

UNIVERSITY OF HAWAI'I COMMUNITY COLLEGES  
ANNUAL INSTRUCTIONAL PROGRAM REVIEW  
PROCEDURES, COMPONENTS, AND MEASURES

**Carpentry Program**

Introduction:

***Program Mission***

The mission of the Carpentry Program is to provide curricula and activities to prepare students for employment in the field of carpentry and to maximize the potential of the individual to fulfill his/her personal and career goals through development of his/her skills and abilities to meet the needs and requirements of a productive society.

***Program History***

The carpentry program's history dates back to 1941 and Hawaii Community College's predecessor, The Hawai'i Vocational School. Hands-on practical applications with a focus on proper tool use, safety practices, industry standards, and strong work ethic have consistently been part of the curriculum. The program's advisory council is active and assisted with the development of the program's student learning outcomes. Currently, students may earn a 36-credit Certificate of Achievement and a 70-credit Associates in Applied Science degree.

In 1965, the carpentry program modified its curriculum to include building a residential home on a site designated by the Department of Hawaiian Homes Lands. The 41st Model Home is now under construction. This project provides students with invaluable on-the-job skills and work experiences with an emphasis on safe construction practices. Its continued success is attributed to the cooperative and collaborative efforts of Hawai'i State and County agencies, private industry and the college.

***Program Student Learning Outcomes***

1. Form, pour, and finish a residential driveway and sidewalk according to drawing documents.
2. Practice commercial form building according to industry practices.
3. Adhere to the ethical and professional practices and industry standards to perform tasks.
4. Be familiar with the Building Code Requirements for Residential Construction.
5. Demonstrate the ability to utilize the Simpson Strong-tie catalog.
6. Recognize the various floor framing members and participate in the calculation and assemblage of a hands-on project.
7. Be knowledgeable of the various wall framing members and participate in the layout, calculation and assemblage of a hands-on project.
8. Recognize the different types of roof designs
9. Calculate various types of rafters using the Full Length Rafter Book and participate in a hands-on project.
10. Calculate, estimate, fabricate and install roof sheathing in a hands-on project
11. Participate in the on-site construction of a residential home.

***Part I. Quantitative Indicators for Program Review***

	AY 04-05	AY 05-06	AY 06-07
CARP			
1. Annual new and replacement positions in the State	7478	7478	7478
2. Annual new and replacement positions in the County	277	277	277
3. Number of majors	48	40	47
4. Student Semester Hours for program majors in all program classes	336	348	336
5. Student Semester Hours for Non-program majors in all program classes	12	0	12
6. Student Semester Hours all program classes	348	348	348
7. FTE Program enrollment	23.2	23.2	23.2
8. Number of classes taught	2	2	2
9. Determination of program's health based on demand (Healthy, Cautionary, or Unhealthy)	Healthy	Healthy	Healthy
10. Average Class Size	14.5	14.5	14.5
11. Class fill rate	90.63%	90.63%	90.63%
12. FTE of BOR appointed program faculty	2	2	2
13. Student/Faculty ratio	24:1	20:1	23.5:1
14. Number of Majors per FTE faculty	30	25	29.38
15. Program Budget Allocation (Personnel, supplies and services, equipment)	\$81,408.00	\$81,336.00	\$81,536.00
16. Cost Per Student Semester Hour	\$233.93	\$233.72	\$234.30
17. Number of classes that enroll less than ten students	0	0	0
18. Determination of program's health based on Efficiency (Healthy, Cautionary, or Unhealthy)	Healthy	Healthy	Healthy
19. Persistence of majors fall to spring	77.08%	77.5%	82.98%
20. Number of degrees earned (annual)	11	11	9
21. Number of certificates earned (annual)	3	2	8
22. Number of students transferred (enrolled) to a four-year institution in UH	1	0	0
23. Perkins core indicator: Academic Attainment(1P1)	81.25%	87.50%	60.00%
24. Perkins core indicator: Technical Skill Attainment (1P2)	94.12%	100.00%	86.67%
25. Perkins core indicator: Completion Rate (2P1)	70.59%	75.00%	66.67%
26. Perkins core indicator: Placement in Employment Education, and Military (3P1)	50.00%	91.67%	58.33%
27. Perkins core indicator: Retention in Employment (3P2)	100.00%	100.00%	85.71%
28. Perkins core indicator: Non Traditional Participation (4P1)	4.65%	6.82%	11.43%
29. Perkins core indicator: Non Traditional Completion (4P2)	7.14%	5.88%	9.09%
30. Determination of program's health based on effectiveness (Healthy, Cautionary, Or Unhealthy)	Healthy	Healthy	Cautionary
31. Determination of program's overall health (Healthy, Cautionary, or Unhealthy)	Healthy	Healthy	Healthy
32. Number of FTE Faculty	1.6	1.6	1.6

***Part II. Analysis of the Program***

The program is healthy. Demand based on new and replacement positions in the county is significantly higher than the number of majors or graduates. Classes consistently fill at more than 90% capacity and the cost per student semester hour is reasonable compared to other applied

technical education programs. A three year trend analysis indicates strength for the majority of data elements. The only weak areas are some of the Perkins core indicators. Reasons for declines in areas of achievement and employment are varied. In some cases, students leave school before graduating because they need to work. Others find jobs not reported on the state's employment record; this is especially true of the construction trades since employers often hire workers as independent contractors, which equates to being self-employed. Weaknesses in this area are offset by a positive increase in the persistence of majors' fall to spring 2006-07, an indication that students are succeeding and staying with the program. Faculty will monitor weak areas closely and will continue efforts to promote the program as a viable option for non-traditional participation.

***Significant Program Actions (new certificates, stop-out; gain/loss of positions, results of prior year's action plan)***

Effective fall 2007, the Carpentry Program modified its first semester curriculum to split its one 12-credit class, Carpentry 20, into two classes. The new classes are Carpentry 20A (3 credits) and Carpentry 21A (9 credits). This was done to articulate classes being offered by the construction academy at local high schools on the Big Island of Hawai'i. Students enrolled in the construction academy classes who earn a "B" or better have an opportunity to earn credits that can be applied to the Carpentry program at Hawaii Community College.

***Part III. Action plan***

The Carpentry Program will closely monitor the progress of the Construction Academy's students that enter the Hawaii Community College Carpentry Program to insure the 3 credits are justified by what is taught at the high schools.

Currently the Carpenter's Union Local 745 credits students graduating from the Carpentry Program with a total of 1000 work hours and 240 classroom hours. This is applied to the students' records upon been accepted into the Carpenter's Union Local 745. Further attempts to negotiate with the union to get additional credits for the students have being unsuccessful, but will be pursued in the future.

The program will continue to work with Department of Hawaiian Home Lands under a contract that is in effect until 2011. This involves the carpentry students constructing an affordable residential home on Hawaiian Home Lands for a qualified Hawaiian applicant.

The Carpentry Program will continue to manage its resources by promoting recycling of valuable construction materials throughout the academic year. By maximizing the use of the following materials through conservation and recycling, the program saves money and promotes sustainability standards:

- concrete masonry unit (CMU) hollow tile
- concrete form materials (2 x 6,8,10,12)
- flooring materials (2x 6 & 8, 4 x 6, 8))
- sheathing materials (3/4" x 4 x 8 T & G Flooring)
- framing materials (2 x 4, 6, 8)
- roofing materials (Galvanized Roof Iron)
- nails

***Part IV. Resource Implications (physical, human, financial)***

The Carpentry Program carefully manages its budget and resources. In order for it to continue fulfilling its mission, the following are required new resources are needed:

1. Replacement of its aging and irreparable vehicles. This is necessary for the safe transporting of students to the job site and on visitations. The replacement of the 1987 Crew Cab Truck, even though it is newer than the 1981 Flatbed Truck, is crucial. It was purchased via the State Surplus, which had acquired it from the U. S. Navy. The general condition of the vehicle, at the time of purchase marginally met the Carpentry Program's needs. Since the time of purchase, the vehicle has gone through numerous repairs and mechanical upgrades to keep it in working condition. However, it has now reached a point where it's a safety issue if we prolong its use. Three windows are inoperable, the power steering is broken and the windshield has a crack in it due to rusting of the frame around the window. Estimated replacement cost is \$45,000.
2. Stationary machines need to be upgraded to industry standards. This will result in estimated expenditures of \$10,000. Machines being replaced include Resaw Band saw, a 6" Jointer and a Unisaw Table saw.
3. Facility upgrades are needed to provide a safe, well-maintained facility conducive to learning. The following table provides details on required repairs, maintenance, and upgrading of facilities.

<b>List Bdnng/Rm/Lab/Shop</b>	<b>Describe Renovation/Repair Needed</b>	<b>Estimated Cost</b>
Building 3386B	- bathroom facilities for both males and females, and faculty - classroom is non-existing - fiber optics for computer link	\$1,000,000
Building 390 - exterior	- needs fresh coat of paint - exterior door to shop needs to be replaced - dust collection system need to be overhauled, upgraded	\$300,000
Building 390 - classroom	- needs fresh coat of paint - air conditioning system not adequate and noisy - exterior door needs to be replaced - needs to be treated for termites, both ground and dry wood termites	\$30,000
Building 390 - shop	- needs fresh coat of paint - electrical needs to be upgraded - doors need to be replaced - ventilation system needs to be improved - treated for termites - replace current compressor	\$505,000
Building 390 - bathroom	- needs to be renovated and upgraded to accommodate both males and females - treated for termites	\$750,000
Building 390 - tool room	- door needs to be replaced - needs fresh coat of paint - treated for termites	\$25,000
Building 390 – office	- door needs to be replaced – security - needs painting - treated for termites	\$25,000