Attachment 1 –A
Revised July 2007

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

Diesel Mechanics

Introduction:

Program Mission

The mission of the Diesel Program is to prepare students to be valued trades people who have the knowledge and skills necessary to effectively troubleshoot, maintain, and/or repair diesel engines, trucks, tractors, boats, and/or other heavy equipment.

Program History

The Diesel Mechanics Program (DIMCH) at what is now Hawai'i Community College began in 1947 under the Department of Education's Hawai'i Vocational School. During this period, students were required to complete 2,600 hours of instruction to earn a Certificate of Achievement in a two-year period. In 1969, when Hawai'i Technical School became a part of the University of Hawai'i Community College system, an Associate in Science Degree was added; this was later changed to an Associates in Applied Science Degree. In 1975 the program hired a second instructor and operated with two instructors until 1994.

Summer of 1994 marked a new era for the program. Administration requested a restructuring which would allow the program to operate with one instructor and accept students every fall. The program consists of 28 different one (1) to three (3) credit modules. Courses are offered over a two year cycle with students being accepted any semester. In addition to the 64-credit A.A.S. degree, the program also has a 36-credit Certificate of Achievement.

Program Student Learning Outcomes

Students completing the C.A. or A.A.S. degree will be able to:

1. Exhibit desirable work habits, knowledge, skills, attitude, and competencies required to succeed on the job.
2. Appreciate their heritage and be aware of contributions of different cultures.
3. Exercise good judgment as citizens and recognize the benefits of lifelong learning and changing technology
4. Practice appropriate safety precautions on the job to protect self, equipment and the environment
5. Communicate clearly with team members and customers
6. Establish respectable relationships with clients
7. Conduct self on the job with a high degree of professionalism
8. Use service literature and tools efficiently
9. Practice a systematic diagnostic and repair strategy

10. Understand the operational systems theory for modern diesel equipment and heavy trucks
11. Diagnose electrical and computer controlled malfunctions

Part I. Quantitative Indicators for Program Review

	AY 04-05	AY 05-06	AY 06-07
DISL			
1. Annual new and replacement positions in the State	1183	1183	1183
2. Annual new and replacement positions in the County	18	18	18
3. Number of majors	23	21	18
4. Student Semester Hours for program majors in all program classes	250	195	192
5. Student Semester Hours for Non-program majors in all program classes	0	0	0
6. Student Semester Hours all program classes	250	195	192
7. FTE Program enrollment	16.67	13	12.8
8. Number of classes taught	6	7	6
9. Determination of program's health based on demand (Health, Cautionary, or Unhealthy)	Healthy	Healthy	Healthy
10. Average Class Size	20.83	16.14	16
11. Class fill rate	104.17%	80.71%	80%
12. FTE of BOR appointed program faculty	1	1	1
13. Student/Faculty ratio	23:1	21:1	18:1
14. Number of Majors per FTE faculty	28.75	26.25	22.5
15. Program Budget Allocation (Personnel, supplies and services, equipment)	$44,008.00	$43,594.00	$43,176.00
16. Cost Per Student Semester Hour	$176.03	$223.56	$224.88
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	82.61%	80.95%	83.33%
20. Number of degrees earned (annual)	4	9	3
21. Number of certificates earned (annual)	6	8	1
22. Number of students transferred (enrolled) to a four-year institution in UH	0	0	0
23. Perkins core indicator: Academic Attainment(1P1)	68.75%	71.43%	90.00%
24. Perkins core indicator: Technical Skill Attainment (1P2)	70.59%	87.50%	100.00%
25. Perkins core indicator: Completion Rate (2P1)	52.94%	37.50%	72.73%
26. Perkins core indicator: Placement in Employment Education, and Military (3P1)	75.00%	77.78%	66.67%
27. Perkins core indicator: Retention in Employment (3P2)	100.00%	71.43%	100.00%
28. Perkins core indicator: Non Traditional Participation (4P1)	7.41%	4.17%	.00%
29. Perkins core indicator: Non Traditional Completion (4P2)	.00%	.00%	.00%
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	0.8	0.8	0.8

Part II. Analysis of the Program

The program is healthy. Demand based on new and replacement positions in the county is the weakest area showing *annual new and replacement positions in the County* of only 18 compared to 1,183 for the state. The number of majors averages 21, which is higher than demand but not of significant concern since the program teaches transferable skills. Strong industry support also suggests a higher demand for qualified diesel mechanics than is indicated by the county statistics.

Class caps for the program are set higher than for many of the other Applied Technical Education programs. Classes fill rates average 88% and the cost per student semester hour is reasonable compared to other applied technical education (ATE) programs. The majority of statistics used to determine efficiency increased favorably for the current period and generally exceed the ATE program averages.

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

Plan of Action 2006-2007	Status
1. To promote and award the Caterpillar/Hawthorne Student Achievement Award at the high school and continuing student level	Two $2,500 awards were given: one to a continuing student and one to a recent high school graduate entering the diesel program. The awards are for fall 2007 ($1,250 per student) and spring 2008 ($1,250 per student).
2. To develop a recruitment flyer featuring non traditional students and the Modular Diagnostic Information System being purchased with a Perkins mini grant.	This is in process. It will be available spring 2008.
3. To work with Hawthorne for donations of current diesel engines	Hawthorne is sending a Caterpillar C-13. They are also paying for the freight.
4. To form a technical maintenance council: a group of industry people who will make classroom presentations and hold training workshops. The purpose will be to make sure students are exposed to current industry training and trends	A formal council has yet to be formed. Mitch Soares, the program's sole instructor, discusses program related issues with members of his advisory council on a regular basis. Three industry people spoke to the class in spring 2007 and one in fall 2007 to discuss current trends in industry.
5. To develop relationships with manufacturers nationwide	Mitch Soares visited diesel programs at two colleges in southern California, Palomar College and Miramar College, summer 2008. Joe Shaffer from

	Palomar College also visited Hawaii CC's diesel program. He agreed to help Hawaii CC make connections with manufacturers on the mainland. Mitch and he communicate on a regular basis.
6. To review and update if necessary student learning outcomes	Student learning outcomes have remained the same.
7. To develop assessment strategies for student learning outcomes	Assessment strategies are being developed.
8. To request $25,000 to replace and update equipment and tools	Funds to replace and update equipment was included in the supplemental budget request made by the college.
9. To attend the **Fuller Standard Transmission** summer training held on the mainland ($3,000).	School was still in session at the start of the training so the instructor could not attend.

Part III. Action plan

During the next academic year the program's instructor will:

1. Award the Hawthorne Caterpillar scholarships again for the 2008-09 academic year.
2. Further develop a relationship between Joe Shaffer, Palomar College, and the Hawaii CC Diesel Program. This will include investigating whether Mr. Shaffer would like to lecture three credits for Hawaii CC spring or fall 2008.
3. Get the C-13 engine being contributed by Hawthorne running so students can experience a more modern diesel engine than those currently available in the lab.
4. Support Guam Community College in their development of a diesel program; this relationship is being developed at the request of Hawthorne Pacific Corp, a strong support of Hawaii CC's diesel program.
5. Have an outside person assess randomly selected students performing an actual work project
6. Work with Helen Nishimoto to survey employers of recent graduates to determine their assessment of the students' skills and work ethic.
7. Continue to look for ways to replace outdated equipment.
8. Determine if class caps can be lowered to improve safety and working conditions in the classroom.

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

1. Lecturer to teach three credits per academic	$5,123
2. Student help – this is especially important since the program is taught by one instructor and each class has students with a variety of skill levels	$4,856
3. Get updated engine for students to work on – the program's most recent engine is a1983 model	$10,000
4. Get updated transmissions: 13 and 18 speed - the program's	$20,000

most recent transmission is a1981 model	
5. Big storage tool box	$12,000
6. Drill presses	$5,000
7. Big bench grinder	$2,500
8. Wire feed welder	$5,000
9. Pressure washer	$2,000
10. Sand blaster	$6,000
11. Personal Copy machine – the remote location of the diesel classroom and having only one instructors makes it difficult when a copy is needed	$1,500
12. Fax machine	$500