

HAWAI‘I COMMUNITY COLLEGE PROGRAM ANNUAL REVIEW REPORT

Carpentry Program

Date Nov. 5, 2015

Review Period
July 1, 2014 to June 30, 2015

Initiator: Joel Tanabe

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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 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/program-unit-review/>

Program Description

Please provide a brief description of your Program. Include your Program Mission statement.

The Carpentry program allows students to participate in the "foundation-to-finish" experiences necessary to build a basic residential house while completing the required carpentry coursework. Students will graduate from the Carpentry program with the knowledge and experience necessary to begin employment at the entry level in the construction industry, or enter a four-year apprenticeship program. The local Carpenters Union unit awards HawCC carpentry program graduates 400 classroom hours out of 620 that is required for the Apprenticeship program and 1000 work hours out a required 8000 to be classified as a Journeyman Carpenter.

The Carpentry Program's five courses are comprehensive in the residential building sector and touches upon the commercial sector in the second semester (Concrete Form Construction). The curriculum is based on preparing students to exit as entry level carpenters. A Model Home is constructed annually and is the program's capstone project (all courses lead up to the construction of the Model Home). The task of constructing an off-campus dwelling that conforms to all building codes, and meet industry quality standards is rigorous yet well received by students.

The college is currently on the third year of a 5 year contract with the Department of Hawaiian Home Lands which expires on June 30, 2017. Upon completion, the residence is turned over to DHHL and they in turn sell the residence to a qualifying native Hawaiian family for the amount it cost the college to construct it, plus \$100.00 for the lease of the land.

Using a capstone project, students will graduate from the Carpentry Program with the knowledge, work ethics, and experience necessary to begin employment at the entry level in the construction industry, or enter a four-year Carpenters' Union apprenticeship program. The two year experience will not only include teaching the principles and skills of the trade, but also life skills including critical thinking, leadership, accountability, personal interaction, and cultural/community considerations.

Our mission's true worth cannot be replicated by classroom lectures or shop mock-ups. The Model Home provides a realistic, tangible working environment that a carpenter would experience on the job. In accomplishing our mission, we must also consider the current industry trends and try to incorporate pertinent instruction and procedures that expose students to the latest methods/materials. The 2014's Model Home kept on track in offering instruction with an emphasis on sustainability. The Model Home included Energy star rated roofing, thermal radiant barrier, low/no VOC paint, solar water heating, photo-voltaic energy system, Energy Star rated appliances/light bulbs, and carpet made from recycled products. The green initiative gives students an important perspective and direction that the construction field is headed toward.

The program's five courses include:

1. Carp20A, Basic Carpentry I: Safety, math and hand tools.
2. Carp21A, Basic Carpentry II: Principles/procedures, power tool/machinery certification, various carpentry/woodworking projects.

- 3. Carp 22, Concrete Form Construction: Residential and commercial applications.
- 4. Carp 41, Rough Framing and Exterior Finish: Foundation, concrete slab, framing, trusses, roofing, sheathing. (Model Home)
- 5. Carp 42, Finishing: Exterior trim, drywall, windows, doors, cabinets/countertops and shelving, interior trim. (Model Home)

Part I. Review of Program Data

Go to the Annual Reports for Program Data (ARPD) website linked below and review the data for your program.

Demand Health	Efficiency Health	Effectiveness Health
<p>Per 2014-2015 Review</p> <p>Healthy</p> <p>The Demand Health Call is based on Declared Majors divided by the county of Hawaii's projected New and Replacement Positions. Though the Number of Majors has decreased by 5.5% since last year, the New and Replacement Positions (County prorated) have also decreased by 1%. Using ARPD calculations, this ratio has deemed the program Healthy. Though majors have consistently decreased over the last several years, the number of native Hawaiian students has steadily increased.</p>	<p>Per 2014-2015 Review</p> <p>Healthy</p> <p>The program was not at capacity at the start of the new cohort (reasons unknown) and a couple of students dropped out during the AY, as witnessed by the decrease to 12.7 student average. Those that did not continue did so due to personal or financial issues or change of educational direction.</p> <p>Though the number of majors dropped, incoming classes are still near capacity, therefore a Healthy rating.</p>	<p>Per 2014-2015 Review</p> <p>Healthy</p> <p>Carpentry majors that have enrolled and still in the major from Fall to Spring has increased from 77.5% to 83.7%. Persistence from Fall to Fall has also risen from 37.5% to 52.9%.</p> <p>Students are encouraged to continue the course and earn their certificates or degrees with the opportunity to broaden their knowledge and sharpen their skills by participating in the construction of the annual Model Home. Those that are faced with financial problems are encouraged to apply for scholarships, financial aid and grants to help subsidize the cost to come to school. Those with personal problems are directed to counselors.</p> <p>The unduplicated degrees/certificates awarded dropped from the last two</p>

		<p>years. Reason being that the outgoing class was smaller than in previous years. Though the class was smaller, the ratio of students receiving certificates/degrees was higher. This rating is Healthy.</p>
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<http://www.hawaii.edu/offices/cc/arpd/>

Part II. Analysis of the Program

Based on the ARPD data in Part 1, analyze the Program in terms of Demand, Efficiency, and Effectiveness. Include significant Program actions (e.g., new certificates, stop out, gain/loss of positions) and results of prior year's action plan. Include analysis of any Perkin's Core Indicator(s) for which the Program's goal was not met. Also discuss any trends or other factors (internal/external) affecting the Program and analyze other Program changes or information not included elsewhere.

The Carpentry Program is very similar to most trade programs where fluctuations of enrollment, persistence, and graduation numbers average out similarly year after year. Though the health of the economy directly affects all data points, typically the program's graduate rates are consistent.

Persistence from Fall to Spring is usually the spring board into persistence to the next Fall. Students usually need the first semester to discover if carpentry is the direction decided upon. If the student persists to the Spring, they usually persist to completion.

The HawCC Carpentry Program's Model Home project is the key to being able to instruct at a high level, while retaining students. The culmination of classroom lectures, lab practicals and full scale mock ups results in a unified class effort in the construction of the Model Home. The project helps develop motivation, commitment, participation and critical thinking which focus on meeting specific objectives and deadlines.

Part III. Action Plan

Describe in detail the Program's overall action plan for the current/next academic year. Discuss how these actions support the College's Mission and can lead to improvement(s) in student learning. Include specific action plans to address any ARPD Health Call scores of "Cautionary" or "Unhealthy," and any Perkin's Core Indicator(s) for which the Program's Goal was not met.

Carpentry Program Action Plan 2016-2017

- Address concerns as revealed in course assessments. Course assessments will dictate whether and what type of actions are required by both instructors. Weaknesses will be immediately addressed if no or little resources are required. If greater funding is required, the program will look into using the program's revolving account and/or grant funding (Perkins).
 - Though the program is not exempt from fluctuating enrollment, persistence and graduation numbers, it has consistently produced entry level carpenters that enter the work force every year. This is validation by our industry, both unionized and non-union that our students have met the objectives of the program. Many graduates have become building contractors, who in turn hire our students.
 - The college's mission is met due to the diversity of students that work together to build a Model Home for a native Hawaiian family in a native Hawaiian community. Many technical aspects of the build touch upon the intrinsic values of the Hawaiian culture.
 - The program has achieved a Healthy rating for Demand, Efficiency and Effectiveness categories.
 - The program has met three out of six Perkins IV Core indicators. Student Placement, Nontraditional Participation and Nontraditional Completion have not been met. Student Placement goal was not met by 0.17, which indicates that for all intentional purposes, the program met its goal. The program successfully places the majority of graduates into industry as indicated by 2015's 80% employment numbers. However it is questionable if self employment is included in the 4P1's calculations. Historically, some carpenters opt to be self employed as maintenance workers which may not be counted in the calculations. Nontraditional Participation and Placement has always been an issue due to the small numbers of women working in the industry. Until the industry recognizes women as competent workers, these two areas will be difficult to meet.
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Part IV. Resource Implications

Please provide a brief statement about any implications of current operating resources for the Program. Budget asks are included in the 3-year Comprehensive Review, except for the following that may be included here: health and safety needs, emergency needs, and/or necessary needs to become compliant with Federal/State laws/regulations. Describe the needed item(s) in detail, including cost(s) and timeline(s). Explain how the item(s) aligns with one or more of the Strategic Initiatives of the Hawai'i Community College 2015-2021 Strategic Plan. Identify and discuss how the item(s) aligns with the Initiative's Goal, Action Strategy, and Tactic. [HAWCC Strategic Plan](#)

The HawCC Carpentry Program is very fortunate to have the annual Model Home capstone project. Due to the completeness and hands-on requirements of the project, all lessons eventually become a tangible application during the last year of the program when the project is constructed from the ground, up. Though the students provide the knowledge and skills to build the home, is almost impossible, and definitely unrealistic to build a house without the help of machines and proper equipment, in the required time frame. The following are replacements for second hand machines over 30 years old:

1. Truck: flatbed with dump. \$60,000
2. Backhoe: four-in-one. \$80,000
3. Forklift: two ton capacity. \$35,000

NOTE: These three machines have had to be repaired on a regular basis, yet are still considered unreliable and threaten the timeline of the Model Home completion. Substituting the functions of the machines with student labor would pose a **high risk to health and safety**.

The implications: It is a matter of time when the highly recognized (college, UHCC system, industry and public) Model Home may not be able to complete the project on time due to mechanical failure. Instructors should not have to be burdened by "band-aiding" and **compromising on safety**, when they are already tasked with such an ambitious project.

Part V. Comprehensive Review Information

Please provide a short summary regarding the last comprehensive review for this program. Discuss any significant changes to the Program since the last comprehensive review that are not discussed elsewhere.

The last Carpentry Comprehensive review was 2014. There were no significant changes to the program since then.

Required for ARPD Web Submission: Provide the URL to the specific location of this Unit's last Comprehensive Review on the HawCC Program/Unit Review website (see link on page 1):
http://hawaii.hawaii.edu/program-unit-review/docs/2014_carp_comprehensive_program_review.pdf

Part VI. Program Student Learning Outcomes

For all parts of this section, please provide information based on the PLOs (P-SLOs) that were assessed through PLO-aligned course assessments in AY 2014-15.

A) Evidence of Industry Validation (CTE Programs)

Minutes

Carpentry Advisory Council Meeting

February 19, 2015

The meeting was called to order at 4:20 p.m. by Gene Harada.

Present: Daryn Arai Sharon Sakamoto
 Gene Harada Robert Shirai
 Conrad Hokama Darryl Vierra

Introduction: Everyone introduced themselves.

Purpose: Gene explained the purpose and responsibility of the Advisory Council. Members provide input on changing trends, industry updates, and advise if we are on track as far as what we are teaching our students. The appointment is for two years.

Assessment

- The Comprehensive Report will be due soon. Gene explained that it is hard to meet the nontraditional (i.e. female) participation and nontraditional completion indicators. Efforts are made to recruit non-traditional students by participating in Career Expos. There are currently no females in the Carpentry program.
- All five courses will be reviewed within a 5-year period.
- There are many ways to assess and trying to determine the best way. Using rubrics is a fair way to assess the students (attendance, work ethics, productivity, etc.).
- The Construction Academy program is funded by HawCC and offered in the high schools for dual (high school / college) credits. In the last several years, about half of the Carpentry students took a CA class in high school.
- The Council reviewed and determined that the PLO's and CLO's meets the industry needs.

Industry Report

- Gene advised that there are mistakes on the drawings and sometimes the students catch the errors. The students are instructed that the correct procedure to follow is to submit a Request for Information (RFI) to the Draftsperson or Architect for clarification. Bob explained that they sometimes have to go through a Honolulu or mainland office because the drawings are incorrect. Students cannot "assume" that drawings are correct.
- Sharon advised that, in general, our students know what they need to know. Some of the younger workers don't know how to work with single walls. Most of the carpenters (apprentices) specialize in one area. Conrad added that it is good to know all aspects so that worker can do diverse jobs when construction slows down.
- Sharon explained that iPhones and tablets are good to have on the job site for instant information and communication. Jobs are picking up slowly.
- Gene brings in union and non-union speakers so students can get an idea on which type of construction field they would like to enter.

Please review the handouts and let Gene/Darryl know if you have any input. They are open to feedback.

The meeting adjourned at 6:05 p.m.

Submitted by,

April Nakagawa

[General Pre-Professional Programs can skip industry validation.]

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, you may submit evidence of the program’s advisory committee’s/board’s recommendations for, approval of, and/or participation in assessment(s).

B) Expected Level of Achievement

For each Course assessed in AY 2014-15: Discuss the rubric(s) standards and the benchmark goal(s) for student success (e.g., “85% of students will achieve Excellent or Good ratings in the assessed activity” or “90% of students will score Meets or Exceeds Standards on the assessment rubric”).

CARP 20A’s goal was set at 75% Developing Proficiency and/or Proficient. NOTE: CARP 20A consists of the first four weeks of instruction for the incoming cohort. Though 75% rate seems low, consideration is given to students that are facing the “new college experience” and technical content.

CARP 41’s goal was set at 80% Developing Proficiency and/or Proficient. Note: Students should be well on their way in the disciplinary knowledge and skills of this third semester (of four) of instruction.

C) Courses Assessed

List all Program Courses assessed during AY 2014-15. Also list Program Courses for which a follow-up “Closing the Loop” assessment was implemented in AY 2014-15.

Assessed Course Alpha, No., & Title	Semester assessed	PLO-aligned CLOs that were assessed
CARP 20A Basic Carpentry I	Fall 2014	1,2,3,4,5,6
CARP 41 Rough Framing	Fall 2014	1,2,5

“Closing the Loop” Assessments Alpha, No., & Title	Semester assessed	PLO-aligned CLOs that were assessed
CARP 20A Basic Carpentry I	Fall 2015	1,2,3,4,5,6
CARP 41 Rough Framing	Fall 2014	1,2,5

D) Assessment Strategy/Instrument

For each Course assessed in AY 2014-15, provide a brief description of the assessment strategy, including the type of student work or activity assessed how and when the assessment was conducted, how and why assessed artefacts were selected, and how the artefacts were analyzed.

CARP 20A assessment (Fall 2014) utilized a written assessment tool with a scoring rubric to establish proficiency ratings. Questions assessed all five of the course’s Course Learning Outcomes, as well as the aligned Program and Institutional Outcomes. Thirteen students anonymously took an eleven question, multiple choice test. 75% Proficient was the goal for the first semester students.

CARP 41 assessment (Fall 2014) utilized construction artifacts with a corresponding scoring rubric. Three CLOs were being assessed. The teaching professor used a rubric to score each student (10) by asking questions and evaluating specific artifacts.

E) Results of Program Assessment

For each Course assessed in AY 2014-15, provide a summative description of the assessment results. Discuss how these results collectively demonstrate achievement of the Program’s Learning Outcomes and support the College’s Mission.

CARP 20A assessment (Fall 2014) utilized a written assessment tool with a scoring rubric to establish proficiency ratings. Questions assessed all five of the course’s Course Learning Outcomes, as well as the aligned Program and Institutional Outcomes. Thirteen students anonymously took an eleven question, multiple choice test. 75% Proficient was the goal for the first semester students.

Scoring Rubric:

<60% Not Proficient

60%-79% Developing Proficiency

80%> Proficient

Results:

Question	CLO	PLO	ILO	Score (13 students)	Rating
1.	5	2,3,4,5,6	1,2	100%	Proficient
2.	4	2,3	2	92%	Proficient
3.	1	1	2	62%	Developing Proficiency
4.	1	1	2	15%	Not Proficient
5.	1,2	1,2	2	69%	Developing Proficiency
6.	2	2	2	85%	Proficient
7.	2	2	2	54%	Not Proficient
8.	3	3	2	77%	Developing Proficiency
9.	5	2,3,4,5,6	1,2	100%	Proficient
10.	1	1	2	69%	Developing Proficiency
11.	2	2	2	85%	Proficient

Out of the eleven questions answered: 5 were at the Proficient level

4 were at the Developing Proficiency level

2 were at the Not Proficient level

Evaluation:

One of the Not Proficient questions involved a math calculation, the other a wood property question.

Three of the Developing Proficiency questions involved math, one was on hand tools.

Conclusion:

It is evident that even though math topics were introduced during the first week of class, either they were not clearly understood, or retained (this assessment occurred one week after completion). The other Not Proficient area involved the properties of wood. These areas are now recognized as requiring more instructional time, pertinent information and practice, possibly a different teaching methodology and/or a combination of the above.

CARPENTRY PROGRAM ASSESSMENT

Date: March 18, 2015

Course: Carp 041 Rough Framing

Instructor: Gene Harada (Professor)

ARTIFACT #	ASSESSOR	
1	Proficient	
2	Proficient	
3	Proficient	
4	Proficient	
5	Proficient	
6	Developing Proficiency	
7	Proficient	
8	Proficient	
9	Developing Proficiency	
10	Proficient	
		TOTAL (average)
Percentage of Rank	80% Proficient	80% Proficient
	20% Developing Proficiency	20% Developing Proficiency

Notes:

Assessor, assessed two Artifacts as Developing Proficiency because the artifact had a brain freeze when he was asked to name the materials utilized for the wall framing, but after a few seconds of giving some hints, the artifact came to its senses and remembered. Eight Artifacts that were Proficient was able to name each member that the wall framing consists of.

SUMMARY FOR CLO #2

This CLO was met with a 80% rank, which is indicative of Artifacts in their third semester. They have been constantly challenged to remember the various materials that are utilized in the construction of the wall framing by exposing the Artifacts various type of materials so they may without hesitation select the correct material for the wall framing.

CARPENTRY PROGRAM ASSESSMENT

Date: March 18, 2015

Course: Carp 041 Rough Framing

Instructor: Gene Harada (Professor)

ARTIFACT #	ASSESSOR 1	
1	Proficient	
2	Proficient	
3	Proficient	
4	Proficient	
5	Proficient	
6	Proficient	
7	Proficient	
8	Proficient	
9	Proficient	
10	Proficient	
		TOTAL (average)
Percentage of Rank	100% Proficient	100% Proficient
	0% Developing Proficiency	0% Developing Proficiency

Notes:

- Assessor, assessed all ten Artifacts as Proficient based on the ease at which the Artifact could be made without any hesitation name the materials and the type of fastener to be utilized with each.

SUMMARY FOR CLO #5

This CLO was met with a 100% rank, which is indicative of the total concentration that the Artifacts had on the day of the assessment!. The program will continue to emphasize to the Artifacts that it takes total concentration when working on a project. It is critical to what the final product will appear as. Practicums will be continued to be provided to stress to the Artifacts that quality workmanship should be the goal they need to achieve.

F) Other Comments

Include any additional information that will help clarify the assessment results. Include comparisons to any applicable College or Program standards, or to any national standards from industry, professional organizations, or accrediting associations. Include, if relevant, a summary of student survey results, CCSSE, e-CAFE, graduate-leaver surveys, special studies, or other assessment instruments used.

G) Next Steps

Based on the Program's overall AY 2014-15 assessment results, describe the Program's intended next steps to enhance instruction in order to improve student learning. Instructional changes may include, for example, revision to curriculum, teaching methods, learning outcome statements, student support, and other options. Please note here if proposed changes will involve Program and/or Course modifications requiring approval.

The results from the last assessment report shows that CARP20A required some attention in several areas including computative methods and properties of wood. These two areas have since been revisited and a different teaching methodology utilized. The other CLO's were met and hopefully closing the loop will happen with the next assessment.

The results from the last assessment report shows that CARP 41's instruction is well received and comprehension and critical thinking evident. The rubric scores are definitive with an average of 90% *Proficient*. With the high average and assessment reports from the last three years, CARP 41 will close the loop.

Assessment for the 2015-2016 academic year will include:

CARP 21A Basic Carpentry II

Lesson assessed: Toolbox Construction and Tool/Machine Safety Check-off

Artifact: Toolbox and written assessment tool.

CLOs to be assessed: 1,3,4

CARP 22 Concrete Form Construction

Lesson Assessed: Commercial Single Waler System

Artifact: Single Waler Form

CLOs to be assessed: 1,2,3,4,5

Part VII. Cost Per SSH

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

General Funds = \$ The following data has not been included in the ARPD report.
Federal Funds = \$ _____
Other Funds = \$ _____
Tuition and Fees = \$ _____

Part VIII. External Data

If your program utilizes external licensures, enter:

Number sitting for an exam _____
Number passed _____

[If your program does not utilize external licensures, skip Part IX.]