

HAWAI`I COMMUNITY COLLEGE COMPREHENSIVE INSTRUCTIONAL PROGRAM REVIEW REPORT

Automotive Mechanics Technology

November 27, 2013

July 1, 2008 to June 30, 2013

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Program Review at Hawai'i Community College is a shared governance responsibility related to strategic planning and quality assurance. It is an important planning tool for the college budget process. Achievement of Program Outcomes is embedded in this ongoing systematic assessment. Reviewed by a college-wide process, the Program Reviews are available to the college and community at large to enhance communication and public accountability.

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Part I: Annual Program Reviews

Populate the following spreadsheet with data from Program's ARPD for the past five (5) years.

	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013
Overall Program Health	Healthy	Cautionary	Cautionary	Cautionary	Cautionary
Demand Indicators					
Demand Health Call	Healthy	Unhealthy	Unhealthy	Unhealthy	Unhealthy
Number of Majors	51	93	104	88	81
SSH in All Program Classes	876	1140	1148	1008	912
Efficiency Indicators					
Efficiency Health Call	Healthy	Healthy	Healthy	Healthy	Healthy
Average Class Size	18	24	24	21	19
Fill Rate	91	100	100	100	95
Number of Low-Enrolled (<10) Classes	0	0	0	0	0
Effectiveness Indicators					
Effectiveness Health Call	Cautionary	Healthy	Cautionary	Cautionary	Healthy
Successful Completion (Equivalent C or Higher)	99	99	95	97	98
Withdrawals (Grade = W)	3	0	0	0	0
Persistence (Fall to Spring)	74	79	72	72	80
Unduplicated Degrees/Certificates Awarded	18	22	22	16	16
Transfers to UH 4-yr	0	1	0	4	1
Distance Education: Completely On-Line Classes					
Number of DE Classes Taught	0	0	0	0	0
Enrollment DE Classes	0	0	0	0	0
Fill Rate	0	0	0	0	0
Successful Completion (Equivalent C or Higher)	0	0	0	0	0
Withdrawals (Grade = W)	0	0	0	0	0
	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
Perkins IV Core Indicators Met or Not Met					
1P1 Technical Skills Attainment	Met	Met	Met	Met	Met
2P1 Completion	Met	Met	Met	Met	Met
3P1 Student Retention or Transfer	Met	Met	Met	Met	Met
4P1 Student Placement	Met	Met	Met	Met	Met
5P1 Nontraditional Participation	Not Met				
5P2 Nontraditional Completion	Not Met				

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Part II: Program Effectiveness

Alignment with College Mission and ILOs

In Table 1, write a brief narrative describing the program and how it supports the College's mission and Institutional Learning Outcomes (ILOs).

Reference the following CERC rubric when completing Table 1:

Criteria	1=Does Not Meet	2=Meets	3=Exceeds
The narrative states the program's mission statement and/or description and how it supports the college's mission statement	Mission or description is not present <u>or</u> no evidence of connection to the College's mission	Program mission and description are present but weak or unclear <u>and/or</u> the explanation of program connection to the College's mission is weak	Mission is present with very thorough, clear program description <u>and</u> contains substantial evidence of how the program connects to the College's mission
The narrative includes an explanation of how the program supports the College's Institutional Learning Outcomes (ILOs)	ILOs are addressed but explanations are not clear and/or no clear explanation of how the program supports the ILO(s)	Describes how the program supports the ILO(s) but the description is weak	Very thorough, clear and substantial explanation of how the program supports the ILO(s)

Table 1: Description and Alignment with Mission and ILOs

College's mission:

Hawai'i Community College (Hawai'iCC) promotes student learning by embracing our unique Hawai'i Island culture and inspiring growth in the spirit of "E`Imi Pono." Aligned with the UH Community Colleges system's mission, we are committed to serving all segments of our Hawai'i Island community.

Program Mission:

The mission of the Automotive Technology (AMT) Program is to prepare students for successful employment as an automotive mechanic. The AMT program offers a 48 credit Certificate of Achievement and a 63 credit Associates in Applied Science (AAS) degree. Students completing the AAS degree are ready for the Automotive Service Excellence (ASE)

Program Description (Use the official description from catalog then give more in depth explanation of what the program does, who it serves and generally describe it's accomplishments)

The 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.

This program has been in existence since 1941 servicing our communities needs in the transportation trades. Graduates have been placed in every facet of the automotive industry. They have found careers in the private sector as well as government agencies. Many have since become employers/managers as

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they now own and operate businesses of their own which creates an excellent career networking system. Some have ventured to the mainland as well as internationally in Japan, Europe and China.

Describe how this program supports the College's mission.

This program primarily services our local community with a multi-cultural graduating student population that understands, respects and blends extremely well with our local community.

Describe how the program supports the College's Institutional Learning Outcomes below.

ILO 1: Our graduates will be able to communicate effectively in a variety of situations.

Describe how the Program supports this ILO:

Communication is the key for success in this program. Students must receive information and properly interpret/process that information from instructors on theory and repair applications. They must retrieve symptoms from customers on vehicle problems. They will utilize the internet for procedures or "hidden" information that is not presented in our on-line repair manual. They must converse with parts houses in preparing estimates and eventual ordering of parts required for the repair. This is done on a daily basis.

ILO 2: Our graduates will be able to gather, evaluate and analyze ideas and information to use in overcoming challenges, solving problems and making decisions.

Describe how the Program supports this ILO:

Proper diagnosis encompasses that they utilize critical thinking in problem solving along with utilizing the proper application of techniques. They must select manuals and other sources of information for repairing specific problems along with the correct tools/equipment to pin point specific failures. Students will then finalize the course of action for repairs. Types of repairs encountered cover the entire vehicle (bumper to bumper). They will consistently encounter logistic problems as unrelated systems or sub-systems will need to be disabled/disassembled in order to access problem areas. This done on a daily basis.

ILO 3: Our graduates will develop the knowledge, skills and values to make contributions to our community in a manner that respects diversity and Hawaiian culture.

Describe how the Program supports this ILO:

Upon graduation students will seek employment in the field of study. Many find jobs locally at full service service stations, general/specialty repair shops, franchised companies, body shops (mechanical repairs on crashed vehicles), and new car dealerships. A few have ventured to the mainland and are employed on the west coast, Texas, Michigan, and Georgia. The program also has graduates in Japan, Europe and mainland China. The local employers and customers are multi-cultured as are our graduates. Some of those with Hawaiian ancestry have enlisted financial aid from various agencies and

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have created successful businesses locally. Graduates enter our local economy island wide and become positive contributing citizens.

Previous Goals

In Table 2, list the program's top 3 goals from the last Comprehensive Review period. Give a progress report for each goal and describe the degree to which the goal was achieved over the review period.

Reference the following CERC rubric when completing Table 2:

Criteria	1=Does Not Meet	2=Meets	3=Exceeds
Goal description and progress report	Goals are not present <u>and/or</u> the progress reports are unclear or unsupported by evidence	Adequate description of each goal and report	Very thorough description of each goal and the report provides substantial evidence of achieving the goal or clear explanation why goal is not achieved

Table 2: Progress Report of Previous Goals

Goals	Progress Evaluation
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.	Currently being used but subscription needs to be renewed in 2013. The renewal will be very very critical for the AMT Program to meet its goals.
Explore and research incorporating Hybrid and EV technology into the curriculum. Make changes to curriculum, if necessary.	Ongoing.
Request funds to up-grade computer systems to meet current diagnostic systems that have blue tooth systems.	Ongoing

Strengths and Weaknesses

In Table 3, briefly describe the program's top 3 strengths and 3 weaknesses. Provide an explanation and supporting evidence for each strength and weakness (e.g. assessment results, data elements from ARPD, surveys, etc.)

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Reference the following CERC rubric when completing the Strengths section in Table 3:

Criteria	1=Does Not Meet	2=Meets	3=Exceeds
Description of strengths and evaluation of supporting evidence	Does not include clear description of strength and/or explanation of supporting evidence is weak or unclear	Includes adequate description of strength and supporting evidence	Very thorough description of strength and substantial evidence in support of strength

Table 3: Analysis of Strengths and Weaknesses

Strengths	Using supporting evidence, describe why this is a strength
1. The programs performance and reputation in the community	This program has been in existence since 1941 servicing our communities needs in the transportation trades. Graduates have been placed in every facet of the automotive industry. They have found careers in the private sector as well as government agencies. Many have since become employers/managers as they now own and operate businesses of their own which creates an excellent career networking system.
2. High demand for well-trained auto mechanics	Due to the automotive industry's drastic technological changes, the employment climate has always presented new opportunities for students.
3. Students work on live jobs	Prepares them for "real life work" environment and experience in all facets of the repair industry.

Reference the following CERC rubric when completing the Weaknesses section in Table 3:

Criteria	1=Does Not Meet	2=Meets	3=Exceeds
Description of weaknesses and explanation of supporting evidence	Does not include clear description of weakness or and/or explanation of supporting evidence is weak or unclear	Includes adequate description of weakness and supporting evidence	Very thorough description of weakness and substantial evidence in support of weakness

Weaknesses	Using supporting evidence, describe why this is a Weakness
1. Newer cars need different equipment; the program does not have this equipment or the budget to purchase it	Lack of up-to-date equipment is a detriment to lab activities. Out-dated equipment provides some experience but is not current with industry standards. A detrimental factor for employers as they must invest more training time for new employees.
2. The program has continued to experience declining non-traditional	The recent numbers reflected on are poor but we have traditionally always had a few non-traditional students. The

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student count	prior graduating classes (2) had no non-traditional students enrolled even with active recruiting.
3. Program cost of operation for existing operation or future considerations for NATEF certification.	Costs of the program becoming nationally certified; NATEF certification requires substantial initial outlays for equipment and routine equipment replacements. Equipment requirements are based on student counts; in most instances where a program is getting by with one piece of equipment NATEF would require multiple pieces. NATEF requirements depreciate equipment more rapidly necessitating replacement much sooner than the program is use to.

Program Learning Outcome Assessment

Provide a summary of the assessments conducted during the reporting period. For each Program Learning Outcome, describe the assessment methods, the data gathered, describe any changes or improvements made based on assessments, and describe the results of making the changes (closing the loop).

Repeat the elements in Table 4 for each outcome assessed.

Reference the following CERC rubric when completing the assessment summary in Table 4:

Criteria	0=Does Not Meet	2=Meets
Program Learning Outcomes assessed	Does not include a complete list of the PLOs assessed during the reporting period	Includes a complete list of the PLOs assessed during the reporting period.
Evidence of industry validation	Does not include a report of industry and/or advisory council participation in assessment	Includes a report of industry and/or advisory council participation in assessment
Results of assessment and any changes made	Does not include a summary of the assessment results	Includes a summary of the assessment results
Evaluation of the changes that were implemented	Does not include the action plans/changes implemented to courses and the program during the reporting period or provides no evaluation of the changes	Includes the action plans/changes implemented to courses and the program during the reporting period and provides an evaluation of how the changes affected the courses and the program

Table 4: Program Learning Outcome Assessment Summary

Program Learning Outcome(s) Assessed:

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- | | |
|---|---|
| 1 | Identify and demonstrate proper work readiness skills and respect for cultural differences. |
| 2 | Apply safety measure at all times. |
| 3 | Maintain proper use of shop tools and equipment. |
| 4 | Demonstrate access and use of online repair manuals. |
| 5 | Diagnose and repair typical problem encountered by owners of vehicles. |
| 6 | Perform routine maintenance functions on vehicles. |

Evidence of Industry Validation (CTE Programs):

(for example, industry participation in course assessment, advisory council recommendations)

Program utilizes two assessors. One is active (private enterprise) and the other retired (dealership). Both belong to an island wide association of automobile businesses. Both program instructors are also members.

Advisory council has met and agrees with the performance and direction of the program.

Results of assessment and any changes made:

Low scoring percentages are rising, getting closer to target numbers of expectation.

Evaluation of the changes that were implemented:

Appears to be working, will review with next assessment.

Trends and Other Factors

Describe trends noted over the review period, including comparisons to any applicable standards, such as college, program, or national standards from accrediting associations, etc. Include, if relevant, a summary of Satisfaction Survey Results, special studies and/or instruments used, e.g., CCSSE, etc. Describe any external factors affecting the program or additional program changes not included elsewhere.

The national trend has been shifted toward certification. The program encourages students to attempt the exam(s) but it is not a requirement of the program. Students will have to pay for exam registration as well for each exam. There are 8 basic areas of examination. Many employers are distributing payroll bonuses for passing exams. In that sense, it is not lucrative to have passed

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exams before employment. The program provides practice exams before graduation so that students will be familiar with testing format.

Part III: Goals and Program Improvement

Goals and Planning

In Table 5, list the top 3 goals for program success planned for implementation during the next Comprehensive Review period. Identify and briefly explain how these goals align to the College's ILOs, Strategic Plan, Academic Master Plan (AMP), and UH System collaboration (if applicable).

Refer to the following CERC rubric when completing Table 5:

Criteria	1=Does Not Meet	2=Meets	3=Exceeds
Each goal is stated, aligned with ILOs and planning, and describes innovations to improve student learning. A calendar of activities provides a timetable for implementing the goal	A goal or goals are not present, or not aligned with ILOs and various plans, or does not describe program improvements and/or no calendar of activities is present	Goals are adequately stated, aligned with ILOs and various plans and describe improvements to the program and a calendar of activities provides a timetable for implementing the goal	Goals are thoroughly detailed, provide strong evidence of ILO and various plans alignment, program improvements are thoroughly articulated and a calendar of activities provides a timetable for implementing the goal

Table 5: Goals and Alignment

Goal 1	ILO Alignment (select up to 3)	Strategic Plan Alignment (select best alignment; max 3)	Academic Master Plan Alignment (select best alignment; max 3)	UH System Collaboration
			Program Action from AMP (ie 4.3) or write "New Strategy"	
Incorporate biodiesel instruction in the existing curriculum.	ILO 3	E.3	c.	
	ILO 2	B.1	g.	
	ILO 3	B.1	New Strategy	

[Link to Hawaii Community College Institutional Learning Outcomes](#)

[Link to Hawai'i Community College Strategic Plan](#)

[Link to Hawaii Community College Academic Master Plan](#)

Narrative of New Strategy for Strategic Plan:

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Biodiesel burns cleaner and doesn't rely on fossil fuels. The technology is relatively new but once accepted by the transportation sector will become a common commodity, .
There already exists a biodiesel processor at the HawCC, but has yet to be installed. The program will create curricula to support the operation and sustainability of biofuel production, which will be used in the State's vehicle inventory that currently uses regular diesel, as well as in the DISL program.
Graduates will be more employable by possessing basic biodiesel knowledge. The Big Island has a couple of refineries already in operation. With increased acceptance of the product, the industry will need more technicians to meet demand.

Narrative of New Strategy for Academic Master Plan

	STEM	Graduation Remediation Workforce	Student Transfer	Underserved Populations	Green Curricula	Program Development
Addition will provide students knowledge of bio-diesel. Will enhance the island's self sustainability.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Briefly explain how **Goal 1** aligns to the College's ILOs, Strategic Plan, Academic Master Plan (AMP), and UH System collaboration (if applicable):

The program will be addressing and attempt to implement the "green" movement into self sustainability for the island community.

Calendar of planned activities for **Goal 1** – In chronological order, briefly describe the procedures/activities planned to achieve **Goal 1**

Activity	When will the activity take place
Example: Nursery design development Shade replacement Irrigation design and installation	September 2014 Fall 2014 Spring 2015
Modify existing existing facility and install biodiesel equipment.	Fall 2014 - Spr. 2015

Goal 2	ILO Alignment (select up to 3)	Strategic Plan Alignment (select best alignment; max 3)	Academic Master Plan Alignment (select best alignment; max 3)	UH System Collaboration
			Action Strategy	Program Action from AMP (ie 4.3)

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Design new module for air conditioning to address the new refrigerant designed for mobile units. Due to be released in 2015. Called HFO-1234yf. designed as more a environmentally friendly chemical.	ILO 2	E.3	New Strategy		
	ILO 2	B.1	New Strategy		
	ILO 1	A1.1	New Strategy		

[Link to Hawaii Community College Institutional Learning Outcomes](#)
[Link to Hawai'i Community College Strategic Plan](#)
[Link to Hawaii Community College Academic Master Plan](#)

Narrative of New Strategy for Strategic Plan:

Due to the government's ban on certain chemicals which has proven detrimental. The program must follow suit and provide instruction to deal with the new AC refrigerant.
As new technologies are utilized in the automobile industry, the program is required to keep pace and provide applicable instruction.

Narrative of New Strategy for Academic Master Plan

	STEM	Graduation Remediation Workforce	Student Transfer	Underserved Populations	Green Curricula	Program Development
Will keep students abreast of the ever changing technology advances in the auto industry. This enhances the student's employability and up to date with the green movement.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Briefly explain how **Goal 2** aligns to the College's ILOs, Strategic Plan, Academic Master Plan (AMP), and UH System collaboration (if applicable):

Will align with ILO's, AMP priorities, and Strategic Plan as the knowledge gained will encompass a global market place. This goes far beyond the local community and into the world climate agreement for the preservation of the atmosphere.

Calendar of planned activities for **Goal 2** – In chronological order, briefly describe the procedures/activities planned to achieve **Goal 2**

Activity	When will the activity take place
Obtain the proper equipment and training.	Fall 2015 - Spr. 2016

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Goal 3	ILO Alignment (select up to 3)	Strategic Plan Alignment (select best alignment; max 3)		Academic Master Plan Alignment (select best alignment; max 3)	UH System Collaboration
			Action Strategy	Program Action from AMP (ie 4.3)	
Super Critical State Fuel Injection System	ILO 2	E.3	New Strategy		
	ILO 2	B.1	New Strategy		
	ILO 1	A1.1	New Strategy		

[Link to Hawaii Community College Institutional Learning Outcomes](#)

[Link to Hawai'i Community College Strategic Plan](#)

[Link to Hawaii Community College Academic Master Plan](#)

Narrative of New Strategy for Strategic Plan:

Due to the government's concern on vehicle emissions, new technologies to eliminate fossil fuels and improve fuel milage has been implemented . The program must follow suit and provide instruction to deal with such technologies.
As new technologies are utilized in the automobile industry, the program is required to keep pace and provide applicable instruction.

Narrative of New Strategy for Academic Master Plan

	STEM	Graduation Remediation Workforce	Student Transfer	Underserved Populations	Green Curricula	Program Development
A drastic change for the vehicular world emissions situation. Will drastically reduce dependency on fossil fuel and increase fuel mileage. Modification to fuel injection systems will provide 4 cylinder gas mileage into the 90 mile/gallon range. Global as well as local communities will be affected.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Briefly explain how **Goal 3** aligns to the College's ILOs, Strategic Plan, Academic Master Plan (AMP), and UH System collaboration (if applicable):

A new inovative design that will increase fuel mileage to approximately 90 mpg. This technology will
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drastically impact the auto industry. Our island community will be greatly impacted by this revolution. Students will need to effectively communicate with industry sources as these vehicles will drastically change the world as we know it today.

Calendar of planned activities for **Goal 3** – In chronological order, briefly describe the procedures/activities planned to achieve **Goal 3**

Activity	When will the activity take place
Obtain proper equipment and training.	Fall 2017- Spr. 2018

Part IV: Justification for Program Existence

Write a brief statement describing the value of this program to the College.

This program has been in existence since 1941 servicing our communities needs in the transportation trades. Graduates have been placed in every facet of the automotive industry. They have found careers in the private sector as well as government agencies. Many have since become employers/managers as they now own and operate businesses of their own which creates an excellent career networking system. Some have ventured to the mainland as well as internationally in Japan, Europe and China.