

HAWAI`I COMMUNITY COLLEGE
ANNUAL
PROGRAM REVIEW REPORT

Electronics Technology (ET)

December 3, 2009

(Assessment Period: 2008-2009)

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**UHCC December 2009 Coversheet –
Annual Report Program Data**

College: Hawai'i Community College

Program: Electronics Technology Program

Check All Credentials Offered	AA	AS	ATS	AAS	CA	CC	COM	ASC	APC
				X		X			

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

Electronics Technology Program Mission Statement

The Electronics Technology Program serves the community by preparing students for employment in the telecommunications, medical electronics, computer and networking and astronomical/observatory technologies.

Electronics Technology Program Student Learning Outcomes:

Outcome #1: The student will be able to specify, design, build, install, program, operate, troubleshoot, analyze, and modify electronic systems, automated test, and manufacturing control systems. The student will also be able to specify, install, program, operate, troubleshoot, and modify computer systems.

Outcome #2: The student will have effective written, interpersonal, presentation, and team building skills.

Outcome #3: The student will have the necessary leadership and management skills to effectively complete a project.

Outcome #4: The student will have a well-developed sense of work ethics and personal discipline to succeed in their chosen profession.

Outcome #5: The student will have attitudes, abilities, and skills required to adapt to rapidly changing technologies and a desire for life-long learning.

Part I. Quantitative Indicators (Reported on 2009 Summary Report Program Data excel sheet --includes health calls based on system scoring rubric).

**Annual Report of Program Data for Electronics Technology
Hawaii Community College Program Major(s): ET**

Overall Program Health				Cautionary	
Demand Indicators		Academic Year			Demand Health Unhealthy
		Fall 06	Fall 07	08-09	
1	New & Replacement Positions (State)	8	6	25	
2	New & Replacement Positions (County Prorated)	-1	2	3	
3	Number of Majors	19	25	19	
4	SSH Program Majors in Program Classes	120	164	306	
5	SSH Non-Majors in Program Classes	0	0	39	
6	SSH in All Program Classes	120	164	345	
7	FTE Enrollment in Program Classes	8	11	12	
8	Total Number of Classes Taught	8	8	16	
Efficiency Indicators		Academic Year			Efficiency Health Cautionary
		Fall 06	Fall 07	08-09	
9	Average Class Size	5.0	7.0	7.1	
10	Fill Rate	25%	35%	36%	
11	FTE BOR Appointed Faculty	1.0	1.0	1.0	
12	Majors to FTE BOR Appointed Faculty	19.0	25.0	19.0	
13	Majors to Analytic FTE Faculty	11.9	15.6	10.5	
13a	Analytic FTE Faculty	n/a	n/a	1.8	
13b	Majors to Analytic FTE Faculty @12cr.	9.6	12.6	8.4	
13c	Analytic FTE Faculty @12cr.	2.0	2.0	2.3	
14	Overall Program Budget Allocation @12cr. F07, 0809	\$79,168	\$81,152	\$118,433	
14a	General Funded Budget Allocation	n/a	n/a	\$118,433	
14b	Special/Federal Budget Allocation	n/a	n/a	\$0	
15	Cost per SSH @12cr. F07, 0809	\$659.73	\$494.83	\$343.28	
16	Number of Low-Enrolled (<10) Classes	8	6	14	
Effectiveness Indicators		Academic Year			
		2006	2007	08-09	
17	Successful Completion (Equivalent C or Higher)	n/a	n/a	91%	
18	Withdrawals (Grade = W)	n/a	n/a	0	

19	Persistence (Fall to Spring)	79%	72%	83%	Effectiveness Health Healthy
20	Unduplicated Degrees/Certificates Awarded	n/a	n/a	6	
20a	Number of Degrees Awarded	13	7	6	
20b	Certificates of Achievement Awarded	0	0	0	
20c	Academic Subject Certificates Awarded	n/a	n/a	0	
20d	Other Certificates Awarded	n/a	n/a	0	
21	Transfers to UH 4-yr	4	2	0	
21a	Transfers with degree from program	n/a	n/a	0	
21b	Transfers without degree from program	n/a	n/a	0	

C/P denotes that the measure is provided by the college, if necessary.

Data current as of: 8/19/2009 - 3:30:PM

Distance Education Completely On-line Classes		Academic Year		
		Fall 06	Fall 07	08-09
22	Number of Distance Education Classes Taught	n/a	n/a	0
23	Enrollment Distance Education Classes	n/a	n/a	0
24	Fill Rate	n/a	n/a	0%
25	Successful Completion (Equivalent C or Higher)	n/a	n/a	0
26	Withdrawals (Grade = W)	n/a	n/a	0
27	Persistence (Fall to Spring Not Limited to Distance Education)	n/a	n/a	0%
Perkins IV Core Indicators				
Perkins IV Measures 2007-2008		Goal	Actual	Met
28	1P1 Technical Skills Attainment	90.00	88.89	Did Not
29	2P1 Completion	44.00	55.56	Met
30	3P1 Student Retention or Transfer	55.00	71.43	Met
31	4P1 Student Placement	50.00	66.67	Met
32	5P1 Nontraditional Participation	25.00	4.76	Did Not
33	5P2 Nontraditional Completion	25.00	0	Did Not

Part II.

Analysis of the Program (Strengths and weaknesses in terms of demand, efficiency, and effectiveness based on an analysis of the data).

The program continues to emphasize its discipline certification and licensure which has been the de facto hiring standard for prospective employers as it attests to the person's knowledge and skills. The program is the only authorized proctoring site in the State for all FCC licenses.

In responding to the program's health indicator effectiveness of "cautionary", in the Fall 2007 semester, the Electronics Technology Program submitted to the CRC to modify its courses to reflect <100 to 100+ to facilitate articulation with the UHCC system. The fall 2009 semester students enrolled in the CRC approved 100+ courses. With courses listed as 100+, the program is prepared to offer distance education Internet based on-line Optics and Photonics courses to the program's counterparts in Kauai, Maui and Oahu CCs and to former graduates interested in learning or upgrading their skills in this new technology. The newly approved 100+ ETRO courses provides for transferability options into the Maui CC's recently approved Bachelor's of Applied Science in Engineering Technology (ET B.A.S.) degree allowing students desirous of furthering their studies into the baccalaureate level. The program is also engaged in on-going discussions with the UHM's College of Engineering for articulation and transferability of lower level coursework into their BS programs. The program is optimistic that this new medium will break down the barriers and to maximize opportunities for more inter-institutional cooperation in course development and implementation and increased access and enrollment via the Internet in hopes of improving the overall program's health.

OVERALL PROGRAM HEALTH: Rated as *Cautionary*

Demand Indicators: Rated as *Unhealthy*

The ratio of New and Replacement Jobs in the County to majors is 6.33 (19/3) meaning there are approximately 6 majors to every new and replacement job. Granted unemployment is high, only 3 New and Replacement Jobs in the County may be on the low side.

Efficiency Indicators: Rated as *Cautionary*

The 36% fill rate is an Unhealthy score. The ET program has been experiencing low enrollment these past years. By modifying its courses to reflect 100+ level, it is hoped to attract a cross section of students including those who have plans to transfer to a four-year institution. The health for Majors/FTE BOR Appointed Faculty (19) is Healthy. The program currently has only one full time instructor and depends on a lecturer to carry part of the teaching load.

Effectiveness Indicators: Rated as *Healthy*

Persistence from fall to spring is 83%, a Healthy score. The ratio of Unduplicated Degrees/Certificates Awarded to Majors is 32% (6/19), a Healthy score. The ratio of Unduplicated Degrees/Certificates Awarded to New and Replacement Jobs in the County is 2.0 (6/3), a Cautionary score. During times of high unemployment, the College's enrollment increases and so does the program's. It is difficult to keep a balance between number of majors, jobs, and graduates.

Note:

- 1) Career Technical Education (CTE) programs must include in analysis any Perkins IV Core indicator for which the program did not meet the goal.**
- 2) If using alternative "program capacity" method to determine program efficiency, include in analysis.**

In FY 2007-2008, this program received a Perkins IV mini-grant to develop a curriculum in hydrogen fuel technology and a program improvement project of developing an introductory course in Optics and Photonics.

The program did not meet 3 of the 6 Perkins IV Core Indicators.

1P1 (Technical Skills Attainment). Students have difficulty with the higher level of math required to gain the technical skills. As an intervention strategy, a peer tutor has been assigned to this program.

5P1 (Non Traditional Participation). There was one female in 2007-2008. To meet the 25% adjusted level of performance, the program needs 6 females. Recruiting efforts will include non-trad participation.

5P2 (Non Traditional Completion). The one female student did not complete the program. Strategies will be established to encourage and help female students to work towards obtaining a degree.

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

Two Certificates of Competence in Optics Technology (7 credits) and Network Technology (12 credits) were offered beginning Fall 2008. Students will be encouraged to take advantage of these options in addition to the CA and AAS.

Part III. Action Plan

1. With the program's courses listed at the 100+ level, articulation with other CCs can take place. This also facilitates program's graduates to enroll in Maui CC's Bachelor of Applied Science in Engineering Technology program. The program is optimistic that the on-going discussions with UH Manoa's College of Engineering and with other baccalaureate programs within or outside the State of Hawaii will maximize opportunities for students.

2. (Ongoing) Promote improving the transition from secondary to postsecondary by participating in Career Pathways and by visiting feeder high schools with various high-tech demonstrators and trainers.
3. Develop a continuity/sustainability plan for the program to allow for a timely certification/licensure of new faculty and lecturer pool.
4. (Ongoing) Continue program effort on student recruitment especially non trad.

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

1. With the only full time tenured instructor slated for retirement in Spring 2010, this program will need to recruit for a new instructor.
2. The fiber-optics installer certification project requires additional acquisition of equipment and consumables valued ~ \$20K.
3. To ensure responsiveness to the changing community needs created by emerging technologies and the program's commitment in fulfilling the functional responsibilities of meeting the community needs, the program must be ensured of adequate funding level for professional and career development requisites for the instructional staff and in the procurement of appropriate resources to continuously improve student-learning outcomes and to achieve a satisfactory overall program's health.

Annual Report Program Data and analysis located on college website at:

[AY 2009 Completed Annual Program-Unit Reviews](#)