

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 as there were no available instructors.

Commencing in 2008, additional emphasis was made in all agriculture courses to include conservation and sustainability practices. A "natural farming" approach is being included to all classes alongside conventional agriculture. The goal is to give students a first-hand experience with both approaches to agriculture.

Part I. Quantitative Indicators for Program Review

**Annual Report of Program Data for Agriculture  
HAW CC Program Major(s): AG**

Demand Indicators		Fall of Year			Unhealthy
		2005	2006	2007	
1	New & Replacement Positions (State)	27	27	1	
2	New & Replacement Positions (County)	18	18	1	
3	Number of Majors	10	11	11	
4	SSH Program Majors in Program Classes	27	21	60	
5	SSH Non-Majors in Program Classes	21	40	6	
6	SSH in All Program Classes	48	61	66	
7	FTE Enrollment in Program Classes	3.20	4.07	4.40	
8	Number of Sections Taught	3	3	3	

Efficiency Indicators		Fall of Year			Efficiency Health Cautionary
		2005	2006	2007	
10	Average Class Size	4.33	5.67	5.33	
11	Fill Rate	30.95	40.48	38.10	
12	FTE BOR Appointed Faculty	1.00	1.00	1.00	
13	Majors / FTE BOR Appointed Faculty	10.00	11.00	11.00	
14	Majors / Analytic FTE Faculty	12.50	16.42	13.75	
14a	Majors / Analytic FTE Faculty @ 12 cr.	10.00	13.13	11.00	
15	Program Budget Allocation (*07 @ 12cr.)	\$40,912.00	\$35,341.10	\$51,656.00	
16	Cost per SSH (*07 @ 12cr.)	\$852.33	\$579.36	\$782.67	
17	Number of Low-Enrolled (<10) Sections	3	2	3	

Effectiveness Indicators		Fall of Year			Effectiveness Health Cautionary
		2005	2006	2007	
19	Persistence (Fall to Spring)	50.00	63.64	54.55	
20a	Number of Degrees Earned (Annual)*	1	1	0	
20b	Number of Certificates of Achievement Earned (Annual)	0	0	2	
20c	Number of Certificates of Completion Earned (Annual)	0	0	0	
21	Number Transferring (to UHM, UHH, UHWO)	4	0	1	
Perkins - Campus Actual **					
22	1P1 Academic Achievement	100	100	100	
23	1P2 Vocational Achievement	66.67	100	50	
24	2P1 Completion	16.67	50	50	
25	3P1 Placement Employment/Education	75	100	100	
26	3P2 Retention Employment	100	100	100	
27	4P1 Non Traditional Participation	30.77	37.5	28.57	
28	4P2 Non Traditional Completion	0	100	100	
Perkins - State Standards **					
22	1P1 Academic Achievement	81.81	81.92	81.87	
23	1P2 Vocational Achievement	90.00	90.00	90.42	
24	2P1 Completion	36.00	37.33	38.17	
25	3P1 Placement Employment/Education	71.00	71.72	71.07	
26	3P2 Retention Employment	90.00	92.00	92.00	
27	4P1 Non Traditional Participation	14.81	14.60	14.60	
28	4P2 Non Traditional Completion	12.86	12.73	12.19	
29	Faculty FTE Workload @12 credits	1	0.84	1	
<b>Overall Program Health</b>				<b>Cautionary</b>	

\*All degrees and certificates are counted based on fiscal year.

\*\* Perkins data are for CTE programs only. From report on 2006-2007 Perkins activity year

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## Part II. Analysis of the Program

An analysis of the data indicates a dramatic drop in demand for positions both on the island of Hawaii and the State of Hawaii. It appears as though agriculture ceased to exist on the Island and State of Hawaii. According to the State of Hawaii Data Book, there were 6500 hired positions in agriculture in 2007 which indicates diversified agriculture continues to be a viable industry for our State.

The demand for positions as listed probably includes only one Standard Occupational Classification—Farm, Ranch, and Other Agricultural Managers. Although this cluster includes crop and livestock, nursery and greenhouse, and aquaculture, it includes only manager positions which islandwide would be only a few. This data does not include individuals who are planning to start their own business and does not include the landscape industry which is also a growing industry within agriculture. The Program's ability to increase demand in industry, is extremely limited.

There are only 11 majors which in itself is a very low number to sustain a program with 1 FTE instructor. However when compared with the number of demand positions, the number of majors is considered too much causing the demand health of the program to be Unhealthy. The number of SSH program majors in program classes has increased significantly by 185.7% (39/21). The demand from non-majors appears to vacillate from year to year. The cause of this variation is due to the alternating years of offering of our courses. Courses that are transferable to other institutions or accepted as science or other type of credits often have higher enrollment.

The Efficiency health is Cautionary. The fill rate for this program is 38.1%, a Unhealthy percentage. The ratio of majors to BOR appointed faculty is 11, a Cautionary number. Our enrollment is very low and as mentioned is linked to the transferability of some of our courses. There is also a difference between our enrollment and our majors. Apparently, our listed majors are not enrolling in agriculture classes. This could be due to the increase in academic rigor and marginal students need to complete pre-requisites before being allowed to enroll in the 100+ level courses.

The Effectiveness health is Cautionary. Persistence (fall to spring) is 54.55%, an Unhealthy percentage. There were no A.A.S. degrees awarded in 2007 and two students have selected certificates as evidence of their efforts. These two certificates earned are 18.2% of total majors (11). The ratio of degrees earned to demand positions is 2:1, a Cautionary number. There was one transfer. Perkins indicators except for 2P1 Vocational Achievement were above the State Standards.

### Significant Program Actions:

Implement plans which were proposed in 2006.

Delete courses which have not been offered for five or more years and not expected to be offered in the near future.

Two certificates were awarded. Prior to the action, student would have left with no evidence of skills and/or knowledge gained.

Part III. Action Plans:

Review course level outcomes and submit necessary curriculum forms to update course outlines and syllabi.

Develop and document assessment strategies for all program learning outcomes.

Identify the program with natural farming techniques

Develop better natural farming techniques

Work closer with farmers in the farmers' market to create an identify as part of the agricultural community

Continue to work on actions planned in the past.

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

<b>Item</b>	<b>Rationale</b>	<b>Estimate Cost</b>
hire a lecturer	the management of the agriculture facilities, prepare coursework, recruit, advertise, and serve the college in committees have surpassed the ability of one instructor. All of the actions proposed can be carried out only a limited scale with one instructor. The need for another person is paramount if the program is to reach its full potential.	\$15,000
purchase soil sterilizer cart	present soil sterilizer cart was purchased to sterilize orchid potting media; it is inadequate to efficiently process the amount of media needed for our classes.	\$13,000
replacement of a 1981 pickup truck	primary truck is over 26 years old and it is requiring more money each year to maintain; replacement parts are becoming more difficult to find.	\$45,000
replace 4 of 10 microscopes	mildew damaged purchased in 1981	\$11,200
upgrade existing shade house with electricity		\$3,000
purchase farm diesel powered cart	the cart will give the students training in farm equipment operation and allow the movement of materials from distant points on the Panaewa farm.	\$15,000