HAWAI`I COMMUNITY COLLEGE
ANNUAL INSTRUCTIONAL
PROGRAM REVIEW

Automotive Mechanics Technology
PROGRAM

APRIL 2, 2007

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ANNUAL INSTRUCTIONAL PROGRAM REVIEW
Automotive Mechanics Technology
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I.   Narrative and Analysis of Data
a. Statement on the mission or purpose of the program, including the target student population;

The Automotive Mechanics Technology program (AMT) is a vocational-technical program that prepares the student for employment as a general mechanic in a service station or auto dealer's shop, or as a specialty mechanic, or a specialist on engine tune-ups or electrical systems. The program offers both a two-year Associate of Science degree and a three semester Certificate of Achievement.

Program entry requirements include
- Possession of a valid driver's license
- Placement in or prior completion of math 22 and Eng 20R or ESL 9

b. Information on external factors affecting the program; None
c. Attach PHI Report (CTE Programs only) See attached
d. Required external measures, if applicable (e.g.) Nursing Cert. None
e. Analysis of data

The program is healthy. Data elements are some of the best in the ATE division.

Number of Majors: The number of FTE student majors of 37.33 compared to the 62 unduplicated majors for the academic year appears reasonable in comparison to other programs in the Transportation and Applied Technology department and ATE division.

Average Class Fit & Student- Faculty Ratio: Class caps for the program are set at 20. The program's average class size is slightly more than 18 and average class fit averaged 91.4%, the highest for the ATE division. The student faculty ratio is 11.9.

FTE Faculty: The number of faculty assigned to the program is adequate. The FTE of BOR appointed program faculty is 2 and the number of FTE faculty based on contact hours is 2.29.

GPA and Number of Graduates: The program paid course (PPC) average GPA is 2.97 and the non-PPC average GPA is 2.1. The number of AMT graduates (12) is the second highest in the ATE division.

II.   Update or Create Your Action Plan including Budget Request with Justification, if needed.

1. Actively seek funds to replace the alignment system damaged beyond repair in the 2000 flood. It is an integral part of the minimum competency for the suspension and alignment module. Faculties have been signing off students as having passed the competency since it isn't the students' fault the equipment is not available. A lecture on the topic and blackboard drawing is no substitute for hands on application. This is an essential course requirement. Cost is $75,000.
2. Revise program level student level outcomes and develop course level outcomes.
3. Develop and or document assessment strategies for student learning outcomes.
4. Utilize technology to teach students about repairs – The program will use *Mitchell On Demand*, a computer based repair manual that is commonly used in the industry. Cost is $4,000.
5. Seek funds to update scan tool which is a vital part of the engine performance module. Newer model cars require the updated tool. Cost is $12000.
6. Request funds for a complete tool set. Instructors currently supply their personal tools for student use, $50,000.
7. Seek funds to purchase a transmission engine cradle. This is a new piece of equipment necessitated by newer model cars whose transmission comes out with the engine, $5,000.
8. Attend NATEF event. NATEF is the National Automotive Technicians Education Foundation, a non profit foundation responsible for the automotive program evaluation process and makes recommendations for ASE program certification based on the evaluation. $3,000
9. Request funds to replace air hoist lifts. The existing lifts are starting to give trouble and if the cylinder leaks it would be an EPA problem. The program has two air lifts; now a days people use above ground hoists; the program has two above ground hoists so is requesting a third above ground hoist to replace one of the two air lift hoists $10,000
10. Determine if the program can pay for the state licenses faculty have had to purchase personally and for their ASE certification exams; without the licenses the repair facility could not do live jobs; $600

Data Chart

QUANTITATIVE TREND DATA CHART

Program Name: Automotive Mechanics Technology

	Fall 2005	Spring 2006	AY
#1 Number of Unduplicated Majors	53	51	62
#2 Total Student Semester Hours	584	536	1120
#3 FTE Student Majors	38.93	35.73	37.33
#4 Number of Graduates	–	–	12
#5 Number of classes	7	7	14

#6	Avg Class size	19.71	16.86	18.29
#7	Avg Class fit	98.6%	84.3%	91.4%
#8	FTE of BOR Appointed Program Faculty	–	–	2
#9	Number of FTE Faculty	–	–	2.29
#10	Student semester hours for all PPC class enrollments	420	396	816
#11	Student-Faculty Ratio	–	–	11.90
#12	PPC Credits Earned Ratio	.95	.94	.94
#13	Non-PPC Credits Earned Ratio	.65	.57	.61
#14	PPC Avg GPA	2.78	3.16	2.97
#15	Non-PPC Avg GPA	2.18	2.01	2.10
#16	Budget	–	–	6920.00
#17	Program Cost per SSH***	–	–	99.72

*** - calculated using rank 4 rate per credit hour of instruction

The Program Health Indicators Review provides a comprehensive, empirically based review of academic programs. Major sections of the report provide descriptive information about the development and history of a program, goals, faculty and advisory committees, admission and degree requirements, and graphic representation of the program's standing. The major clusters of program health indicators are program demand, program efficiency and program outcomes. Hawai'i Community College uses five data elements to develop these clusters: number of applicants and majors (program demand), class fit and average class size (program efficiencies) and graduates (program outcomes).

Chancellor :   Rockne Freitas
Dean of Instruction: Doug Dykstra
Division Chair: Clyde Kojiro

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PROGRAM DESCRIPTION

The Automotive Mechanics Technology program is placed in the Applied Technical Education – Transportation and Applied Technology Department of the Hawaiʻi Community College. Other programs within this division Include: Auto Body Repair & Painting, Diesel Mechanics, Electronics, and Machine Welding & Industrial Mechanics.

This vocational-technical program prepares the student for employment as a general mechanic in a service station or auto dealer's shop, or as a specialty mechanic, or a specialist on engine tune-ups or electrical systems. The program offers both a two-year Associate of Science degree and a three semester Certificate of Achievement.

This department along with the Applied Technical Education – Construction Department, Liberal Arts Division, the Business Education and Technology Division, and Nursing are organized under the Chancellor who is the chief executive officer for the college and is responsible to the University of Hawaiʻi President.

PROGRAM GOALS

The main objective of the AMT program is to provide students with educational opportunities to learn job skills in basic auto repair that will prepare them for entry into the automotive and related occupations.

1. Students are expected to learn and demonstrate proper work attitudes.

2. Students are educated in the knowledge and skills that will enable them to understand and appreciate their heritage and to be aware of the contributions of different cultures, to exercise good judgment as citizens, and to instill a desire for lifelong learning that will enable them to respond to changing technology.

3. The program serves the community by providing job up-grading opportunities for professionals in the field.

4. The program proposes to offer modular courses to non-majors

PROGRAM HEALTH INDICATORS

INDICES	MINIMUM LEVEL	ACTUAL LEVEL	SATISFACTORY LEVEL
PROGRAM DEMAND/CENTRALITY: Fall 2006			
Number of Applicants	30	55	45
Number of Majors	40	54	60
Student Semester Hours	240	504	360
Class Credit Hours	24	24	24
Number of Classes Taught	7	7	7
PROGRAM EFFICIENCY: Fall 2006			
Average Class Size	10	21	15
Student Semester Hours per FTE Faculty	120	252	180
Equiv. Class Credit Hours per FTE Faculty	12	12	12
Percentage of Small Classes	50%	0%	0%
PROGRAM OUTCOMES: Fall 2005 (See Perkins III Core Indicators on Page 5)			
Credits Earned Ratio – General Education		00%	
Credits Earned Ratio – Vocational Education		00%	
Degrees and Certificates Awarded – AY 2001-2002		00%	
Placement into Further Education, Employ, or Military		00%	
Program Retention – Fall to Spring		00%	
Retention in Employment		00%	
Non-Traditional Participation – Females		00%	
Non-Traditional Completion – AY 2001-2002		00%	

2005-2006 PERKINS III CORE INDICATORS

Core Indicators	# in Denominator	# in Numerator	Adjusted Level	Actual Level
Academic Achievement	17	13	81.92%	76.47%
Vocational Skills	18	17	90.00%	94.44%
Degrees & Certificates	18	12	37.33%	66.67%
Placement/Employment	11	8	71.72%	72.73%
Retention/Employment	8	8	92.00%	100.00%
Nontraditional Participation	35	7	14.60%	20.00%
Nontraditional Completion	8	0	12.73%	0.00%

OCCUPATIONAL DEMAND
Hawaiʻi County - 1998-2011

Occupational Title	State 2005	Hawaii County 2005	Hawaii County New 2005-2011	State Replacement 2005-2011	Hawaii County Replacement 2005-2011
Automotive service technicians and mechanics	3562	539	24	545	79
Sales and related occupations	2068	148	21	227	16
Maintenance & repair worker general	8123	880	135	908	98
Welding soldering and brazing workers	237	42	-2	39	71
Total demand 2005-2011 = 442					

Source: EMSI Table for Hawaii County

ANALYSIS OF THE PROGRAM

This program has demonstrated the following with regard to demand, efficiency, and outcome measures:

Program Demand/Centrality

      The program exceeds the minimum level in all categories under program demand. It exceeds the satisfactory level in all areas but number of majors and that category actual level is 90% of the satisfactory level.

Program Efficiency

      The program met or exceeded minimum and satisfactory level for all categories under program efficiency. It had no small class offerings and the average class size was 140% of the satisfactory level.

Program Outcomes

      The AMT program exceeded the desired core indicators in the areas of vocational skills, degrees, placement, retention, and non traditional completion. The program's retention/employment rate was   100%. The program was slightly below the desired level for academic achievement. Although the level of nontraditional participation was below the desired level the non traditional students who completed the program was 20% higher than the desired level.

Plan of Action 2005-2006

      No major plan of action is necessary at this time for curriculum changes. However, equipment upgrades and/or replacement are critical to perform at current levels. Flood damaged equipment are still not resolved. No support was made available to this program to resolve flood damaged equipment and/or upgrades.

Responses to last year's Plan of Action

      The program is still without an essential piece of equipment, the alignment system, that was damaged in the 2000 flood. The program was promised by prior administration that FEMA money would be used to replace but this never occurred.

Plan of Action 2006-2007

11. Actively seek funds for the alignment system. It is an integral part of the minimum competency for the suspension and alignment module. Faculty have been signing off students as having passed the competency since it isn't the students' fault the equipment is not available. A lecture on the topic and blackboard drawing is no substitute for hands on application. This is an essential course requirement. Cost is $75,000.
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20. Determine if the program can pay for the state licenses faculty have had to purchase personally and for their ASE certification exams; without the licenses the repair facility could not do live jobs; $600

Appendix A: History and Admission Requirements

Program History

The current Automotive Program was started in 1941 to meet the community's growing need for automotive technicians. Since the program's inception at Hilo Intermediate School, it was relocated to Banyan Drive in 1943, Manono Street in 1956, and to the current site on Kawili Street, in January, 1981. The program has consistently enjoyed high student interest and demand for its graduates.

In the mid-1980s, an outreach program was initiated at the Kulani Correctional Facility near Hilo. This program was offered in conjunction with the Department of Corrections providing the funding. It provided educational rehabilitation for prisoners who were able to earn either the Associate in Science or a Certificate of Achievement by satisfactorily completing the requirements. There was an average of 10-12 students in each course offered at the facility. The first graduates completed their Certificate of Achievement requirements in 1989. Since the mid-1990s, funding for the outreach program was gradually reduced and finally the program was discontinued.

The Automotive program has consistently enjoyed high student interest and demand since its inception. Placement for graduates remains high at the present time.

Program Admission Requirements

This section describes the requirements for admission, including semester(s) in which students are admitted, basis for admission, minimum qualifications, and other requisites for admission.

Under Hawai'i Community College's open admission policy, the Automotive Mechanics Technology program is open to any high school graduate or person 18 years of age or older.

However, because there are more applicants than spaces available, students are selected on the basis of their ranking which is determined by the following priority criteria:

1. The scores achieved on Math and Reading placement tests (COMPASS) administered by HawCC's The Learning Center.

2. The order in which applications are received by the HawCC Office of Admissions.

Appendix B: Degree Requirements

First Semester

		CA	AAS
AMT 20	Introduction to Auto	1	1
AMT 23	Lubrication	1	1
AMT 30	Engines	7	7
AMT 40B	Fuel Systems	3	3
Elective	Social, Natural, & Cultural Env.	-	6
	TOTAL	**12**	**18**

Second Semester

AMT 40C	Electrical Systems	6	6
AMT 46	Power Train	4	4
AMT 57	Emission	2	2
Math 50	Technical Math or higher	3	3
Eng	Eng 21, 51, or 22 or higher	3	3
	TOTAL	**18**	**18**

Third Semester

AMT 50	Auto Transmission	4	4
AMT 53	Brake systems	4	4
AMT 55	Suspension/Steering	4	4
Elective	Social, Natural, & Cultural Env.	-	3
	TOTAL	**12**	**15**

Fourth Semester

AMT 60H	Elec./Fuel Systems & Related Components	-	3
AMT 60I	Engines and Related Comp.	-	3
AMT 60J	Susp./Brakes & Related Components	-	3
AMT 60K	Power Train/Transmissions & Related Components	-	3
AMT 93V	CVE (optional with instructor approval)	-	-
	TOTAL	**-**	**12**
	TOTAL	**42**	**63**

Appendix C: Faculty

Regular Faculty

Name	Tenure Status and date	Degrees Held	Rank
Harold Fujii	Tenured, 1989	A.S.	C-4
Kenneth Shimizu	Tenured, 1998	A.S.	C-4

Part-time Faculty

Name	Tenure Status and date	Degrees Held	Rank
none			

<u>Appendix D: Advisory Committee</u>   UPDATE THIS SECTION

Wesley Ferreira, Senior Sales/Marketing Executive, Automotive Supply Center

Patrick Seto, Parts Manager, Big Island Toyota (Kona)

James Fukunaga, Service Manager, Big Island Toyota (Kona)

Kent Inouye, Owner/Manager, Bayside Chevron Service Station

Louis Perreira, Jr., Owner/Manager, Louis Auto Repair

Mark Nishioka, Service Manager, Orchid Isle Auto Center

Jared Hook, Island Maintenance Manager, Dollar Rent-a-Car, (Kona)

Appendix E: Definitions of Data Elements (All data includes West Hawaiʻi)

A. Program Demand/Centrality:

1. Number of Applications: Total number of applications received complete and incomplete.

2. Number of Majors: Major declared/on file during the semester.

3. Student Semester Hours: Total number of semester hours based upon class credits and student enrollment. Sum of all class credits multiplied by the enrollment for each class. Includes practica and other classes where 5 students = 1 semester (credit) hour. Excludes cancelled, 99V, 199V, 299V, and all CVE classes.

4. Class Credit Hours: Sum of credits of all classes offered within the program/with the program/major code/alpha. Includes practica and other classes where 5 students = 1 semester (credit) hour. Excludes cancelled, 99V, 199V, 299V, and all CVE classes.

5. Number of Classes Taught: Total number of classes conducted/run within the program/with the program/major code/alpha. Includes practica and other classes where 5 students = 1 semester (credit) hour. Excludes 99V, 1 99V, 299V, and all CVE classes.

B. Program Efficiency:

1. Average Class Size: Average class size of all classes conducted/run within the program/with the program/major code/alpha. Includes practica and other classes where 5 students = 1 semester (credit) hour. Excludes 99V, 199V, 299V, and all CVE courses. Total enrollment in each class excludes students with "DR" and/or "W" grades.

2. Student Semester Hours per FTE Faculty: Total student semester hours from A.3. divided by analytical FTE Faculty.

    a. Analytical FTE Faculty: Teaching based upon a full load (15 or 12 credits depending upon the contact hours.) Division Chairpersons are assigned an analytical FTE Faculty equivalent of 0.70 FTE.

    b. Each full-time faculty within a program is considered to be 1 FTE. FTE based upon lecturers are calculated by the number of credits each are assigned to teach.

    c. Assigned time is to be extracted from FTE calculations… similar to calculating the FTE for a Division Chair. For example, if a Full-time faculty received 3 credits assigned time (out of a regular 15-credit load) it would be considered a .8 FTE rather than 1.

3. Equivalent Class Credit Hours per FTE Faculty: Total class credit hours from A.4. divided by total analytical FTE Faculty.

4. Percentage of Small Classes: Percent of classes within the program/with the program/major code/alpha that had less than 10 students. Includes practica and other classes where 5 students = 1 semester (credit) hour; however, these classes are considered to be Low-enrolled only if there are less than 5 students or between 6 and 9 students. Excludes 99V, 199V, 299V, and all CVE classes.

C. Program Outcomes:

1. Credits Earned Ratio (Remedial/Developmental): Percentage of program majors enrolled in ESL 9, ESL 13, ENG 20R, ENG 20W, ENG 51, LSK 51, MATH 22, and MATH 50 who passed with a grade of A, B, C, D or CR.

2. Credits Earned Ratio (General Education): Percentage of program majors enrolled in all LBART courses (excluding those in C.1.) who passed with a grade of A, B, C, D or CR. Includes practica and other classes where 5 students = 1 semester (credit) hour. Excludes 99V, 199V, 299V, and all CVE courses.

3. Credits Earned Ratio (Vocational Education): Percentage of students enrolled in vocational courses who passed with a grade of A, B, C, D or CR. Includes practica and other classes where 5 students = 1 semester (credit) hour. Excludes 99V, 199V, 299V, and all CVE courses.

4. Credits Earned Ratio (Overall): Combination of C.1., C.2., and C.3. above.

5. Graduate Placement Rate: Students who graduated with a certificate/degree in the PAST academic year and found work in that field.

6. Degrees Awarded: The number of certificates and degrees awarded during the PAST academic year.

7. Retention Rate: New students within a program/major continuing or retained in that program/major from the past two or more terms. (Students registered in Fall 2000 who started in Spring 2000 or Fall 1999. Students registered in Fail 2001 who started in Spring 2001 or Fall 2000.)