

HAWAI`I COMMUNITY COLLEGE COMPREHENSIVE INSTRUCTIONAL PROGRAM REVIEW REPORT

MWIM PROGRAM

November 27, 2013

July 1, 2008 to June 30, 2013

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Program/Unit 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/Unit Outcomes is embedded in this ongoing systematic assessment. Reviewed by a college-wide process, the Program/Unit 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	Cautionary	Cautionary	Cautionary	Cautionary	Cautionary
Demand Indicators					
Demand Health Call	Healthy	Unhealthy	Unhealthy	Unhealthy	Unhealthy
Number of Majors	44	58	47	30	35
SSH in All Program Classes	740	1162	755	776	334
Efficiency Indicators					
Efficiency Health Call	Healthy	Healthy	Healthy	Healthy	Cautionary
Average Class Size	15	15	16	13	8
Fill Rate	82	90	97	72	45
Number of Low-Enrolled (<10) Classes	8	3	0	3	3
Effectiveness Indicators					
Effectiveness Health Call	Cautionary	Cautionary	Cautionary	Cautionary	Cautionary
Successful Completion (Equivalent C or Higher)	97	94	87	88	100
Withdrawals (Grade = W)	0	13	7	3	0
Persistence (Fall to Spring)	89	84	73	77	74
Unduplicated Degrees/Certificates Awarded	6	28	12	13	15
Transfers to UH 4-yr	0	0	0	0	0
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	Not Met	Not Met	Not Met	Met
2P1 Completion	Met	Not Met	Met	Met	Not Met
3P1 Student Retention or Transfer	Met	Met	Met	Met	Met
4P1 Student Placement	Met	Met	Met	Met	Not Met
5P1 Nontraditional Participation	Not Met	Not Met	Not Met	Not Met	Not Met
5P2 Nontraditional Completion	Not Met	Not Met	Not Met	Not Met	Not Met

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Part II: Program Effectiveness

Alignment with College Mission and ILOs

In Table 1, write a brief narrative describing this 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	Program 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	Program 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 student will demonstrate the skills and knowledge required for the machine, welding and industrial mechanics occupations; demonstrate good work ethics, positive work habits and attitudes that will make him/her EMPLOYABLE in this cluster of occupations.

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

This program prepares the student for employment in the metalworking and mechanical/maintenance trades. Employment may be in construction, food processing, manufacturing, utilities, astronomical observatories, or related industries. The job requires good physical health, above average eye/hand coordination, mechanical reasoning, and good form perception and spatial relationship. Job responsibilities may include fabricating, repairing, or maintaining metal products on equipment, buildings, and mechanical systems.

The MWIM Tech Program accepts all students from all segments of our community that meet the Community College's open-door requirements. It is an open entry/exit program that serves multiple

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occupational opportunities in the metal fabrication/welding field. Applicable Certificate of Completion, Certificate of Achievement, and Associate of Applied Science degree will be awarded to graduates.

Science Degrees. With the continued restructuring of this program it will be able to also better service the industrial mechanics, installation, maintenance and repair occupations.

The MWIM Program's has initiated a new compressed curriculum combining existing modules to form larger units of study. This direction will hopefully improve current student interest and entice new students who are seeking a career or looking to upgrade skills in the work place.

Describe how this program supports the College's mission.

The MWIM Program encourages all segments of our Hawai'i island community including nontraditional students such as women and handicapped wheel chair majors. The Program has continually enrolled Native Hawaiian students and women who have become productive and engaged citizens in the community.

Describe how this 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 this Program supports this ILO:

In addition to our regular course of study, all students seeking our CA and/or AAS degrees are required to pass at least the colleges Eng 197 class. (See Eng 21 course description). Additionally, the rigors of program includes in every course, terms and nomenclature specific to their chosen course of study. As in most trades, effective communication with the instructor and fellow students/team members are imperative to successfully meet goals and objectives.

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 this Program supports this ILO:

Many assignments in the Program require the students to access information through the internet, their text, and library research. The challenge of problem solving to make informed decisions on classroom and shop tasks relies on their research, past experiences, and instruction.

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 this Program supports this ILO:

The Program has continually contributed to the community in the form of "live projects". We carefully screen these projects to coincide with our current course work and prioritize the scheduling if the "live project" helps our local native Hawaiian community.

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Previous Goals

In Table 2, list this 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
AMP 22.1	Completed. Will review all modules and review or add topics/objectives as applicable.
AMP 22.2	Submitted to CRC and passed.
AMP 22.3	Done and running for first year stuents.

Strengths and Weaknesses

In Table 3, briefly describe this 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.)

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
Native Hawaiian enrollment although	ARDP Demand indicator 3a. Further involvement with the

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lower than last year, continues to be proportionately high.	DOE, KSBE, and our counseling staff to increase recruitment.
Unduplicated Certificates or Degrees awarded	ARDP Effectiveness Indicator 20. The Program has consistently increased this indicator albeit to lower enrollment.
Successful Completion (Equivalent C or Higher	ARDP Effectiveness Indicator 17.

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 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
New and Replacement Positions (County Prorated)	ARDP Demand Indicator 2. The weak economy and poor construction industry has contributed to the low position availability. The MWIM Program is the only program of its kind in the State. Therefore, we are investigating the possibility of addressing the positions at the state level including the Astronomy community.
FTE Enrollment in Program Classes	The Program did not accept new students in the Fall 2011 semester. This was the cause of the lower student count. Also, one instructor position was eliminated in Fall 2011.
Perkins IV Core Indicators. 2P1, 4P1, 5P1, and 5P2 were not met.	Four of the six indicators were "not met" because of the stop out in Fall 2011, the struggling economy and construction industry, industry reluctance to accept females on an equal basis with males, until this trend ends we will not see any improvement.

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).

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

Criteria	0=Does Not Meet	2=Meets
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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 and changes made
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

Part V: Program Student Learning Outcomes

List the Program Learning Outcomes and check mark those assessed for this reporting period.

Check mark if Assessed this year	Program Student Learning Outcomes
1 <input checked="" type="checkbox"/>	Demonstrate mechanical reasoning; form perception & spatial relations; numerical reasoning and communication skills as a part of the basic entry-level skills and knowledge to gain employment in the machining, welding, industrial mechanics or related fields.
2 <input checked="" type="checkbox"/>	Demonstrate the attributes of a good employee; good safety practices; positive work ethics; working collaboratively or independently under supervision; an awareness of hazardous materials and a responsibility for the orderliness and cleanliness of the workplace.
3 <input checked="" type="checkbox"/>	Demonstrate eye and hand coordination and dexterity in the proper set-up and use of the basic machine tools and equipment; metalworking equipment; the common welding & cutting processes; industrial mechanics equipment; material handling equipment and related machinery.
4 <input type="checkbox"/>	Demonstrate the applications of and the ability to use the common hand tools; layout tools; measuring tools; precision measuring tools; common cutting & forming tools, tools used with the common fasteners and specialty tools and the common metalworking and mechanic tools.
5 <input checked="" type="checkbox"/>	Demonstrate form perception and spatial relations in the applications of geometric construction; the three common methods of pattern development; industrial practices in framing and structural fabrication; practices in welding joint design & joint preparation and the common machine shop operations & practices.
6 <input type="checkbox"/>	Demonstrate the skills of a life-long learner; the ability to read blueprints; knowledge of metals and the common materials & supplies; the ability to do the work related math; the

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		ability to communicate and read technical materials; and the ability to use available technical resources.
7	<input type="checkbox"/>	Demonstrate an awareness of our cultural, social and natural environment and be a contributing member of our community.
8	<input type="checkbox"/>	
9	<input type="checkbox"/>	
10	<input type="checkbox"/>	

Table 4: Program Learning Outcome Assessment Summary

Evidence of Industry Validation for CTE Programs – Describe achieved certification or accreditation from granting organization, i.e. Re-accredited by ACF, June 30, 2013 for five years. If the program/degree/certificate does not have a certifying body, the recommendations for, approval of, and/or participation in, assessment by the program’s advisory council can be described. i.e. 9/27/2013 Minutes of ACC Advisory Council; Rubrics completed by Advisory Council Members, fall 2012, PLOs 1,2,3

The Program has an advisory team comprised of the program faculty, members of the community employed in the machine and weld industry and, when possible, graduates of the program. The advisory team meets annually.

Course(s) Assessed – List the course(s) (Alpha/#) assessed during this reporting period.

Mach 26 Lathe II

Results of Assessments – Provide a summary of assessment results.

100% of the artifacts were Excellent or Good based on the rubric’s criteria. During the evaluation, the assessment team and program instructor discussed the artifacts’ quality. While some of the items appeared of lower quality, the program instructor noted that the grading criteria were based on how well the items were machined and fit together rather than appearance. A micrometer was used to insure the artifacts met the assignment specifications.

Changes that were implemented as a result of Assessment

Assessment team noted the artifacts appearance had lower quality and assessment team suggested to have the students do more training.

Evaluation of the changes that were implemented

Ongoing process

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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 this program or additional program changes not included elsewhere.

The last CCSSE results shows the colleges student satisfaction above the national benchmarks. The Program has consistently participated in the survey with positive results. However, the existing Multiple Operator Weld Source is obsolete (1989). The system needs to be updated to the current standards. Also, the GTAW power source and the Oxy/Acet Manifold for welding, brazing, and cutting needs updating. These replacement equipments are crucial minimum requirements for the Program to maintain industry standards. Should the current welding system fail, two banks (20 welding booths) will become unusable causing student dissatisfaction.

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)	UH System Collaboration

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				alignment; max 3)	
			Action Strategy	Program Action from AMP (ie 4.3) or write "New Strategy"	
Implementation of virtual welder trainer	ILO 2	B.2	c.		
	ILO 1	C.1	a.		
	ILO 2	A1.1	a.		

[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:

The virtual welder will offer students a training aid which eliminates the anxiety of the fusion process and prepare them for the actual skill set. Immediate assessment informs the instructor and student of progress in multiple applications. It is a low cost, environmentally and user safe training tool, excepted by the industry.

Narrative of New Strategy for Academic Master Plan

	STEM	Graduation Remediation Workforce	Student Transfer	Underserved Populations	Green Curricula	Program Development
22.4 Virtual welder will benefit students, environment, and workforce	<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 new virtual welder will introduce a new technology into the program. This will enhance the students hands-on practice and reinforce the nomenclature and terms used in the work place. Hopefully, this new technology will increase student enrollment and with the much needed actual welding time, retain and increase degrees attainment by the under served population and the native hawaiian population. We will assess the students at the end of the course with industry input.
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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
Virtual Welder acquisition	Spring 2014
Program Develop/Create rubrics and	Fall 2014

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assessment.	
Introduce equipment and assessment to the Advisory Committee.	Spring 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)	
Update/redo sheet metal lab. Replace 60 year old equipment as required.	ILO 2	B.2	c.		
	ILO 2	A1.3	e.		
	ILO 3	B.1	g.		

Narrative of New Strategy for Strategic Plan:

The sheet metal fabrication skills are utilized through numerous applications. Though the HVAC field provides the greatest opportunities for SM workers, many specialty metal working shops require the skill. The MWIM program attracts older students that may have had experiences in another field with a desire to include the sheet metal segment to their skill sets.
Sheet metal knowledge and skills is a solid fit within the MWIM program, thus requiring sufficiently capable equipment and tooling.
MWIM's enrollment typically consists of a large number of native Hawaiians. With a well rounded metal trade degree/certificate achieved, they have a better chance of obtaining employment.

Narrative of New Strategy for Academic Master Plan

	STEM	Graduation Remediation Workforce	Student Transfer	Underserved Populations	Green Curricula	Program Development
22.4 Update sheet metal lab will benefit students, and program curriculum	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input 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):

MWIM will align with AMP 22.4 (Expand course offerings as equipment/trainers become available) and 22.5 (Continuously evaluate/modify MWIM curriculum). We will align with ILO 2 and 3 by offering comprehensive instruction, using the latest methods and equipment, thus allowing native Hawaiians (majority of students) to utilize such skills, in any form and through employment, in their culture. (Strategic Plan B.1)
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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
Secure funding	Fall 2014
Secure equipment	Fall 2015
Assess	Fall 2015

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)	
Update Machining Lab with new equipment and trainers.	ILO 2	B.2	c.		
	ILO 2	A1.3	e.		
	ILO 3	B.1	g.		

Narrative of New Strategy for Strategic Plan:

CNC machining is now the basis for many machining operations. Students success to program these machines will largely depend on appropriate trainers and equipment.
CNC machining/milling needs to represent a larger part of the curriculum.
A graduate of MWIM (in the machining sector), should be trained at the level of an operator.

Narrative of New Strategy for Academic Master Plan

	STEM	Graduation Remediation Workforce	Student Transfer	Underserved Populations	Green Curricula	Program Development
CNC equipment/trainers prepare students employment to industry standards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input 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):

To promote the local workforce in the area of Machining Technology to better serve the non-traditional and Hawaiian population. The astronomy programs throughout the state are in need of maintenance technicians to support their telescope repair and maintenance.

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

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Activity	When will the activity take place
Secure funding.	Spring 2015
Secure equipment	Spring 2016
Assess	Fall 2016

Part IV: Justification for Program Existence

Summarizing the data over the past 5 years, write a brief statement describing the value of this program to the College.

The MWIM Tech Program accepts all students from all segments of our community that meet the Community College's open-door requirements. It is an open entry/exit program that services multiple occupations with 2 Certificates of Completion, 2 Certificates of Achievement and 2 Associate of Applied Science Degrees and with the continued restructuring of this program, it will be able to also better service the installation, maintenance and repair occupations.