

AGRICULTURE & NATURAL RESOURCES



ANNUAL
REPORT OF PROGRAM DATA
2021



UNIVERSITY of HAWAII® MAUI COLLEGE

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:

- ☒ Articulated Pathways for 4-year or graduate pathways: UHH, OSU ecampus
- ☐ Articulated Pathways for High school: _____
- ☒ 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.

2. Analysis of the Program/Unit

#	Demand Indicators	2018 - 19	2019 - 20	2020 - 21	Demand Health
1.	New & Replacement Positions (State)	382	308	282	Healthy
2.*	New & Replacement Positions (County Prorated)	49	40	37	
3.	Number of Majors	38	27	22	
3a.	Number of Majors Native Hawaiian	12	7	4	
3b.	Fall Full-Time	23%	14%	22%	
3c.	Fall Part-Time	78%	86%	78%	
3d.	Fall Part-Time who are Full-Time in System	0%	0%	0%	
3e.	Spring Full-Time	11%	16%	10%	
3f.	Spring Part-Time	89%	84%	90%	
3g.	Spring Part-Time who are Full-Time in System	3%	0%	15%	
4.	SSH Program Majors in Program Classes	273	181	145	
5.	SSH Non-Majors in Program Classes	80	137	132	
6.	SSH in All Program Classes	353	318	277	
7.	FTE Enrollment in Program Classes	12	11	9	
8.	Total Number of Classes Taught	14	13	13	

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

#	Efficiency Indicators	2018 - 19	2019 - 20	2020 - 21	Efficiency Health
9.	Average Class Size	11	10	10	Healthy
10.*	Fill Rate	53.3%	51.5%	77.6%	
11.	FTE BOR Appointed Faculty	1	1	1	
12.*	Majors to FTE BOR Appointed Faculty	38	27	22	
13.	Majors to Analytic FTE Faculty	38	27	22	
13a.	Analytic FTE Faculty	1	1	1	
14.	Overall Program Expenditures	\$193,791	\$215,316	\$215,469	
14a.	General Funded Budget Allocation	\$177,019	\$196,139	\$203,680	
14b.	Special/Federal Budget Allocation	\$16,772	\$19,177	\$11,789	
14c.	Tuition and Fees	0	0	0	
15.	Cost per SSH	\$549	\$677	\$778	
16.	Number of Low-Enrolled (<10) Classes	5	6	6	

#	Effectiveness Indicators	2018 - 19	2019 - 20	2020 - 21	Effectiveness Health
17.	Successful Completion (Equivalent C or Higher)	87%	82%	86%	Needs Attention
18.	Withdrawals (Grade = W)	6	5	2	
19.*	Persistence Fall to Spring	64%	74%	55%	
19a.	Persistence Fall to Fall	38%	26%	33%	
20.*	Unduplicated Degrees/Certificates Awarded	14	4	3	
20a.	Degrees Awarded	3	2	2	
20b.	Certificates of Achievement Awarded	3	1	2	
20c.	Advanced Professional Certificates Awarded	0	0	0	
20d.	Other Certificates Awarded	15	2	1	
21.	External Licensing Exams Passed ¹				
22.	Transfers to UH 4-yr	0	3	0	
22a.	Transfers with credential from program	0	1	0	
22b.	Transfers without credential from program	0	2	0	

¹ Campus to include in program analysis if applicable.

2021 UH Maui College ARPD
Program: Agriculture and Natural Resources

#	Distance Indicators	2018 - 19	2019 - 20	2020 - 21	
23.	Number of Distance Education Classes Taught	0	0	0	
24.	Enrollments Distance Education Classes	0	0	0	
25.	Fill Rate	0%	0%	0%	
26.	Successful Completion (Equivalent C or Higher)	0%	0%	0%	
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	2018 - 19	2019 - 20	2020 - 21	
35.	Number of Degrees and Certificates	6	3	4	
36.	Number of Degrees and Certificates Native Hawaiian	0	0	2	
37.	Number of Degrees and Certificates STEM	Not STEM	Not STEM	Not STEM	
38.	Number of Pell Recipients ¹	4	0	0	
39.	Number of Transfers to UH 4-yr	0	3	0	

* Used in Rubric to determine Health Indicator

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Strengths & Weaknesses: The pandemic highlighted several things about the Hawaiian economy. One is that we are too dependent on tourism and we are too dependent on distant supply chains for food and other goods. Agriculture is viewed for the real potential to make our local economy more circular. Growing food, flowers, nursery crops, and creating value added products from locally produced goods keeps money and jobs here. More and more folks see segments of agriculture as a way to create a business or supplement their income. In addition, landscaping and natural resource conservation are areas of interest and these jobs cannot be exported. This is expressed in the strong job demand numbers for both county and State. UHMC has tremendous potential to contribute to a newer economy because of our facilities; greenhouse, production fields, and dedicated lab classroom that allows for robust hands-on skill and academic training.

Our efficiency numbers are sufficient, although larger class sizes would be preferred. (exception is courses restricted to 5 and 10 - tractors & beekeeping). During this academic year the classroom was restricted to 14. The completion rates are over 80% and consistent for the past three years. Perkins core indicators were all exceeded this past year.

The biggest weakness for the AGNR program is the decline in the number of majors and the consequential lowering of graduation rates. Much like overall enrollment at UHMC, Agriculture and Natural Resources has had a three year slide in number of majors. Persistence from Fall to Fall are also not high enough.

Unit actions: The Molokai farm was officially closed. Now only Maui campus has agriculture courses and a farm. Several courses were put up for a Sustainability designation. Discussions were held via zoom across the CC system between agriculture and agriculture related programs at different campuses. Potential shared courses and online offerings were examined. A [memo](#) was submitted to the CC system office..

The pandemic had a definite impact on the 20-21 academic year for the agriculture program. UHMC decided in order to truly meet our learning objectives we need to continue our provides hands-on labs. Therefore we continued to teach face to face the entire year. This was greeted happily by some students while other students were reluctant to come back to class. A few used online classes from other campuses to continue on their educational path. Other students opted out of school entirely. Normally our enrollment surges when unemployment rises, but in this case folks waited to be called back to work and did not want to risk being tied up. Current labor shortages, despite night class offerings, will likely make increasing AG student enrollment challenging.

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 281 Weed Science.

c) Assessment Results.

- a. The method of assessment was a final “situational” essay that asked for control 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. Seven of Eight students - 88% were successful in meeting the criteria of 75% or better.
- b. CASLO: No CASLO assessment was made in AY 20-21.
- 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

Action 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.

5. Resource Implications

Fill behind current faculty after retirement. This will not increase costs. The program has only one full-time faculty. This program requires maintenance of facilities including living material, supervision of staff, fundraising through selling products, grant writing and management, and a 2-year cycle of course offerings in a wide range of disciplines. The program cannot function without

a full-time faculty. The program was built as a two faculty program and has struggled with only one faculty for years. So do not expect success if there is no replacement faculty put in place. This program will not run on lecturers alone.

Request Perkins grant to fund electric tractor.

Collaboration with SSM in offering GIS 150. Collaboration with other CC's is somewhat limited due to the hands-on nature of the curriculum. Only a very few courses translate well to distance education and these are being explored.

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