination of program's health based on Efficiency (Healthy, Cautionary, or Unhealthy)	Healthy	Healthy	Healthy
19. Persistence of majors fall to spring	75.44%	63.16%	80%
20. Number of degrees earned (annual)	10	10	9
21. Number of certificates earned (annual)	10	10	2
22. Number of students transferred (enrolled) to a four-year institution in UH	0	0	0
23. Perkins core indicator: Academic Attainment(1P1)	90.00%	90.91%	86.96%
24. Perkins core indicator: Technical Skill Attainment (1P2)	5.00%	100.00%	92.00%
25. Perkins core indicator: Completion Rate (2P1)	70.00%	56.52%	40.00%
26. Perkins core indicator: Placement in Employment Education, and Military (3P1)	84.62%	64.29%	76.92%
27. Perkins core indicator: Retention in Employment (3P2)	81.82%	77.78%	80.00%
28. Perkins core indicator: Non Traditional Participation (4P1)	7.02%	13.46%	13.33%
29. Perkins core indicator: Non Traditional Completion (4P2)	7.14%	14.29%	16.67%
30. Determination of program's health based on effectiveness (Healthy, Cautionary, Or Unhealthy)	Healthy	Healthy	Healthy
31. Determination of program's overall health (Healthy, Cautionary, or Unhealthy)	Healthy	Healthy	Healthy
32. Number of FTE Faculty	2	2	2

Part II. Analysis of the Program

- **Strengths and weaknesses in terms of demand, efficiency, and effectiveness based on an analysis of data.**

  - Item #3/Number of Majors illustrates a significant gain which indicates a healthy program.

  - Items #4, #6/Total Student Semester Hours All Programs and item #7/FTE Program Enrollment dipped slightly in AY 06-07 due to students applying and being hired at various electrical companies. Job placements indicate a high demand in the electrical field.

  - Item #20/Number of Degrees Earned (annually) and item #21/Number of Certificates Earned (annually) are normal due to student job placements.

  - Item #10/Average Class Size illustrates a healthy program which indicates a high demand in the electrical field and the interest of traditional and non-traditional students in the electrical field.

  - Item #12/FTE of BOR Appointed Program Faculty and item #32/Number of FTE Faculty based on contact hours (21), are a constant and should not change in the near future.

  - Item #13/Student Faculty Ratio illustrates a rise which indicates the popularity of the EIMT Program

  - Items #15/Program Budget Allocation illustrates a dropped in AY 05-07 which indicates the need to increase the budget due to the rising cost of material and equipment.

- **Significant Program Actions (new certificates, stop-out; gain/loss of positions, results of prior year's action plan)**

  - Continued recruitment efforts were a significant factor in the good health standings of the EIMT Program.

  - The Perkins Funding replaced and upgraded some of the outdated and unsafe tools and equipment.

  - No Advisory Board meetings were held lately due to the retirement and semi-retirement of majority of the board members.

  - Currently, SLO's are being assessed and fine tuned.

Part III. Action plan

- **Action Plan**
  - Continue recruitment efforts.
  - Continue developing a priority list of equipment upgrades and replacements through funding that becomes available.
  - Hold an Advisory Council's meeting.
  - Finalize Course SLO's.
  - Efforts in implementing a "Sustainable Energy" course into the fourth semester are in progress. The EIMT Program is currently pursuing grants to purchase a "Photovoltaic System" and to train the Instructors. The system will be used as a tool to assess SLO's. One instructor will visit Maui Community College through the WO Faculty Exchange Grant.
    - The objective of the exchange is to gain knowledge in photovoltaic system designs to assist in proposing a similar course during the spring semesters as a module in the EIMT Program.

The expected outcomes of the visit are to use the ideas and knowledge to develop a curriculum to teach basic photovoltaic applications and to design an actual working photovoltaic system for students' hands-on applications.

Part IV. Resource Implications (physical, human, financial)

CHART 1: PHYSICAL FACILITIES ASSIGNED TO PROGRAM

List Bldng/Rm/Lab/Shop	Describe Renovation/Repair Needed	Estimated Cost
Building 391/17 Laboratory	-increase square footage to provide efficient working space for student workstations -replace light fixtures -improve electrical -repair exhaust fans -replace racking systems -repair hoist system -replace air compressor system -upgrade air-conditioning system	$ 975,000.00
Building 391/18, 22 Faculty Offices	-install separate phone lines -replace furniture -replace all light fixtures -replace ceiling tiles -upgrade electrical outlets -improve internet cable layout -upgrade air-conditioning system	$ 150,000.00
Building 391/23, 24 Lecture Rooms	-replace louvers -replace furniture -replace light fixtures -replace ceiling tiles -install fixed projection system -provide additional internet lines -upgrade air conditioning system	$58,000.00
Building 391/12, 13, 14, 15, 16, 20, 21 Storage / Tool Rooms	-replace light fixtures -replace ceiling tiles -replace racking systems -improve electrical	$ 400,000.00

CHART 1A: INVENTORY LIST: EQUIPMENT & CONTROLLED PROPERTY

Program Assigned Equipment (E) and Controlled Property (CP) (List in order of chronological depreciation date)	Category: E =item value > than $5K CP =item value $1K - $5K	Expected Depreciation Date	Estimated Replacement Cost
(2007) 4" EMT Bender	E	2007	$20,000.00
(2007) Fluke Kit	CP	2008	$2,500.00
(2005) Power MIG	CP	2006	$2,300.00
(2005) Thermal Dynamics Plasma Cutter	CP	2006	$2,700.00
(1999) Bender	CP	2000	$3,500.00
(1992) Motor Control Center	E	1993	$7,500.00
(2004) Dell Computer	CP	2005	$3,000.00
(2002) Computer PDC	CP	2003	$3,000.00
(2007) Plate Compactor	CP	2008	$2,500.00
(1994) Chevrolet Truck	E	1995	$45,000.00
(1985) Van Dodge	E	1986	$30,000.00
(2003) Threader Machine	CP	2004	$4,500.00

CHART 2: PERSONNEL

Instructors
1. Harry Takiue, Associate Professor
2. Patrick C. Pajo, Assistant Professor
3. Lecturer

CHART 3: BUDGET REQUESTS

Describe Item	Biennium Request – 1st Yr.	Biennium Request – 2nd Yr.	Reallocation of Funds and/or Positions	X Amt. Line Item
10 Passenger Van (2 ea.)	X			$60,000.00
Pick-up Truck Crew Cab	X			$45,000.00
Permanent Computer Projection System	X			$6,000.00
Television Sets		X		$4,200.00
Furnishings		X		$20,000.00
Photovoltaic System	X			$50,000.00