

HAWAI‘I COMMUNITY COLLEGE PROGRAM ANNUAL REVIEW (APR)

Machine Welding and Industrial Mechanics

Date November 17, 2017

Review Period
July 1, 2016 to June 30, 2017

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Program/Unit Review at Hawai‘i Community College is a shared governance responsibility related to strategic planning and quality assurance. Annual and 3-year Comprehensive Reviews are important planning tools for the College’s budget process. This ongoing systematic assessment process supports achievement of Program/Unit and Institutional Outcomes. Evaluated through a college-wide procedure, all completed Program/Unit Reviews are available to the College and community at large to enhance communication and public accountability. Please see <http://hawaii.hawaii.edu/files/program-unit-review/>

Please remember that this review should be written in a professional manner. Mahalo.

PART 1: PROGRAM DATA AND ACTIVITIES

Program Description (required by UH System)

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| <p>Provide the short description as listed in the current catalog.</p> | <p>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.</p> |
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Comprehensive Review information (required by UH System)

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| <p>Provide the year and URL for the location of this program's last Comprehensive Review on the HawCC Program/Unit Review website: http://hawaii.hawaii.edu/files/program-unit-review/</p> | |
| <p>Year</p> | <p>2016</p> |
| <p>URL</p> | <p>Machine, Welding and Industrial Mechanics Technologies - (MWIM)</p> |
| <p>Provide a short summary of the CERC's evaluation and recommendations from the program's last Comprehensive Review.</p> <p>Discuss any significant changes to the program that were aligned with those recommendations but are not discussed elsewhere in this report.</p> | <p>There are no current CERC evaluations or recommendations at the time that this report was submitted.</p> |

ARPD Data: Analysis of Quantitative Indicators (required by UH System)

Program data can be found on the ARPD website: <http://www.hawaii.edu/offices/cc/arpd/>

Please attach a copy of the program's data tables and submit with this Annual Program Review (APR).

a) **If you will be submitting the APR in hard copy, print and staple a copy of the data tables to the submission; the icon to print the data tables is on the upper right side, just above the data tables.**

OR

b) **If you will be submitting the APR in digital form (WORD or PDF), attach a PDF copy of the data tables along with the digital submission; the icon to download the data tables as a PDF is in the upper right of the screen, just above the data tables.**

Analyze the program’s ARPD data for the review period.

Describe, discuss, and provide context for the data, including the program’s health scores in the following categories:

Demand

Our Demand indicator shows the program’s health call to be “Cautionary” with only 3 new and replacement positions in the county. It is our goal to track the success of our graduates in their work placement to show that there are more employment opportunities in the county overall than the ARPD data shows. Because our CIP code is only for welding and not for machining or fabricating, it does not reflect the students that go to work in machining and fabricating.

Of our nine student graduates, three found work in their field, one graduate is self-employed and does machining work, one graduate works for a local sheet metal company and one graduate does the maintenance and repairs for his family business. Two graduates are currently working in small family businesses using the skills for maintenance and repairs they learned in the program, and two are currently going through the hiring processes at different companies, one for industrial maintenance at HELCO on the Big Island and one for the Iron Workers Local Union 377 in San Francisco, California. One student is continuing his education and the ninth student has not found work. One of the graduates who is working in his family business also is currently applying for an industrial maintenance mechanic/welder/machinist for Mauna Loa Macadamia Nut.

We are confident that in tracking our graduates, we will see their success in finding employment over the next year. We will continue to track our students’ success as they enter the welding, machining and fabricating industries.

See Attachment 1, number of graduates and locations of employment.

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| Efficiency | <p>The health call for the Efficiency indicator is currently “Healthy” and went up from 59.2% in AY 15-16 to 67.9% in AY 16-17. We do not have the desired 75% fill rate, but with one instructor, the “Majors to FTE BOR Appointed Faculty” ratio is 28.5.</p> |
| Effectiveness | <p>The health call of the program for the Effectiveness indicator is “Healthy.” We have a 74.1% persistence from Fall to Spring score, which is down 11.6% from the previous year, because there were four first year students from Fall 2016 that moved off island because of family, and one female student that was taking the first semester courses in order to support her desired major as an electrician. The persistence from Fall to Fall is up from 47.6% to 51.8% and our successful completion rate is up from 91% to 97%.</p> |
| Overall Health | <p>The overall health of the program is “Healthy.” Even though the program is healthy at this time, we believe that the CIP code for the Demand Indicator is flawed because we only fall under one category, which is welding. Our students are finding work in sheet metal, fabrication, industrial mechanics and machining, as well. We project this health call being difficult to stay healthy if the CIP code does not reflect that actual jobs available to our graduates.</p> <p>Our efficiency indicator is Healthy, and we hope to stay Healthy. The numbers may change with the hiring of a permanent instructor for machining by changing the “Majors to FTE BOR Appointed Faculty” number in AY 17-18, but we are confident that our class size and fill rate will increase.</p> <p>Our Effectiveness indicator is Healthy and we anticipate this indicator to remain Healthy.</p> |
| Distance Education | N/A |
| Perkins Core Indicators (if applicable) | <p>For the 2016-17 year, the Perkins Core Indicator 1P1 Technical Skills Attainment was met with a 100.00 score and a goal of 92.0. This score shows that every student in the program received a 2.0 or better in the CTE courses that they were taking.</p> |

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| | <p>For the Perkins Core Indicator 2P1 Completion, we met with a score of 62.5 and the goal being 51. We are pleased to meet this indicator as it was not met in AY 15-16. The students in the previous year had an unusually hard time with different family and economic hardships, and we think that although the Fall 2016 semester had four students move off island, this did not affect the health score like the previous year. We anticipate some hardships for students in their endeavors to graduate successfully, but hopefully not as much as in AY 15-16 and are pleased the numbers have increased.</p> <p>For the Perkins Core Indicator 3P1, Student Retention or Transfer for the 2015-16 year, the data shows that we did not meet with a score of 53.57. The goal was 81.00. This data is coming from the 2015-16 year when we had a particularly unusual amount of hardships within our cohort. We expect this percentage to increase and meet our goal in the upcoming AY 16-17.</p> <p>For the Perkins Core Indicator 4P1, Student Placement, the data was pulled from the 2015-16 year and shows that we did not meet with a score of 58.33. The goal was 63.87. This data is believed to be flawed because the program can only use one CIP code. The program teaches students to weld (CIP 48.05.08), machine (CIP 48.05.01), sheet metal (CIP 48.05.06) and computer numeric controls (CIP 48.04.10), but we are given the one CIP for welding. We are currently tracking our students work placement to show that there are more jobs available for our graduates.</p> <p>For the Perkins Core Indicator 5P1 Nontraditional Participation, the goal was 22.00 and the actual was 10.34. The goal for the Perkins Core Indicator 5P2, Nontraditional Completion, was also 22.00 and was also not met with 10.34 score. The Perkins Core Indicator 5P1 and 5P2 Nontraditional Participation and Nontraditional Completion have always been a challenge and we are currently emphasizing recruitment of non-traditional students by going to job fairs and talking to non-traditional students. We have also hired a permanent female APT in Fall 2016 and she is active in encouraging prospective non-traditional students to visit our booth/display, to ask questions or to examine our virtual reality welder on the various outings that do to promote our program. We will continue to look for opportunities to recruit non-traditional students to our program.</p> |
| Performance Funding Indicators (if applicable) | N/A |

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| <p>What else is relevant to understanding the program's data? Describe any trends, internal/external factors, strengths and/or challenge that can help the reader understand the program's data but are not discussed above.</p> | <p>Challenges in the program mainly consist of budget, equipment, meeting non-traditional enrollment goals and personnel issues.</p> <p>A challenge that is not new, but getting more difficult, is the looming possibility of not having enough consumables and/or materials to get through the semester. Consumables include welding rods and materials include sheet metal, flat iron, box iron and metals used. Part of the reason that we have not run out of materials sooner is that there was a large stock-pile of donated materials from twenty years ago that has been slowly decreasing in size over the years, and also the price of consumable continues to go up each year.</p> <p>Equipment in the shop is generally outdated and not up to industry standards as is the consensus with the Advisory Council. Two new CNC Milling machines, a new horizontal ban saw, and a new vertical ban saw were approved for purchase and the program hopes to have these installed and in use as soon as possible. This equipment is replacing existing machinery that is out dated. It is still hoped that the program is able to purchase other new technologies, such as a laser cutter, a 3-D printer, upgraded software for the plasma cam or new plasma cam technologies, and a new virtual welder so that we are currently teaching with the tools that are used in industry. It is the instructor's goal to acquire up to date equipment and technologies so that we maintain a reputation for graduating capable students.</p> <p>Regarding the 5P1 and 5P2 Perkins Core Indicators that were not met, the program feels that there is a trend toward getting closer to meeting these benchmarks. We cannot predict that industry will accept females on an equal basis as males, but there is more interest in our program at job fairs and on career days from prospective female students. We anticipate that these Perkins Indicators will improve in the near future.</p> <p>The program is need of hiring a permanent Machining Instructor and currently has two machining lecturers for the machining side and the Welding Instructor for the welding side. It is hoped that a permanent machining instructor will be hired before the Fall 2017 year starts so that there is time to set up curriculum.</p> |

PROGRAM ACTIVITIES

Report and discuss all major actions and activities that occurred in the program during the review period, including the program's meaningful accomplishments and successes. Also discuss the challenges or obstacles the program faced in supporting student success and explain what the program did to address those challenges.

For example, discuss:

- Changes to the program's curriculum due to course additions, deletions, modifications (CRC, Fast Track, GE-designations), and re-sequencing;
- New certificates/degrees;
- Personnel and/or position additions and/or losses;
- Other changes to the program's operations or services to students.

Changes to Program's Curriculum:

1. In the Spring of 2017, every CLO was realigned to every PLO.
2. In the Spring of 2017, every PLO was aligned to the new ILOs.

Hiring of Personnel:

The program was able to hire the "Casual Hire" as a permanent APT in Summer 2016. Two lecturers were also hired in the Fall 2016 and Spring 2017 to teach the MWIM 42, MWIM 52, MWIM 62 and MWIM 72 courses.

Math QM120T Requirement:

The program has received positive feedback from students about the QM120T Math course that is now being taught in the portable adjacent to the AMT building, which is very close and convenient for the students in parking and in time management.

Equipment:

1. Outdated equipment dates to the 1950s and 1980s such as the sheet metal equipment and the stick welders.
2. Outdated equipment is at the end of its life expectancy, such as the ventilation system. (see AY 13-14, 14-15, 15-16 Comprehensive Report and the AY 15-16 Annual Report)
3. Program is in need of up-to-date technologies, equipment and tools such as a laser cutter, updated software for plasma cam, modern CNC machines, and a virtual welder

with modern software that does not have interference and complications that the older virtual welder had and with more welding capabilities.

PROGRAM WEBSITE

Has the program recently reviewed its website? Please check the box below that best applies and follow through as needed to keep the program's website up-to-date.



Program faculty/staff have reviewed the website in the past six months, no changes needed.



Program faculty/staff reviewed the website in the past six months and submitted a change request to the College's webmaster on _____ (date).



Program faculty/staff recently reviewed the website as a part of the annual program review process, found that revisions are needed, and will submit a change request to College's webmaster in a timely manner.

Please note that requests for revisions to program websites must be submitted directly to the College's webmaster at

<http://hawaii.hawaii.edu/web-developer>

PART 2: PROGRAM ACTION PLAN

AY17-18 ACTION PLAN

Provide a detailed narrative discussion of the program's overall action plan for AY17-18, based on analysis of the Program's AY16-17 data and the overall results of course learning outcomes assessments conducted during the AY16-17 review period.

This Action Plan should identify the program's specific goals and objectives for AY17-18, and must provide benchmarks or timelines for achieving each goal.

1. One of the challenges of the program has been enrollment of nontraditional students. This is an on-going challenge that is being addressed by going to job fairs and career days at various high schools as well as hosting HCC Day here on campus with our newly hired female APT and at least one female student to represent the program. The program encourages nontraditional students and female involvement in the trades. We hope to see an increase our nontraditional participation and completion for the Perkins

Core Indicators over the next couple years. We do not anticipate meeting the 22.00 goal in the next year, but anticipate closing the gap.

2. The program will edit and re-write every rubric for each of the assessments so that they are streamlined and the expectations are easily understood, are clear, and are consistent. The overall results of these clearly defined rubrics will assist the instructor and the Advisory Council in analyzing where any weaknesses in instruction or gaps in student learning outcomes exist. We plan to have these edits finished and approved by the Advisory Council by the end of summer 2018 and will be working on them as we finish our last Closing the Loop assessments in the Fall 2017. The program will continue to work with the Institutional Assessment Coordinator to ensure that the rubrics are accurate and clear and reflect student learning outcomes as well as the alignments to the CLOs and PLOs, and that we are meeting our goal.

3. The program would like to purchase the latest software for the plasma cam cutter. In staying up to date and obtaining the latest technologies in welding and machining, the program encourages student enrollment. Students want to know that the skills they learn will allow them to apply for quality jobs after graduation. The goal is to acquire this software by Spring 2018.

ACTION ITEMS TO ACCOMPLISH ACTION PLAN

For each Action Item below, describe the strategies, tactics, initiatives, innovations, activities, etc., that the program plans to implement in order to accomplish the goals described in the Action Plan above.

For each Action Item below, discuss how implementing this action will help lead to improvements in student learning and their attainment of the program's learning outcomes (PLOs).

Action Item 1:

The program is currently implementing the action plan of increasing non-traditional enrollment by going to job fairs and career days with female students and the female APT that was just hired in the summer of 2016. There is very positive feedback with younger female high school students and the current Hawaii Community College female students who go to the job fairs/career days and the female APT. With women at the job fair, prospective female students are more inclined to approach the table and ask questions. Last year, AY 16-17, we attended more job fairs and career days than the year before and will continue to go to these recruitment opportunities when possible, or send the program APT to represent the program. We anticipate

that in the next year, we will have more female students that will be able to attend these job fairs.

Action Item 2:

In rewriting and editing the rubrics for all the assessments for every course, the program will work with the Institutional Assessment Coordinator to ensure that the rubrics are accurate and clear and reflect student learning outcomes as well as the alignments to the CLOs and PLOs. If the program hires a permanent machining instructor, the newly hired APT and the prospective machining instructor can work with the current welding instructor to implement this action plan. It is anticipated that this action plan will be complete in summer 2018.

Action Item 3:

In purchasing the latest software for the plasma cam cutter and staying up to date and obtaining the latest technologies in welding and machining, the program not only encourages student enrollment but allows the program to make decorative metal pieces that can lead to money earned for the “R” account, which shows what the program is capable of creating. In AY16-17 we had numerous requests for small projects and one of the projects included making signs for our Career Day display. If our display consists of actual student work, we will better promote the program.

RESOURCE IMPLICATIONS

NOTE: General “budget asks” are included in the 3-year Comprehensive Review. Budget asks for the following three categories only may be included in the APR: 1) health and safety needs, 2) emergency needs, and/or 3) necessary needs to become compliant with Federal/State laws/regulations.

Provide a brief statement about any implications of or challenges due to the program’s current operating resources.

The operating budget has not increased since the original formula was developed and implemented in the late 1990’s. All our resource costs have increased with inflation over the years but we still have to manage with the same budget. We spoke with Air Gas and asked for their estimation of the increase of consumables over the last 5 years, and we were told that the price of consumable has increased about 8% each year.

This is the first semester that we were not sure if we would have enough welding rods to make it until the end of the semester, and then in the beginning of November 17, we were given a \$2,500 scholarship that saved us from going in the red.

The program also has a stock-pile of donated metals from the 1980s and 1990's that has been slowly dwindling, but giving the program a small buffer of materials for students. These donations are "scrap" metals and not always ideal for the students who are learning, and sometimes require extra time to clean up if they have corrosion. The program is looking into ways in which we can add to the supply of materials that we currently have.

BUDGET ASKS

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| For budget ask in the allowed categories (see above): | |
| Describe the needed item(s) in detail. | <ol style="list-style-type: none"> 1. Updated ventilation system; 2. Ten-unit individual welding system to replace the previous grid with appropriate electrical. |
| Include estimated cost(s) and timeline(s) for procurement. | <ol style="list-style-type: none"> 1. \$125,000 The program is currently operating with a ventilation system that is at about half of its operating capacity. The ventilation system is from the 1990s and must be closely monitored. 2. \$200,000 The program needs ten welders and an updated electrical system to support them. This welding system is from the 1990s and the welders from the 1980s and they came from the old shop. The system is outdated and as it starts to break, the replacement parts will not be found. One of the welders has recently broken and the malfunctioning welder was removed and replaced with the last remaining spare. We anticipate the breakage of the remaining welders in the near future. These welders are a crucial part of our program and the |

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| | stick welding side of the program is not possible without these welders. |
| <p>Explain how the item(s) aligns with one or more of the strategic initiatives of <u>2015-2021 Strategic Directions</u>:</p> <p>http://hawaii.hawaii.edu/sites/default/files/docs/strategic-plan/hawcc-strategic-directions-2015-2021.pdf</p> | <ol style="list-style-type: none"> 1. The outdated ventilation system is not currently an emergency situation, but it could become one if we do not address this issue. The ventilation system is also a crucial part of our program and without it we would not be able to operate the stick welding side of our curriculum. 2. The breakdown of one of welders shows the age of our system. The welders are at the end of their life expectancy and we have no spares for the current electrical set-up in place. This could be a possible emergency situation if there were to be any electrical issues with the 30-year-old welders. The welders are crucial to our program. |

PART 3: LEARNING OUTCOMES ASSESSMENTS

For all parts of this section, please provide information based on CLO (course learning outcomes) or PLO (program learning outcomes) assessments conducted in AY16-17.

Evidence of Industry Validation and Participation in Assessment (for CTE programs only)

Provide documentation that the program has submitted evidence and achieved certification or accreditation (if applicable) from an organization granting certification/accreditation in the program's industry/profession. If the program/degree/certificate does not have a certifying body, you must submit evidence of the program's advisory committee's/board's recommendations for, approval of, and/or participation in the program's assessment(s).

Please attach copy of industry validation for the year under review.

Courses Assessed

| List all program courses assessed during AY16-17, including Initial and "Closing the Loop" assessments. | | | |
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| Assessed Course Alpha, No., & Title | Semester assessed | CLOs assessed (CLO#s) | PLO alignment (PLO#s) |
| N/A | N/A | N/A | N/A |

| “Closing the Loop” Assessed Course Alpha, No., & Title | Semester assessed | CLOs assessed (CLO#s) | PLO alignment (PLO#s) |
|---|------------------------------|--|---|
| MWIM 52 Sheet Metal and Machining | Spring 2017 | CLO: 1 CLO: 2 CLO: 3 CLO: 4 CLO: 5 | PLO: 2 PLOs: 1,3,4,5 PLOs: 1,5,6 PLOs: 1,2,3,6 |
| MWIM 55 Intermediate Welding and Qualification Procedures | Spring 2017 | CLO: 1 CLO: 2 CLO: 3 CLO: 4 CLO: 5 CLO: 6 | PLO: 2 PLOs: 3,4,5 PLOs: 1,2,4,5,6 PLOs: 1,2,3,5,6 PLOs: 2,3,5,6 PLOs: 1,2,6 |
| MWIM 72 Introduction to CNC Milling | Spring 2017 | CLO: 1 CLO: 2 CLO: 3 CLO: 4 | PLOs: 2,6 PLOs: 1,2,3,5,6 PLOs: 1,2,3,5 PLOs: 1,2,3,5 |
| MWIM 75 Special Process Welding & Rigging | Spring 2017 | CLO: 1 CLO: 2 CLO: 3 CLO: 4 | PLOs: 1,3,4,6 PLOs: 1,3 PLOs: 1,3,4,6 PLOs: 1,3,4,5,6 |

Assessment Strategies

For each course assessed in AY16-17 listed above, provide a brief description of the assessment strategy, including:

- a description of the type of student work or activity assessed (e.g., research paper, lab report, hula performance, etc.);
- a description of how student artefacts were selected for assessment (e.g., the assessment included summative assignments from all students in the course, OR a sample of students’ summative assignments was randomly selected for assessment based on a representative percentage of students in each section of the course);
- a brief discussion of the assessment rubric/scoring guide and the criteria/categories and standards used in the assessment.

Course Alpha/#: MWIM 52
Sheet Metal and Machining

1. In using almost the exact same rubric that was used in the Spring of 2016, every student was assessed on their ability to produce a sheet metal artifact. The rubric was only changed in the wording that determined students' scores by adding the actual percentages so that the results were more defined and accurate.
2. In using the same rubric that was used in the Spring of 2016, every student was assessed on their ability to produce a metal artifact, a multi-tapered plug. The goal for this assessment was that an overall average of the combined scores would show that 75% of the students would meet proficiency.
3. This assessment was given as a written test in Spring 2016. The current instructor decided that a hands-on performance assessment would more accurately show that the students were proficient at the desired skill level for industry standards. Although the performance test was hands-on, all the material in the written test was assessed, vocabulary, components, safety, etc. along with the proper use and dexterity required to do the job.
4. The soft-skills assessment given in the Spring of 2016 is very similar to the soft-skills assessment given in the Spring of 2017 by the new instructor with only one competency added. Every student was assessed on their abilities to be safe, prepared, demonstrate a positive attitude, and work well with others showing respect for cultural differences. The current rubric used for the Spring 2017 added "attention to task."

Course Alpha/#: MWIM 55

Intermediate Welding and Qualification Procedures

The soft-skills assessment given in the Spring of 2016 is very similar to the soft-skills assessment given in the Spring of 2017 with two competencies added. Every student was assessed on their abilities to be safe, prepared, demonstrate a positive attitude, and work well with others showing respect for cultural differences. The current rubric used for the Spring 2017 added "safety" and "attention to task." The instructor determined that adding the "safety" competency to the hands-on performance assessment and eliminating the written OSHA exam was a more complete assessment. Because the students had all been given a written safety/OSHA exam in both of their courses their first semester, MWIM 42 and MWIM 45, the instructor decided to assess their performance as is if they were working in the field to gauge their employment readiness.

2. We used the same rubric and assessed the same CLOs as we did in Spring 2016 for MWIM 55. The students were assessed on five different skills and were scored with either: does not meet, meets or exceeds. "Meets proficiency" is the goal. The rubric was scored with 0, 1 and 2 points.

Course Alpha/#: MWIM 72

Introduction to CNC Milling

In using almost the exact same rubric that was used in the Spring of 2016, every student was assessed on their ability to produce a metal artifact. The rubric was only changed by eliminating one of the lower skill levels. The rubric scored students with 4 skill levels, 0 points for “poor,” 2 points for “needs improvement,” 3 points for “meets,” and 4 points for exceeds, with four different skills being assessed. This would mean that in order to meet the benchmark, a student would need 12 out of 16 points.

The instructor gave the same written exam on calculating proper speeds and feeds and selecting proper tools and cutters for the lathe that was given in Spring 2016. Each question was worth one point and was given a final percentage

The instructor gave the same written exam on the vertical milling machine parts, components and functions that was given in Spring 2016. Each question was worth one point and was given a final percentage.

Course Alpha/#: MWIM 75

Special Process Welding & Rigging

In using almost the same Arc Welding rubric that was used in the Spring 2016 semester, every student was assessed on the same CLOs as we did in Spring 2016 for MWIM 75. The goal was that 75% of the students would meet the benchmark. This goal was met with nine out of twelve students meeting the benchmark, or 89%, and an overall combined average score of 41/36 pts or 100%.

In using almost the same TIG Welding rubric and assessing the same CLOs as we did in Spring 2016 for MWIM 75, we set the goal to be that 75% of the students would meet the benchmark. This goal was met with eight out of nine students meeting the benchmark, or 89%, and an overall combined average score of 30/36 pts or 83%.

In using almost the same Rigging rubric and assessing the same CLOs as we did in Spring 2016 for MWIM 75, we set the goal to be that 75% of the students would meet the benchmark. This goal was met with nine out of nine students meeting the benchmark, or 100% , and an overall combined average score of 42/36 or 100%.

CLOs: 1,4

Expected Levels of Achievement

For each course assessed in AY16-17 listed above, state the standard (benchmark, goal) for student success for each CLO assessed AND the percentage of students expected to meet that standard for each CLO.

Example: “CLO#1: The standard for student success is that students will answer 80% of the questions on the final exam related to CLO#1 correctly. The expectation is that 85% of students will meet this standard for CLO#1.”

Example: “CLO#4: The standard for student success is that students will be able to perform skills associated with CLO#4 with 80% proficiency. The expectation is that 75% of students will meet this standard for CLO#4.”

| Assessed Course Alpha, No., & Title | Assessed CLO# | Standard for Success | % of Students Expected to Meet Standard |
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| Course Alpha/#: MWIM 52 Sheet Metal and Machining | 1. Performance assessment for metal artifact CLOs: 2,3 | 1. 75% of the students would meet the benchmark of developing proficiency. | 1. 80% of the students met the benchmark |
| | 2. Performance assessment for tapered-plug artifact CLOs: 1,2,4,5 | 2. 75% of the students would meet the benchmark of developing | 2. 99% of the students met the benchmark |
| | 3. Performance assessment lathe components and proper use CLO: 4 | 3. 75% of the students would meet the benchmark of developing proficiency | 3. 73% of the students met the benchmark |
| | 4. Soft-skills assessment CLO: 1 | 4. 75% of the students would meet the benchmark of developing proficiency | 4. 100% of the students met the benchmark |
| Course Alpha/#: MWIM 55 Intermediate Welding and Qualification Procedures | 1. Soft-skills assessment CLOs: 1,6 | 1. 75% of the students would meet the benchmark of developing proficiency | 1. 100% of the students met the benchmark |

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| | 2. Performance assessment inspect a test weld CLOs: 2,3,4,5,6 | 2. 75% of the students would meet the benchmark of developing proficiency | 2. 73% of the students met the benchmark |
| Course Alpha/#: MWIM 72 Introduction to CNC Milling | 1. Performance assessment for metal artifact CLOs: 1,3,4 2. Written Exam on lathe calculations CLO: 2 3. Written Exam on CNC Milling Machine CLO: 4 | 1. 75% of the students would meet the benchmark of developing proficiency 2. 75% of the students would meet the benchmark of developing 3. 75% of the students would meet the benchmark of developing | 1. 75% of the students met the benchmark 2. 61% of the students met the benchmark 3. 100% of the students met the benchmark |
| Course Alpha/#: MWIM 75 Special Process Welding & Rigging | 1. Performance assessment for Arc Welding CLOs: 1,2,4 2. Performance assessment for TIG Welding CLOs: 1,3,4 3. Performance assessment for Rigging CLOs: 1,4 | 1. 75% of the students would meet the benchmark of developing proficiency 2. 75% of the students would meet the benchmark of developing 3. 75% of the students would meet the benchmark of developing | 1. 89% of the students met the benchmark 2. 83% of the students met the benchmark 3. 100% of the students met the benchmark |

Results of Course Assessments

For each course assessed in AY16-17 listed above, provide:

- a statement of the quantitative results;
- a brief narrative analysis of those results.

Course Alpha: MWIM 52

Sheet Metal and Machining

1. Nine out of twelve students met the benchmark, so that 75% of the students met proficiency standards.
2. Eight out of eleven students met the benchmark so that 73% of the students met proficiency standards.
3. Although the performance test was hands-on, all the material in the written test was assessed, vocabulary, components, safety, etc. along with the proper use and dexterity required to do the job. Eight out of eleven students met the benchmark so that 73% of the students met proficiency standards.

Course Alpha/#: MWIM 55

Intermediate Welding and Qualification Procedures

1. Results were an overall combined average score of 100% meets proficiency. Twelve out of the twelve students met the benchmark so that 100% of the students met proficiency standards.
2. Eight out of eleven students met the benchmark so that 73% met proficiency standards.

Course Alpha/#: Course Alpha/#: MWIM 72

Introduction to CNC Milling

1. Results were that an overall combined average score of 100% meets proficiency. Nine out of twelve students actually met proficiency standards, so that 75% of the students met the benchmark.
2. The overall combined average of the students' test scores were 61%, and only 4 out of the 8 students passed with 75% or better. There was one student that left the country, and if he had taken the exam, most likely would have made the benchmark so that 63% or 5 out of 8 students would be meeting proficiency instead of the 4 out of 8 or 50%.
3. The overall combined average of the scores of the test were 88%, and 9 out of the 9 students passed with 75% or better so that 100% of the students met the benchmark.

Course Alpha/#: Course Alpha/#: MWIM 75

Special Process Welding & Rigging

1. Nine out of twelve students meeting the benchmark, or 89%, and an overall combined average score of 41/36 pts or 100%.
2. Eight out of nine students meeting the benchmark, or 89%, and an overall combined average score of 30/36 pts or 83%.
3. Nine out of nine students meeting the benchmark, or 100% , and an overall combined average score of 42/36 or 100%.

Other Comments

Include any additional information that will help clarify the program's course assessment results, successes and challenges.

The program wishes to edit the rubrics so that the expectations are clear. In the past there was discrepancy with the loss of an instructor and the hiring of two lecturers. In the event that the program hires a permanent machining instructor, the APT plans to work with the new instructor and the present instructor to streamline and make the rubrics for all of the courses' assessments more concise and understandable. This will assist industry and the Advisory Council in understanding the expectations more clearly as well.

Discuss, if relevant, a summary of student survey results, CCSSE, e-CAFE, graduate-leaver surveys, special evaluations, or other assessment instruments that are not discussed elsewhere in this report.

The e-Cafe results for the Fall of 2016 showed that thirteen students responded to the MWIM 42 course and only one to the MIW 62 course. In the Spring 2017, there was only one student that responded at all. The program is happy with the overall results of the e-Cafe and confident that they reflect the students' learning. The comments at the bottom of the survey for the Fall 2016 and the Spring 2017 were positive. Students wrote that they enjoyed the courses and the instructor's knowledge. The number of responses in the Spring was significantly less than the Fall. In the Fall, the APT sat in the classroom while students took turns confidentially doing the survey on the student computers. It was hoped that the following Spring semester, the students would be more familiar with the survey, and with time still set aside, it will not be necessary for the APT to sit in classroom while the students rotated on the computers. This proved to not get the number of results anticipated, and in the future, time will be set aside again in the classroom with the presence of the APT. It will also be explained more clearly and reiterated that both surveys should be answered, one for each course.

Next Steps – ASSESSMENT ACTION PLAN for AY17-18

Describe the program’s intended next steps to improve student learning, based on the program’s overall AY16-17 assessment results.

Include any specific strategies, tactics, activities or plans for improvement to program or course curriculum or instructional strategies, or changes in program or course assessment practices.

The program has completed its entire 5-year cycle of assessments, including Closing The Loop re-assessments, for all courses, so the program does not plan to conduct any new Initial assessments in AY17-18. However, regular course assessments will continue to be conducted and the following steps will be taken to continuously improved assessment and instruction as needed:

1. The APT will work with the new instructor to revise syllabi.
2. The program will continue to work with the Assessment Coordinator to determine if any of the CLOs need to be edited, which was the plan with the previous instructor.
3. The program will work with the Assessment Coordinator in streamlining and organizing assessment rubrics so that they are consistent and accurately reflect student achievement of the CLOs. The rubrics will also be edited so they are concise and subjective, eliminating broad terms such as “good” and record actual student scores in the results sections.

PART 4: ADDITIONAL DATA

Cost Per SSH (to be provided by Admin)

Please provide the following values used to determine the total fund amount and the cost per SSH for your program:

General Funds = \$ _____
Federal Funds = \$ _____
Other Funds = \$ _____
Tuition and Fees = \$ _____

External Data*

If your program utilizes external licensures, enter:

Number sitting for an exam _____

Number passed _____

***This section applies to NURS only.**

SPRING 2017 Graduates

Of our nine student graduates, three found work in their field, one graduate is self-employed and does machining work, one graduate that works for a local sheet metal company and one graduate does the maintenance and repairs for his family business. Two graduates are currently working in small family businesses using the skills for maintenance and repairs they learned in the program, and two are currently going through the hiring processes at different companies, one for industrial maintenance at HELCO on big island and one for the Iron Workers Local Union 377 in San Francisco California. One student is continuing his education and the ninth student has not found work. One of the graduates that is working in his family business is currently applying for an industrial maintenance mechanic/welder/machinist for Mauna Loa Macadamia Nut.

1. "K" self-employed machinist
2. "F" Family business and applying for Mauna Loa Macadamia Nut
3. "B" Family business, maintenance and repair work
4. "L" applying for HELCO
5. "C" sheet metal company
6. "E" pipe fitter union in New Mexico
7. "A" hiring process of Iron Workers Union
8. "G" finishing school
9. "J" in a restaurant

| Effectiveness Indicators | | Program Year | | | Effectiveness Health Call |
|--------------------------|--|--------------|-------|-------|---------------------------|
| | | 14-15 | 15-16 | 16-17 | |
| 17 | Successful Completion (Equivalent C or Higher) | 96% | 91% | 97% | Healthy |
| 18 | Withdrawals (Grade = W) | 3 | 0 | 0 | |
| 19 | *Persistence Fall to Spring | 76.4% | 85.7% | 74.1% | |
| 19a | Persistence Fall to Fall | 50% | 47.6% | 51.8% | |
| 20 | *Unduplicated Degrees/Certificates Awarded | 11 | 21 | 23 | |
| 20a | Degrees Awarded | 1 | 8 | 5 | |
| 20b | Certificates of Achievement Awarded | 1 | 3 | 11 | |
| 20c | Advanced Professional Certificates Awarded | 0 | 0 | 0 | |
| 20d | Other Certificates Awarded | 9 | 14 | 14 | |
| 21 | External Licensing Exams Passed | Not Reported | N/A | N/A | |
| 22 | Transfers to UH 4-yr | 0 | 0 | 0 | |
| 22a | Transfers with credential from program | 0 | 0 | 0 | |
| 22b | Transfers without credential from program | 0 | 0 | 0 | |

| Distance Education: Completely On-line Classes | | Program Year | | | |
|---|--|--------------|-------|-------|--|
| | | 14-15 | 15-16 | 16-17 | |
| 23 | Number of Distance Education Classes Taught | 0 | 0 | 0 | |
| 24 | Enrollments Distance Education Classes | N/A | N/A | N/A | |
| 25 | Fill Rate | N/A | N/A | N/A | |
| 26 | Successful Completion (Equivalent C or Higher) | N/A | N/A | N/A | |
| 27 | Withdrawals (Grade = W) | N/A | N/A | N/A | |
| 28 | Persistence (Fall to Spring Not Limited to Distance Education) | N/A | N/A | N/A | |

| Perkins IV Core Indicators 2015-2016 | | Goal | Actual | Met | |
|---|-----------------------------------|-------|--------|---------|--|
| 29 | 1P1 Technical Skills Attainment | 92.00 | 100.00 | Met | |
| 30 | 2P1 Completion | 51.00 | 62.50 | Met | |
| 31 | 3P1 Student Retention or Transfer | 81.00 | 53.57 | Not Met | |
| 32 | 4P1 Student Placement | 63.87 | 58.33 | Not Met | |
| 33 | 5P1 Nontraditional Participation | 22.00 | 10.34 | Not Met | |
| 34 | 5P2 Nontraditional Completion | 22.00 | 15.00 | Not Met | |

| Performance Measures | | Program Year | | | |
|----------------------|--|--------------|----------|----------|--|
| | | 14-15 | 15-16 | 16-17 | |
| 35 | Number of Degrees and Certificates | 2 | 11 | 16 | |
| 36 | Number of Degrees and Certificates Native Hawaiian | 1 | 3 | 6 | |
| 37 | Number of Degrees and Certificates STEM | Not STEM | Not STEM | Not STEM | |
| 38 | Number of Pell Recipients ¹ | 19 | 14 | 11 | |
| 39 | Number of Transfers to UH 4-yr | 0 | 0 | 0 | |

*Data element used in health call calculation

Last Updated: October 29, 2017

¹PY 16-17; Pell recipients graduates not majors