

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

**Agriculture Program**

Introduction:

***Program Mission***

The mission of the Agriculture Program is to provide curricula to prepare students for employment in the field of agriculture, landscaping, and entrepreneurship and to maximize the potential of the individuals to fulfill their personal and career goals. This will be accomplished through course work and experiences that develop their skills and abilities to meet the needs and requirements of a productive society.

***Program History***

The Agriculture Program began offering courses in the fall of 1971 and the first class of six students graduated in 1973. At that time, the classroom facilities consisted of a former nurses' cottage and a quarter acre of soil for a garden plot.

In 1973, the curriculum was revised to provide for more practical "hands-on" experience for all of the students, and the Certificate of Achievement was offered. Twelve agriculture courses were offered with only three with dual numbering to enable students to qualify for 100+ coursework.

In 2006, the curriculum was revised to make the content and level of instruction more current. All of the basic courses were revised to 100+ numbers to reflect their new status and rigor. Two Certificates of Completion were proposed to position the program to the growing demand for landscape workers and farm workers with horticultural training and for students who desired only an introduction to agriculture. The Animal Science course offerings were discontinued.

***Program Student Learning Outcomes***

**Associate of Applied Sciences**

- Use safe, ecologically sound and legal horticultural practices
- Design gardens that demonstrate the aesthetic principles of unity, repetition, balance, color, and texture congruent with the customers' desires
- Cultivate horticultural crops in a sustainable manner
- Operate and maintain tools and equipment
- Plan and manage projects based on sound biological and technological principles
- Set-up and manage a business enterprise
- Interact with customers and co-workers in ways that effectively supports the work to be accomplished

**Certificate of Achievement Agriculture**

- Use safe, ecologically sound and legal horticultural practices
- Cultivate horticultural crops in a sustainable manner
- Operate and maintain tools and equipment
- Plan and manage projects based on sound biological and technological principles
- Interact with customers and co-workers in ways that effectively supports the work to be accomplished

**Certificate of Completion Farm Worker**

- Use safe, ecologically sound and legal horticultural practices
- Cultivate horticultural crops in a sustainable manner
- Operate and maintain tools and equipment
- Interact with customers and co-workers in ways that effectively supports the work to be accomplished

**Certificate of Achievement Landscape Worker**

- Use safe, ecologically sound and legal horticultural practices
- Operate and maintain landscape tools and equipment
- Interact with customers and co-workers in ways that effectively supports the work to be accomplished

Within the Agriculture Program, there are fourteen courses which are taught in a two-year cycle. The Program’s SLO’s are incorporated into each of these classes.

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

	AY 04-05	AY 05-06	AY 06-07
AG			
1. Annual new and replacement positions in the State	1064	1064	1064
2. Annual new and replacement positions in the County	109	109	109
3. Number of majors	18	10	11
4. Student Semester Hours for program majors in all program classes	48	27	21
5. Student Semester Hours for Non-program majors in all program classes	21	21	40
6. Student Semester Hours all program classes	69	48	61
7. FTE Program enrollment	4.6	3.2	4.07
8. Number of classes taught	3	3	3
9. Determination of program's health based on demand (Health, Cautionary, or Unhealthy)			
10. Average Class Size	6.67	4.33	5.67
11. Class fill rate	41.67%	30.95%	40.48%
12. FTE of BOR appointed program faculty	1	1	1
13. Student/Faculty ratio	18:1	10:1	11:1
14. Number of Majors per FTE faculty	26.87	12.5	16.42
15. Program Budget Allocation (Personnel, supplies and services, equipment)	\$35,283.10	\$40,912.00	\$35,341.10

16. Cost Per Student Semester Hour	\$511.35	\$852.33	\$579.36
17. Number of classes that enroll less than ten students	3	3	2
18. Determination of program's health based on Efficiency (Healthy, Cautionary, or Unhealthy)			
19. Persistence of majors fall to spring	61.11%	50%	63.64%
20. Number of degrees earned (annual)	1	1	0
21. Number of certificates earned (annual)	0	0	2
22. Number of students transferred (enrolled) to a four-year institution in UH	0	0	0
23. Perkins core indicator: Academic Attainment(1P1)	71.43%	100.00%	100.00%
24. Perkins core indicator: Technical Skill Attainment (1P2)	90.00%	66.67%	100.00%
25. Perkins core indicator: Completion Rate (2P1)	40.00%	16.67%	50.00%
26. Perkins core indicator: Placement in Employment Education, and Military (3P1)	50.00%	75.00%	100.00%
27. Perkins core indicator: Retention in Employment (3P2)	100.00%	100.00%	100.00%
28. Perkins core indicator: Non Traditional Participation (4P1)	4.76%	30.77%	37.50%
29. Perkins core indicator: Non Traditional Completion (4P2)	.00%	.00%	100.00%
30. Determination of program's health based on effectiveness (Healthy, Cautionary, Or Unhealthy)			
31. Determination of program's overall health (Healthy, Cautionary, or Unhealthy)			
32. Number of FTE Faculty	0.67	0.8	0.67

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

An analysis of the Occupational Demands for Agriculture indicates that there is a demand of 109 positions per year for new and replacement positions in the County of Hawaii and 1064 for the State of Hawaii from 2004 to 2007. This does not include individuals who are planning to start their own businesses or individuals who plan to work in the landscape industry. This is an encouraging figure indicating a demand for workers in the field of agriculture.

This demand does not reflect our current number of major which has decreased from 48 in 2004-05 to 11 in 2006-07 and the decrease of student semester hours for program majors in program classes.

The student semester hours for non-program majors in all programs have almost doubled in 2005-07 when compared with the two prior time periods. Also, student semester hours in all program classes appear to vacillate from year to year. This may be due the two-year cycle of course offerings.

The data which is disturbing is the FTE Program enrollment which ranges from 4.6 in 2004-05 to 4.07 in 2006-07. Also the Average class size and Class fill rate are disturbing low.

The demand for agricultural workers and the student enrollment are not synchronized. The demand for the Agriculture Program is Cautionary or Unhealthy.

As stated above, the average class size and class fill rate are very low. The Student/Faculty ratio and the number of Majors per FTE faculty are satisfactory.

The Program Budget Allocation from 2005-2007 range from \$35,283.10 to \$40,912. This reflects a student cost of \$511.35 for 2004-05; \$852.33 for 2005-06; and \$579.35 for 2006-07.

When reviewing the classes that enroll less than ten students, all but one class fell into that category.

The data which is encouraging is the awarding of two certificates. Two certificates of completion and a certificate of achievement are available for students who do not wish to pursue further education. The awarding of certificates in the Agriculture Program was uncommon in the past.

The data appears to indicate that the efficiency of the Agriculture is either Cautionary or Unhealthy.

Assumptions can be surmise from the data:

- There is a demand for agriculture workers
- Students who are listed as majors are not enrolling in classes
- Certificates may allow for more students to achieve their goals

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

Creation of two Certificates of Completion: Agriculture Worker and Landscape Worker  
Revision of basic courses to 100+ levels to allow for easier transition of students into baccalaureate programs.

***Part III. Action plan***

Create a recruiting plan to increase enrollment  
Explore the possibility of offering courses annually  
Articulate with other baccalaureate granting colleges

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

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

1. Replacement of a 1981 pickup truck, \$45,000  
Our primary truck is over 25 years old, and it is requiring more money each year to maintain. Replacement parts for the vehicle are becoming more difficult to find.
2. Upgrading the existing shade house by providing electrical power to the shade house \$2,500
3. Replace mildew damaged equipment by replacing of two of ten compound and dissecting scopes originally purchased in 1981 \$5,600
4. Purchase of a soil sterilizer cart to replace the present sterilizer which was purchased to sterilize orchid potting media; UHH CAFNRM is presently using all of the carts and none are available for our use. Using the present sterilizer

requires three days to accomplish the same task as the equipment requested.  
\$6000

5. The hiring of faculty/staff for the agriculture program \$61,112