

HAWAI`I COMMUNITY COLLEGE
ANNUAL
INSTRUCTIONAL PROGRAM REVIEW
TEMPLATE

MWIM PROGRAM

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July 1, 2012 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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CERC Comments and Feedback (If you submitted a Comprehensive Program Review in 2011 or 2012, please complete this section)

CERC gave recommendations intended as suggestions for improvement. Provide a brief response to the suggestions made. i.e. Were suggestion(s) valid? Were change(s) made as a result of the suggestion(s)?

NA

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)

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 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 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.

Part I: Quantitative Indicators

NO ENTRY

Part II: Analysis of the Program

Alignment with College Mission and ILOs

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Write a brief narrative describing the program and how it supports the College's mission and Institutional Learning Outcomes (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 MWIM Program will provide the knowledge, and teach skills required for the entry level machine, welding and industrial mechanics occupations. The program will also instill good work ethics, a positive attitude, and accountability that will make him/her EMPLOYABLE in a variety of related industries as well as basic preparation to enter any employment field.

Describe how this program supports the College's mission.

The MWIM Program welcomes all segments of our Hawai'i island community including nontraditional students (gender and age), those with physical disabilities, and the general public, no matter their social economic standing, religion, ethnicity or sexual orientation. 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 the Program supports ILO1:

In addition to our regular course of study, all students seeking our CA and/or AAS degrees are required to pass at least the college's Eng 197 class. (See Eng 21 course description). Additionally, the rigors of the program include 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 ILO 2:

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 ILO 3:

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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.

Annual Report of Program Data (ARPD)

Based on the data from this Program's ARPD, analyze this program's strengths and weaknesses in terms of demand, efficiency, and effectiveness.

Overall Health-- Cautionary

Demand -- Unhealthy

The Demand Health Call is based on declared majors divided by the county of Hawaii's projected New and Replacement positions. The number of declared majors has fallen since last year but is still considered high for the amount of class openings. Potential applicants may perceive that the construction field has not shown a strong rebound yet (due to the economy) thus shying away from the MWIM field. The number of jobs available (County Prorated) is very low (3), again due to the poor economic situation. Until the construction industry and the economic situation improve, there is very little that the program can do.

Efficiency -- Cautionary

The program has been consistent in filling all of the 16 slots that were available during the 2012/2013 year, averaging 8.6. A few students dropped due to the curriculum and rigor of the program not meeting their expectations. However the majority of those that do not persist to succeeding semesters are usually in response to unexpected personal or financial issues.

Effectiveness -- Cautionary

Successful Completion increased by one percent from the previous year and at 100% validates that the program is successful in retaining students through the two year program. Withdrawals have dropped significantly in two years.

Distance Education: Completely On-Line Classes

If applicable, based on the data on Distance Education (DE) from this Program's ARPD, analyze this program's strengths and weaknesses in terms of its DE offerings. Include future plans (i.e. will increase/decrease offerings; CARP 100 was not effective online, will try CARP 101 instead; increase professional development for faculty).

NA

Perkins IV Core Indicators

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If applicable, provide an analysis for any Perkin's Core Indicator for which this program did not meet the goal.

The MWIM Program has achieved the goals set by the indicators in 2 out of 6 areas (Technical Skills Attainment, Student Retention or Transfer.) Student Placement is proportionately affected by the job market: last year construction was down. Non-traditional student enrollment is historically low because MWIM is perceived as a male oriented trade. Therefore, Non-traditional Completion may be low as Non-trad students recognize actual or perceived obstacles as they progress through the program. Attracting female students has always been a challenge, especially because of the industry's reluctance to accept them on an equal basis with males. Until this trend ends, we will not see any great improvement in this area.

Performance Funding

Briefly describe initiatives/strategies that this program has or will implement to increase any or all of the Performance Funding outcomes.

The new virtual welding equipment/trainer will hopefully raise the Program's Performance Funding Data. The additional practice time on a virtual welder will benefit students, environment, and workforce. The students will have additional nomenclature and industry terms repeated continuously. The environment will see reduced welding fumes and the workforce will have a more productive and informed worker. We believe the Number of Degrees and Certificates, Number of Degrees and Certificates Native Hawaiian, and Number of Pell Recipients will increase.

Previous Program Actions

From the Academic Master Plan (AMP), list the Program Actions for this program. Give a progress report for each Program Action, describe the degree of achievement. Indicate "Delete" if this Program Action will no longer be a priority Program Action

Program Actions	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 students.
AMP 22.4	Have expanded course offerings to include industrial mechanics
AMP 22.5	In progress.
AMP 22.6	In progress.

Significant Program Actions for 2012-2013. (include curriculum changes, new certificates, stopout, gain/loss of positions)

1. Continue to evaluate/assess, modify, new block courses.
2. Assess and link SLO's, PLO's, ILO's with MWIM's Advisory input.

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3.

Analysis of Strengths and Weaknesses

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.)

Strengths	Using supporting evidence, describe why this is a strength
S1. Native Hawaiian enrollment although lower than last year, continues to be proportionately high.	ARDP Demand indicator 3a. Further involvement with the DOE, KSBE, and our counseling staff to increase recruitment.
S2. Successfully collapsed multiple modular courses into larger block type courses.	This program modification presents an effective and better defined transition between the three components of MWIM. Students will receive comprehensive instruction in an orderly and logical manner.
S3. Successful Completion (Equivalent C or Higher)	ARDP Effectiveness Indicator 17.

Weaknesses	Using supporting evidence, describe why this is a Weakness
W1. 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.
W2. 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.
W3. 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.

Trends and Other Factors

Describe trends including comparisons to any applicable standards, such as college, program, or national standards from accrediting associations, etc. Include, if relevant, a summary of

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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: Action Plan

Goals and Planning

List additional Program Action(s), not included in the AMP to be implemented for program success. Identify the AMP Priorities, College's ILOs, Strategic Plan Action Strategies, and UH System collaboration (if applicable) to which these Program Action(s) align.

Program Action 1		ILO Alignment (select up to 3)	Strategic Plan Alignment (select best alignment; max 3)		UH System Collaboration
			Performance Measure	Action Strategy	
Implementation of virtual welder trainer	Green Curricula	ILO 2	B.2	c.	
	Graduation	ILO 1	C.1	a.	
	Program Development	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:

1. 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.
2.
3.

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

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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.

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

Activity(ies)	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 assessment.	Fall 2014
Introduce equipment and assessment to the Advisory Committee.	Spring 2015

Program Action 2		ILO Alignment (select up to 3)	Strategic Plan Alignment (select best alignment; max 3)		UH System Collaboration
			Performance Measure	Action Strategy	
Update/redo sheet metal lab. Replace 60 year old equipment as required.	Graduation	ILO 2	B.2	c.	
	Program Development	ILO 2	A1.3	e.	
	Workforce	ILO 3	B.1	g.	

Narrative of New Action Strategy for Strategic Plan:

1. 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.
2. Sheet metal knowledge and skills is a solid fit within the MWIM program, thus requiring sufficiently capable equipment and tooling.
3. 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.

Briefly explain how **Program Action 2** aligns to the College's AMP Priorities, ILOs, Strategic Plan, 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

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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)

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

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

Program Action 3		ILO Alignment (select up to 3)	Strategic Plan Alignment (select best alignment; max 3)		UH System Collaboration
			Performance Measure	Action Strategy	
Expand Machining curriculum by adding new CNC technologies and generally updating methods consistent with the industry.	Graduation	ILO 2	B.2	c.	
	Program Development	ILO 2	A1.3	e.	
	Workforce	ILO 3	B.1	g.	

Narrative of New Strategy for Strategic Plan:

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

Briefly explain how **Program Action 3** aligns to the College's AMP Priorities, ILOs, Strategic Plan, 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, which requires the latest machining techniques and especially CNC training.

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

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

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Assess	Fall 2016

List specific action plans for any Perkin's Core Indicator for which this program did not meet the goal.

Perkin's Indicator	Action Plans	When will the activity take place
5P1	The Program will actively promote and recruit non-traditional students with the intent of graduating entry level workers in MWIM related fields.	Each semester.
5P2	Use qualified service people for those with disabilities where applicable.	Each semester.
1P1		
1P1		
1P1		
1P1		

Part IV: Resource Implications

List Top 3 Cost Items needed for program success. Identify alignment to the AMP Program Actions, Strategic Plan Action Strategies and/or Strengths and/or Weaknesses to address.

Cost Item 1	Type	Cost	Strategic Plan Alignment (select best alignment; max 3)		Academic Master Plan Alignment (select best alignment; max 3)	Strength	Weakness
				Action Strategy	Program Action from AMP (ie 4.3) or write "New Strategy"		
Virtual Welder	Equipmen	85,000	B.2	c.	22.4	S3	W3
			None	None		None	None
			None	None		None	None

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

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

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

Briefly explain why **Cost Item 1** is necessary to meet priorities of program and/or to address strengths and/or weaknesses.

Introduce students to welding with a safe, non-threatening trainer. Gain objective assessment immediately. Newest green technology to reduce toxic fumes in welding booths. Reduce the cost of

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consumables.

Cost Item 2	Type	Cost	Strategic Plan Alignment (select best alignment; max 3)		Academic Master Plan Alignment (select best alignment; max 3)	Strength	Weakness
				Action Strategy	Program Action from AMP (ie 4.3) or write "New Strategy"		
Update Sheet Metal Lab	Equipmen	100,000	B.2	c.	22.1	S1	W1
			None	None		None	None
			None	None		None	None

Briefly explain why **Cost Item 2** is necessary to meet priorities of program and/or to address strengths and/or weaknesses.

To meet industry standards basic knowledge and strengthen student graduation rates.

Cost Item 3	Type	Cost	Strategic Plan Alignment (select best alignment; max 3)		Academic Master Plan Alignment (select best alignment; max 3)	Strength	Weakness
				Action Strategy	Program Action from AMP (ie 4.3) or write "New Strategy"		
Update machining lab with equipment and trainers.	Equipmen	250,000	B.2	c.	22.6	S1	W1
			None	None		None	None
			None	None		None	None

Briefly explain why **Cost Item 3** is necessary to meet priorities of program and/or to address strengths and/or weaknesses.

The Advisory Council has suggested the program update these equipment to accommodate the astronomy community as well as global needs.

Part V: Program Student Learning Outcomes

List the Program Learning Outcomes and check mark those assessed for the 2012-2013 program year.

	Check mark if	Program Student Learning Outcomes
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	Assessed this year	
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 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"/>	

A) Evidence of Industry Validation for CTE Programs – Provide documentation that the program has submitted evidence and achieved certification or accreditation from an organization granting certification in an industry or profession. 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 submitted. – Describe the documentation; i.e. 9/27/2013 Minutes of ACC Advisory Council; Completed Rubrics by Advisory Council Members.

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.

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B) Expected Level of Achievement – Describe the different levels of achievement for each characteristic of the learning outcome(s) that were assessed. What represented “excellent,” “good,” “fair,” or “poor” performance using a defined rubric and what percentages were set as goals for student success; i.e. 85% of students will achieve good or excellent in the assessed activity.”

The expected performance level: 80% of the students will achieve Good or Excellent as stated in the rubric

C) List Course(s) Assessed – List the courses assessed during the reporting period.

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D) Assessment Strategy/Instrument – Describe what, why, where, when, and from whom assessment artifacts were collected.

Students have an assignment in which they will machine an acme threaded shaft with a knurled handle. From the student artifacts produced during the assignment, four were randomly chosen for use in the assessment.

E) Results of Program Assessment – The % of students who met the outcome(s) and at what level they met the outcome(s).

100% of the artifacts were excellent or good based on the rubric’s criteria.

F) Other Comments – Include any information that will clarify the assessment process report.

Following the evaluations the assessment team discussed the effectiveness of the rubric and agreed it is an effective instrument for evaluating this assignment.

G) Next Steps – Describe what the program will do to improve the results. “Next Steps” can include revision to syllabi, curriculum, teaching methods, student support, and other options.

Though the assessors were in agreement ,using the provided rubric, in scoring all of the artifacts at the proficient level, the program will continue to be cognizant to any concerns to ensure that objectives are being met.