ANNUAL
REPORT OF PROGRAM DATA
2022

UNIVERSITY of HAWAI'I
MAUI
COMMUNITY COLLEGE

Agriculture and Natural Resources

1. Program or Unit Description

Program or Unit Mission or Purpose Statement

Program Mission: We envision a program that promotes active student engagement by providing high quality instruction in agriculture, horticulture, and natural resource management with an emphasis on entrepreneurship and sustainability.

Value of Degree: The USDA Farm Service Agency recognizes the Certificate of Achievement and A.A.S degrees toward one or more years of experience to qualify for loans. The CO in Sustainable Agriculture Management is also accepted as an agreement with FSA and GoFarmHawaii. In addition, graduates would not be required to get the additional financial training that most applicants would need to complete before qualifying for an FSA loan. In industry, based on graduate placements, the A.A.S tends to move graduates into higher management positions. Certificates provide opportunities as working foreman and entrepreneurs.

Target student or service population:

X Articulated Pathways for 4-year or graduate pathways: UHH, OSU ecampus
__Articulated Pathways for High school: _____
X Articulated Pathways for Other: GoFarmHawaii certificate

Most of our students are opting for a terminal degree or taking courses to upgrade their skills in industry. Many are returning adults who are looking for a new career or upgrading skills to improve their work situations. Younger students, those within 4 years of High School, and recent veterans are more often interested in a 4-year degree. Due to difficulties in articulation for a full 2 year A.A.S. degree (our classes are 300 & 400 level courses at UHH and UH Manoa), we counsel these students to transfer as soon as possible and take mostly general education requirements at UHMC.

Closing equity gaps: Our program has always had a relatively high number of female students in a male dominated industry. Ethnicity numbers have fluctuated over the years. The last graduating class was 50% female. However, the last graduating class was also 0% minority or Hawaiian a

2. Analysis of the Program/Unit

#	Demand Indicators	2019 - 20	2020 - 21	2021 - 22
1.	New & Replacement Positions (State)	173	173	172
2.*	New & Replacement Positions (County Prorated)	20	19	18
3.	Number of Majors	27	22	24
3a.	Number of Majors Native Hawaiian	7	4	8
3b.	Fall Full-Time	14%	22%	17%
3c.	Fall Part-Time	86%	78%	83%
3d.	Fall Part-Time who are Full-Time in System	0%	0%	13%
3e.	Spring Full-Time	16%	10%	17%
3f.	Spring Part-Time	84%	90%	83%
3g.	Spring Part-Time who are Full-Time in System	0%	15%	4%
4.	SSH Program Majors in Program Classes	181	145	161
5.	SSH Non-Majors in Program Classes	137	132	70
6.	SSH in All Program Classes	318	277	231
7.	FTE Enrollment in Program Classes	11	9	8
8.	Total Number of Classes Taught	13	13	12
	Demand Health		**Healthy**	

NOTE: New & Replacement jobs updated (View Methodology).

	Efficiency Indicators	2019 - 20	2020 - 21	2021 - 22
9.	Average Class Size	10	10	8
10.*	Fill Rate	51.5%	77.6%	57.5%
11.	FTE BOR Appointed Faculty	1	1	1
12.*	Majors to FTE BOR Appointed Faculty	27	22	24
13.	Majors to Analytic FTE Faculty	27	22	24
13a.	Analytic FTE Faculty	1	1	1
14.	Overall Program Expenditures	$215,316	$215,469	$152,006
14a.	General Funded Budget Allocation	$196,139	$203,680	$152,006
14b.	Special/Federal Budget Allocation	$19,177	$11,789	0
14c.	Tuition and Fees	0	0	0
15.	Cost per SSH	$677	$778	$658
16.	Number of Low-Enrolled (<10) Classes	6	6	10
	Efficiency Health		**Progressing**	

#	Effectiveness Indicators	2019 - 20	2020 - 21	2021 - 22
17.	Successful Completion (Equivalent C or Higher)	82%	86%	95%
18.	Withdrawals (Grade = W)	5	2	2
19.*	Persistence Fall to Spring	74%	55%	83%

19a.	Persistence Fall to Fall	26%	33%	48%
20.*	Unduplicated Degrees/Certificates Awarded	4	3	8
20a.	Degrees Awarded	2	2	2
20b.	Certificates of Achievement Awarded	1	2	0
20c.	Advanced Professional Certificates Awarded	0	0	0
20d.	Other Certificates Awarded	2	1	8
21.	External Licensing Exams Passed [1]			
22.	Transfers to UH 4-yr	3	0	0
22a.	Transfers with credential from program	1	0	0
22b.	Transfers without credential from program	2	0	0
	Effectiveness Health		**Healthy**	

[1] Campus to include in program analysis if applicable.

#	Distance Indicators	2019 - 20	2020 - 21	2021 - 22
23.	Number of Distance Education Classes Taught	0	0	1
24.	Enrollments Distance Education Classes	0	0	3
25.	Fill Rate	0%	0%	12%
26.	Successful Completion (Equivalent C or Higher)	0%	0%	100%
27.	Withdrawals (Grade = W)	0	0	0
28.	Persistence (Fall to Spring Not Limited to Distance Education)	0%	0%	0%

#	Perkins Indicators	Goal	Actual	Met
29.	1P1 Postsecondary Placement	33	50	Met
30.	2P1 Earned Recognized Credential	33	82.35	Met
31.	3P1 Nontraditional Program Concentration	10	41.67	Met
32.	Placeholder - intentionally blank	N/A	N/A	N/A
33.	Placeholder - intentionally blank	N/A	N/A	N/A
34.	Placeholder - intentionally blank	N/A	0	N/A

#	Performance Indicators	2019 - 20	2020 - 21	2021 - 22
35.	Number of Degrees and Certificates	3	4	2
36.	Number of Degrees and Certificates Native Hawaiian	0	2	0
37.	Number of Degrees and Certificates STEM	Not STEM	Not STEM	Not STEM
38.	Number of Pell Recipients[1]	0	0	1
39.	Number of Transfers to UH 4-yr	3	0	0

*** Used in Rubric to determine Health Indicator**

Strengths & Weaknesses: The COVID-19 pandemic has had lingering effects on the AG and Natural Resources Program and they have been both positive and negative. The 2021-2022 school year was still dealing with issues broth forth by the changes inflicted to both Hawaii's economy and the very model that we utilize to teach at UH-MC. In the previous Program Report it was stated that "One is that we are too dependent on tourism and we are too dependent on distant supply chains for

food and other goods". This has not changed, however, it may have enlightened the potential students on the need for both sustainability and food security. Food may be outsourced, but the people growing it cannot be. As the pandemic slowly winds down (hopefully) many people have found that it was easier to conduct work and education remotely, telecommuting to the offices, but people growing food and teaching others to grow food have found that this is not possible. Practical, "hands on" learning by doing and teaching by involving students and community are the mainstays for this program, but we will need to adapt and change to meet the needs of the students of the future. These factors are what appears to be driving the 100% year to year growth of the Native Hawaiian population of students in the program. Many of these new students have cultural ties to the stewardship of the land in both conservation/preservation of natural resources and food production.

The biggest weakness for the AGNR program is the overall low number of majors and the consequential lowering of graduation rates. Perhaps, this is not that bad given that there is an overall decrease in enrollment at UH-MC. Persistence from Fall to Fall is not the best but is showing a slow upward trend. Effectiveness indicators are being rated as being "Healthy". Low numbers of majors is also creating under enrolled classes or less than optimal class sizes as statistics are reporting an average class size of 8 and this is a 20% drop over previous years. This may be an artifact of a few of the classes have limited class sizes due to safety issues i.e. AG 162 Introductory Beekeeping with 10 students and AG 232 Tractor Operation set at 5, but is more likely low a result of low student enrollment.

As our enrollment typically surges when unemployment rises (but did not in the previous year), it is not inconceivable that we saw a continued period of low enrollment due to economic conditions. The Hawaii unemployment rate for 2021-2022 went from 6.6% – 3.3% (although, higher in parts of Maui County i.e. Molokai) and inflation with an all-time high, greatly contributed to low enrollment. This is despite night class offerings, outreach, and other incentives for students, the AG and Natural Resources Program remains low enrolled.

3. Program Student Learning Outcomes or Unit/Service Outcomes

a) List of the Program Student Learning Outcomes or Unit/Service Outcomes

PLO 1. - Use basic business principles to manage projects or design a horticultural business enterprise.

PLO 2. - Recommend cultural practices, solve problems, plan projects, and/or cultivate horticultural crops in a sustainable manner based on sound biological and technological principles.

PLO 3. - Explain the relationships between agroecosystems, economics, human culture, and natural environments

PLO 4. - Design gardens that demonstrate aesthetic principles. (hort & landscape only)

b) PLO 3 was assessed during AG 16: Introductory Beekeeping.

c) Assessment Results.

a. The method of assessment was a final "situational" essay that asked for diagnosis and potential mitigation measures given a hypothetical situation. The situation involved natural environments, government agencies, and would require a multi-pronged approach to be successful. Control measures were evaluated based on being realistic and including multiple methods used over time. Five of five students -100% were successful in meeting the criteria of 75% or better.

b. CASLO: No CASLO assessment was made in AY 21-22.

d) Changes: Cover more situations and potential control methods and include the time element (i.e. no silver bullets) and reinforce the public aspect of successful control measures.

4. Action Plan

2020-2021 Plan

1) Continue to explore some articulation with SSM program. Possible CO that could transfer as undergraduate credits to SSM?

2) Recruitment a) actively promote high school tours or high school ag day for spring 22. b) Reach out to Hawaiian Homes, Ag zoned neighborhoods, and other communities for GoFarmHawaii cohorts. c) As events become open again, attend and promote program.

3) Seek Perkins funding for Electric Tractor. This would bring in newer sustainable technology that is appropriate for small farms into the department and showcase for Maui. Seek funding for other appropriate technologies as they emerge.

4) Remain in USDA NIFA ANNH consortium. Fund student tuition and supplies as well as equipment such as hoophouse and BCS walk behind tractor.

5) Actively work with consortium for AG 100 course that will substitute for AG 103 and be delivered online throughout the system. Determine if AG 104 and AG 230 can be shared online between campuses.

6) Faculty member to retire after Fall 21 semester. This will allow for a new faculty member to evaluate the program and curriculum and make appropriate changes based on capacity and future projections. Curriculum may need to be streamlined or changed to adapt to future industry needs.. Agriculture and Natural Resource management is and will continue to be an important component of the County of Maui's economy. The need to prepare professionals with in-depth training will continue.

There was no one at the helm for spring 2022 faculty position vacant, However Items #3, #4 and #6 were completed. The status of #1, #2 and #5 are uncertain and currently being attended to.

To that end we are proposing:

1) Continue to explore some articulation with SSM program. Possible CO that could transfer as undergraduate credits to SSM?

2) Recruitment a) actively promote high school tours or high school AG & Natural Resources Day for spring 2023 or fall 2023. b) Work with state and county government to create incentives for students to enroll at UH-MC AG and Natural Resources Program. Based on conversations with Maui County Dept. of Agriculture and personal observations it was concluded that the normal pipeline that would provide new students to the UH-MC AG & NR Program was broken. Normally, the HS agriculture programs would be training, inspiring and sending students to our program. The advent of "No Child Left Behind" saw cuts to HS CTE support and then COVID pandemic happened and seasoned AG teachers retired or moved onto new occupations. This confluence of events has created a cohort of new HS Agriculture instructors that need support so that they may help spark interests of the students in careers in Agriculture. Several ideas are currently being worked on to facilitate training of this new cohort of teachers. Some include to continue night courses to make them accessible to this new cohort of teachers. Short term will affect statistics as we will have more students that are a part of the program but will not graduate, but may pay higher dividends in the future as these teachers send more students to our program. We are hoping if we teach the teachers they will become part of the recruitment efforts of future students. Alternatively, a list of no credit courses have been and are being developed to provide a quick delivery system to HS teacher enrichment. Similarly, instead of "Band Camp" or "CSI Camp", why not "Bee Camp" or "AG/NR Camp"?

3) Remain in USDA NIFA ANNH consortium. Fund lecturers, student tuition and supplies as well as equipment. Additionally, some of this funding might be used for part b of Item #2.

4) Actively work with consortium for AG 100 course that will substitute for AG 103 and be delivered online throughout the system. Determine if AG 104 and AG 230 can be shared online between campuses.

5. Resource Implications

There does appear to be support to consolidate AG 103 with Leeward CC AG 100 that is conducted remotely. Adds to their class enrollment and potentially takes one off our list of offerings. It will make it possible for the students with family/geographical/ time/work schedule challenges that would normally be excluded to take this class, as this course is conducted remotely and via video content developed by Leeward CC. It may it may be important to develop similar content from Maui Nui and this will require staff/hardware resources. OTOH it may be a way that we can showcase the various agricultural industries in Maui Nui which could be leveraged for resources from the state and county government.

It is possible that the addition of a : **Regency 106" 16-Gauge Stainless Steel Three Compartment Commercial Sink with 2 Drainboards - 18" x 24" x 14" Bowls @ listed minus shipping or similar $1,049.00** will significantly assist with the teaching of the AG 251-252 Sustainable crops classes as we are currently using an improvised wash station which potentially wastes water, and

frequently requires replacement parts (plastic totes) . If we want to lead the way and teach students how to produce food, yes the improvised way is good for illustration of what is possible when forced by circumstances, but we should be also showing what students can endeavor to accomplish. All said and done, shipping estimate or local source option will potentially add 300% to total costs. Estimate for item will probably be $3000-$5000 landed and installed.

☐ **I am NOT requesting additional resources for my program/unit.**

6. Optional: Edits to Occupation List for Instructional Programs

Review the Standard Occupational Classification (SOC) codes listed for your Instructional Program and verify that the occupations listed align with the program learning outcomes. Program graduates should be prepared to enter the occupations listed upon program completion. Indicate in this section if the program is requesting removal or additions to the occupation list.

☐ **I am requesting changes to the SOC codes/occupations listed for my program/unit.**