Agriculture

ANNUAL REPORT OF PROGRAM DATA 2021

July 1, 2020 through June 30, 2021

UNIVERSITY of HAWAI'I®
HAWAI'I COMMUNITY COLLEGE

1. Program or Unit Description

Program or Unit Mission or Purpose Statement
What is the target student or service population?

This program prepares students for employment in government service, agribusiness, horticulture, livestock, flowers and foliage, landscape, and the macadamia nuts, papaya, and coffee industries.

Hawai‘i Community College is a two-year institution targeting students who are interested in the Agricultural field.

2. Analysis of the Program/Unit

Discuss the program's or unit's strengths and areas to improve in terms of Demand, Efficiency, and Effectiveness based on an analysis of the program's ARPD Quantitative Indicators or comparable unit-developed measures or program-developed metrics. Include a discussion of relevant historical-trend data on key measures (i.e., last three years). Provide an explanation of any significant changes to the program's Quantitative Indicators or unit's key performance measures in the year of this Review.

Instructional programs must include a discussion of ARPD health indicators with benchmarks to provide a quick view on the overall condition of the program. CTE programs must include an analysis of Perkins Core indicators for which the program did not meet the performance level in the year of this Review.

Demand Indicators

HEALTHY score. All indicators seem to point to high demand for highly skilled Ag graduates, even though the county replacement position numbers have declined post-COVID. However, the replacement position numbers do not reflect entrepreneurial opportunities that many students would like to pursue. Also, the CIP/SOC codes may not reflect workforce opportunities with smaller private companies. The actual current job opportunities are very good in the County and State of Hawai‘i.

Efficiency Indicators

HEALTHY score. Our fill rate averaged out to 97.7% for AY20-21. We continue to allow students to enroll over the class limit due to the high interest in agriculture. Agriculture interest seems to be on the rise. If our fill rate continues to exceed capacity, we may need to start an additional cohort and seek another faculty position.

Effectiveness Indicators

PROGRESSING score. Fall to Spring persistence and successful completion both rose significantly, although Unduplicated Degrees/Certificates Awarded fell. This decline may have been due to students discontinuing before completing their degree for various personal reasons. Although we were given a Progressing call for this Indicator, we are limited in our ability to increase our Unduplicated Degrees/Certificates Awarded much further than the current number. We do not have the physical space or staff to grow the program beyond what the single faculty member is currently accomplishing.

Perkins Indicators

1P1 (Met)--Successfully met goal of 33% with a 87.5%

2P1 (Met)--Successfully met goal of 33% with a 35.29%

3P1 (Met)--Successfully met goal of 10% with a 20%

Discuss significant program or unit actions and activities over the year of this Review. Include new certificate(s), stop outs, gain/loss of position(s), organizational changes, changes in unit operations or responsibilities, etc. Include a discussion of external factors affecting the program or unit.

Instructional programs must provide the URL for the program's ARPD data tables and attachment(s) for relevant program-developed metrics discussed in this Review; non-instructional units must provide URLs for unit-specific data and attachment(s) for relevant unit-developed metrics discussed in this Review.

https://uhcc.hawaii.edu/varpd/index.php?y=2021&c=HAW&t=CTE&p=2309

The Ag Program in collaboration with the Electronics Program successfully secured a $300,000.00 NSF ATE Grant to build a Mobile Controlled Environment Greenhouse that would be solar powered. The grant would run from July 2021 to 2024 and be used to train Ag Technicians in high tech agricultural production. This mobile unit will be taken to local high schools to help train and recruit new Ag students to Hawai‘i Community College.

The HCC Ag Program is partnering with Kau High School to articulate our first year of study to form a career pathway to HCC. This would give students the opportunity to complete their first year of the HCC Ag Program while in high school and earn two certificates of completion. They may continue on at HCC after graduation to finish their final year and receive an AAS degree in Ag.

The HCC Ag Program in partnership with the Honua Ola BioEnergy Company, is developing a working Agroforestry project on three acres of land adjacent to the bio-energy plant. The edible crops that are grown will be donated to the Hawai‘i Food Bank for distribution to the needy. Summer interns worked during this past summer to hand clear the site, which is now ready to be fenced and planted.

The HCC Ag Program continues its collaboration with the Culinary Program with a program-to-program Farm-to-Table initiative. This provides the Culinary Program with a variety of fresh produce and gives our students a chance to learn true production agriculture skills.

The HCC Ag Program continues its collaboration with the four other ATE programs on the Model Home Project in Keaukaha. We propagate all the plants that are used in the landscaping during the fall semester and continue to do the planning and installation in the spring semester at the model home site.

The HCC Ag Program continues to support the Hawai‘i CC Food Distribution for needy students. We harvest and package fresh produce for the monthly food distribution and encourage Ag students to serve as volunteers during the distribution.

The size of the current Ag classes (18 students) has forced the program to hold classes at the UHH Ag Farm due to COVID protocols. All courses since the Fall of 2020 have been lecture/lab with no true lecture settings with technology. This has continued through the fall of 2021 and I believe we have lost some quality of delivery throughout this pandemic that is causing some lack of retention for students. We are doing our best with what we have for now and hope to return to normal class settings in the near future.

The loss of our APT position in the summer of 2020 due to Covid budget cuts was a major blow to the program and put added pressure on faculty. With many ongoing projects outside the classroom and increased demands on the program, we need to get an APT position for the Ag Program ASAP. Faculty will do its best to keep up with the daily functions of the program and upkeep of the Ag Farm until help arrives.

The Ag Program applied for and received HEERF funds to supplement sustainable student projects and activities. We upgraded our hydroponic irrigation systems and had students take home and build a mini hydroponic greenhouse for their own use. This project is probably the most impactful and useful project ever developed for Ag students. We have had great student outcomes from this simple project.

3. Program Learning Outcomes or Unit/Service Outcomes

a) *List of the Program Learning Outcomes*

a) **Program Learning Outcomes (PLOs)**

1. Plan and manage projects and cultivate horticultural crops using legal; sustainable; safe; and ecologically, biologically, and technologically sound practices.
   ILOs 1, 2, 3, 5, 6
2. Design gardens that demonstrate the aesthetic principles of unity, repetition, balance, color, and textures congruent with the customers' desires.
   ILOs 1, 2, 3, 6
3. Operate and maintain tools and equipment. Set-up and manage a business enterprise.

   ILOs 2, 5

4. Set-up and manage a business enterprise.

   ILOs 1, 2, 3, 5, 6

5. Interact with customers and coworkers in ways that effectively support the work to be accomplished.

   ILOs 1, 2, 3, 4, 5, 6

b) *Program Student Learning Outcomes that have been assessed in the year of the Annual Review of Program Data.*
c) *Assessment Results*
d) *Changes that have been made as a result of the assessments.*

No Assessments were completed this year due to Covid19 interruption of classes and the loss of key personnel (APT) to the program. The program was forced to relocate to the UHH Ag Farm full time with no true classroom to conduct formal lectures. When courses are entirely lecture/lab and there are no guest speakers to enhance course work, there is some loss of student engagement and retention. As the single faculty member of the Ag Program, the loss of our APT due to Covid staff reductions was a big blow to the program. The program runs at a very fast pace and with many other projects on top of regular class time, assessments were put on hold so I could keep up with the daily functions and upkeep of the program. Managing a program is all about priorities and making good decisions, and I believe that I had the priorities in the right order during the last two years.

4. Action Plan

The Hawai‘i Community College Agriculture Program is seeking to secure its own farm lab, independent of the UH Hilo College of Agriculture Forestry and Natural Resource Management (CAFNRM). With the Manono Redevelopment Plan moving forward, we are also seeking to

relocate our classrooms to the farm lab to eliminate costly commuting time between the classrooms and farm lab. If the Hawai‘i CC Agriculture Program is able to secure its own land to develop a modern and efficient farm lab, we would double our student capacity and quadruple our growing area. This would lead to increased student enrollment and ultimately enhanced student learning. Another reason is we would like to fulfill part of our mission statement, by having livestock as part of the curriculum. Under the current agreement with UHH CAFNRM, we are not able to have livestock on the farm. Livestock has not been part of the curriculum for a number of years but with a new farm lab, we anticipate adding a Small Animal Production cohort to the Ag Program.

In September 2019, Chancellor Rachel Solemsaas officially signed the Memorandum of Agreement (MOA) with the University of Hawai‘i Manoa College of Tropical Agriculture and Human Resources (UH CTAHR) to develop the HawCC Ag Farm Lab on 18 acres at the Waiakea Research Station. The planning and building stage for the farm lab will be a 3-5 year process if there are no major setbacks. We hope to have state-of-the-art classrooms, greenhouses, restrooms, a food processing area, equipment and other necessary components with “green sustainability” as the theme for all of the items that are included for the farm lab. Having a new facility will bring a renewed excitement to student learning. We will be able to recruit effectively, keep students motivated and increase our retention. Our goal is to have a public-friendly facility and facilitate tours for grades K-12 and the general public.

Hawai‘i Graduation Initiative Action Goals 1, 2, and 3 align with HGI Action Strategy 1 by engaging Hawai‘i Island K–12 students, parents, and public and private schools early and often to promote and prepare for college. Action Goal 1, 2 and 3 align with HGI Action Strategy 2 by reducing gaps in college completion for Native Hawaiians and low–income and underrepresented groups. Action Goal 1, 2, and 3 align with HGI Action Strategy 3 by engaging systematically with community-based groups to inform program offerings and curricula.

Hawai‘i Innovation Initiative Action Goal 1 aligns with HI2 Action Strategy 3 addressing Health and Wellness and Sustainable Agriculture by working closely with employers to increase the qualified and skilled workforce base.

21st Century Facilities (21CF) – Modern Teaching and Learning Environments Action Goal 1 aligns with 21CF Action Strategy 2 by continuing to explore and implement cost-savings strategies and sustainable practices.

Action Item #1:

Initiate planning for farm structures such as a certified kitchen, a produce processing unit and a building to house these items, along with classrooms at the Farm Lab. Plans could be made available within a year. As the plans are put into motion during AY 2022-2023, the facilities will be established, and this will help improve student learning. There would be less commute time and

more teaching time. Hands-on learning would be greatly increased due to the efficiency of the layout of the farm.

The Ag program's new facilities will help improve student learning and attainment of the PLO's by supporting the whole program's curriculum, especially in the program's refocus into Farm to Table, Sustainability, and Landscaping. Farm to Table involves not only the Agriculture program, but also the Culinary Arts program.

Benchmarks/Timeline: Develop the project with legislators and administration, organize ATE collaborators and begin site-specific planning in 2021-2022. Plan for completion of the project in 2024-2025. This project directly facilitates PLOs 1-5 for the agriculture program. Additionally, the College as a whole benefits from the physical results of this project as well as the inherent benefits of increased collaboration.

Action Item #2:

The hiring of a Farm Manager is a vital part of the program expansion and current program needs. Unlike most other programs, the Ag program deals with live crops. These live crops are student projects that must be maintained (watered, fertilized, etc.). The instructor should be spending his non-teaching time developing the program, not maintaining the farm. With the assistance of a farm manager, the instructor can develop and fine-tune the program/curriculum so that the students can learn and attain PLOs 1, 2, 3, 4, 5 efficiently. This will enhance student learning by exposing students to a well thought out and planned curriculum provided by the instructor.

With the additional space, we would also like to add the animal component to HawCC Ag program. The program has been without a livestock curriculum for many years. We would like to have an animal instructor and an additional APT to run the livestock program. We would like to see chickens, pigs, rabbits, bees, fish and other types of animals on the farm. As the animal program grows, we would like to add a veterinarian technician class as part of the program. This would add additional value and raise interest in the program.

Acton Item #3:

Equipment to run the farm will need to be included in the initial planning. We will have total control of the new Hawai'i Community College Ag Farm and will have to maintain all 18 acres that are utilized. A comprehensive equipment list evaluation and need will have to be done in AY 2021-2022. The equipment requested would directly support PLO 1 and 3.

5. Resource Implications -
* ONE-TIME BUDGET REQUESTS ONLY *

The program requests continued support to accomplish the ongoing Action Plan above. Otherwise, no additional resource requests at this time.

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.

x I **am NOT requesting changes to the SOC codes/occupations listed for my program.**

☐ **I am requesting changes to the SOC codes/occupations listed for my program.**
O*Net CIP-SOC Code Look-up
in the **Crosswalks box, choose "Education," then enter CIP number to see related SOC codes*

List below each SOC code for which change is being requested and include details of requested code deletions and/or additions. Include justification for all requested changes.

*All requested changes to the SOC codes/occupations listed for programs must be discussed with and approved by the Department/Division Chair.