HAWAIʻI COMMUNITY COLLEGE
PROGRAM ANNUAL REVIEW REPORT

Agriculture

Date: January 20, 2017

Review Period:
July 1, 2015 to June 30, 2016

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Program/Unit Review at Hawaiʻi Community College is a shared governance responsibility related to strategic planning and quality assurance. Annual and 3-year Comprehensive Reviews are important planning tools for the College's budget process. This ongoing systematic assessment process supports achievement of Program/Unit and Institutional Outcomes. Evaluated through a college-wide procedure, all completed Program/Unit Reviews are available to the College and community at large to enhance communication and public accountability. Please see http://hawaii.hawaii.edu/files/program-unit-review/

Please remember that this review should be written in a professional manner. Mahalo.

PROGRAM DESCRIPTION

Describe the Program	
Provide the short description as listed in the current catalog.	This program prepares students for employment in government service, agribusiness, horticulture, livestock, flowers and foliage, landscape, macadamia nuts, papaya, and coffee industries.
Provide and discuss the program's mission (or goals and objectives if no program mission statement is available).	The mission of the Agriculture Program is to maximize the potential of individuals to fulfill their personal and career goals by providing curricula that prepare students for entrepreneurship or employment within the many fields of agriculture or landscaping. Our program provides course work and direct, hands-on learning experiences emphasizing current, environmentally and economically sound, and sustainable principles and practices that develop the skills, knowledge, and abilities vital for Hawaii's green industries as well as for a healthy, productive society.

Comprehensive Review information: Required for ARPD Web Submission

Provide the year and URL for the location of this program's last Comprehensive Review on the HawCC Program/Unit Review website: http://hawaii.hawaii.edu/files/program-unit-review/	
Year	2012
URL	http://hawaii.hawaii.edu/files/program-unit-review/docs/2012_ag_comprehensive_program_review.pdf
Provide a short summary regarding the last Comprehensive Review for this program. Discuss any significant changes to the program since the last Comprehensive Review that are not discussed elsewhere in this review.	The focus of the last review was: 1) aligning classes to matriculate to the four year UH agriculture degree, 2) replacing and upgrading equipment, and 3) increasing capacity. The program has changed a great deal since the last review, primarily due to the change of Faculty at the start of 2015. The focus of the program is now built around an integrated farm-to-table model with emphasis on hands-on learning.

QUANTITATIVE INDICATORS

ARPD Data

Please attach a copy of the program's ARPD data tables and submit with the Program Review document.

a) **If you will be submitting the Program Review document in hard copy, print and staple a copy of the data tables to the submission; the icon to print the data tables is on the upper right side, just above the data tables.**
OR

b) **If you will be submitting the Program Review document in digital form, attach a PDF copy of the data tables along with the digital submission; the icon to download the data tables as a PDF is in the upper right side, just above the data tables.**

Program data can be found on the ARPD website: http://www.hawaii.edu/offices/cc/arpd/

ANALYSIS OF THE PROGRAM's DATA

Analyze the program's ARPD data for the review period. Describe, discuss, and provide context for the data, including the program's health scores in the following categories:	
Demand	(Unhealthy) Replacement position numbers do not reflect estimation of entrepreneurial opportunities, which many program students hope to pursue. To our belief the County data does not reflect an accurate picture of agriculture industry in Hawaii. This data representation needs to be further looked into before we can claim our demand indicators "unhealthy". The state's heavy reliance on imports of food and plant materials continues and future forecasts project little change in this area. Increased awareness of the importance of food security and community-sustainability and -food systems coupled with our islands' unique environments are indicators of demand for entrepreneurs beyond recognized state and county positions. Additionally, there is a growing awareness that as sustainable initiatives gain momentum there will be increased employment opportunities as unimagined jobs are created from within these new systems. There are tremendous opportunities for

	program graduates.
Efficiency	(Healthy) The class numbers have dropped slightly due to a cap that was set for the incoming instructor. The fill rate was 91% and although this area was called healthy there is a large coarse load on a single instructor.
Effectiveness	(Cautionary) The call on effectiveness was due to a low score of only 66% persistence fall to spring, which is consistent with previous data. This is likely due to students taking fall courses such as horticulture and plant identification as electives.
Overall Health	(Cautionary) The program has a new instructor and is in a period of transition. Many of the deficiencies outlined in the data are addressed in the action plans below.
Distance Education	n/a
Perkins Core Indicators (if applicable)	Technical skills attainment was not met, and is a primary focus of the farm to table initiative. Student placement is an issue of the CIP codes used to generate data as mentioned above. Student retention/transfer and nontraditional participation were both very close to the set goals.
Performance Funding Indicators (if applicable)	
Describe any trends, and any internal and/or external factors that are relevant to	The scopes of the datasets used are not representative of the unique situation in Hawaii County. Additionally the local interest in agriculture and sustainability attracts many people to enroll in classes simply to learn the subject, with less

understanding the program's data.	interest in pursuing degrees and certificates let alone moving on to a 4-year program. We will monitor degree/certificate interest vs. general Ag interest in future student cohorts to confirm this observation.
Discuss other strengths and challenges of the program that are relevant to understanding the program's data.	The program is multifaceted with a focus on technical hands-on education as well as offering courses that align with UHH CAFNRM. This is a large task for a program with 1 FTE faculty. Additionally, achievements in one aspect have the potential to detract from the data that would support other aspects of the program.

Analyze the program's IRO data for the year under review. Discuss how data/analysis provided by the Institutional Research Office has been used for program improvement. (For example, how results from CCSSE or IRO research requests have impacted program development.)	
Describe, discuss, and provide context for the data.	n/a
Discuss changes made as a result of the IRO data.	n/a

Report and discuss all major/meaningful actions and activities that occurred in the program during the review period. For example:	
Changes to the program's curriculum due to course additions, deletions, modifications	Math requirements were adjusted to allow QM

(CRC, Fast Track, GE-designations), and re-sequencing	120T to replace other remedial math courses for the AAS. This move was made in alignment with other CTE programs.
New certificates/degrees	n/a
Personnel and position additions and/or losses.	New instructor was hired before the start of the fall semester and 2 different casual hires were brought in as ATPs, one in each of the fall and spring semesters.
Other major/meaningful activities, including responses to previous CERC feedback.	n/a

Describe, analyze, and celebrate the program's successes and accomplishments. (For example, *more students were retained/graduated* OR *the program successfully integrated new strategies/technologies*.)

Discuss what the program has been doing well. Are there areas that needs to be maintained and strengthened? Please provide evidence if applicable (ex: program data reports, relevant URL links, etc.).	The major accomplishment during this year of transition was the new emphasis on the farm to table initiative with intensive hands-on learning. The program also reinvigorated its collaborative relationship with the Culinary program, in which students took part in class activities built around commercial scale production with weekly produce deliveries to the Culinary program kitchen. See attached: (newspaper article)

Describe, analyze, and discuss any challenges and/or obstacles the program has faced.	
Identify and discuss the program's challenges/obstacles.	One of the main challenges is an ongoing logistical problem with the transportation between college and farm laboratory. Additionally the course load is overwhelming for one instructor, despite the presence of an APT. Securing a permanent APT for the program remains a challenge.
Discuss changes and actions taken to address those challenges, and any results of those actions.	Largely the students volunteering to drive independently, or arriving early to class so the van can leave in a timely manner, have resolved most of the transportation issues. The casual hires have helped alleviate the course load, but this has been limited due to the overall course responsibilities continuing to rest on the sole primary instructor.
Discuss what still needs to be done in order to successfully meet and overcome these	There is currently some interest at the legislative level to improve the farm resources and infrastructure, which would

challenges.	include a classroom facility at the farm. This would directly resolve transportation issues while potentially freeing up space on campus for other programs/classes. While the addition of another FTE instructor has been suggested in the past, a lecturer position would be an ideal fit to ease the load on the primary instructor. This would facilitate the primary instructor's ability to be spokesperson and organizational director for the program.

PROGRAM ACTION PLAN

Discuss the program's prior year's (AY14-15) action plan and results.	
Describe the program's action plan from the prior review period and discuss how it was implemented in AY15-16.	-Implement cohort system -Advise and participate on new boards and committees -Expand farm to table initiative -Continue and expand collaborations -Expand courses to cover entrepreneurial farming, soft skills, and farm to table marketing -Consolidate Courses -Track graduating students to address ARPD data shortcomings -Create a plan to reverse "Not Met" Perkins Core Indicators -Work with students to assist them in being successful in program area and classes. The plan from last year was a bit expansive in scope, and a few individual focal points developed. The farm to table initiative became the backbone of the program, and was integrated into daily coursework. Courses and assessments were re-focused to cover entrepreneurial farming and soft skills.
Discuss the results of the action plan and the program's success in achieving its goals.	As mentioned above, the plan as a whole was limited due to its broad scope. The points of the farm to table initiative and locally relevant direct marketing strategies were both highly resonant with the students, advisory board and collaborating

	programs. The increased focus on soft skills is an important factor in the function of the class as a productive group. As a whole this emerging focus on experiential and practical education is a direct hit with the interests of the students and the current needs within the state and county.
Discuss any challenges the program had in implementing that action plan or achieving its goals.	The biggest challenges faced this year have been the need for assistance with the instruction of classes. With a new emphasis on production and collaboration, the instructor has been forced to focus more energy on organizational and production responsibilities. These points are critical for the growth of the program and would be facilitated by the assistance of a lecturer to ease the primary instructor's course load.

- Did the program review its website during AY15-16? Please check the box below that applies.

☐ Reviewed website, no changes needed.

☐ Reviewed website and submitted change request to webmaster on _____(date)_____.

■ Reviewed website and will submit change request to webmaster.

Please note that requests for revisions to program websites must be submitted directly to the College's webmaster at

http://hawaii.hawaii.edu/web-developer

Discuss the program's overall action plan for AY16-17, based on analysis of the Program's data and the overall results of course assessments of student learning outcomes conducted during the AY15-16 review period.	**Benchmarks and Timelines for implementation and achievement of goals.**
Action Goal 1: Continue to focus on the Farm to Table Initiative, and begin to integrate into course framework (COR, catalog description, etc..).	**Benchmarks/Timelines:** 2 courses updated to integrate farm to table initiative in AY16-17

How can this action Goal lead to improvements in student learning and attainment of the program's learning outcomes (PLOs)? The PLOs focus on experiential and practical learning, and although broad in scope they are readily encompassed by the farm to table activities. PLO 1,3,4 and 5 are covered by farm production activities, marketing of vegetables during sales on campus, and daily interaction as part of a production team and with "clients" in the culinary program.	
Action Goal 2: Initiate facility improvements as part of a collaborative ATE project. The long term plan is to build a multi-use structure at the farm lab. This will include a food processing area, a certified kitchen, a classroom with restrooms and showers and equipment storage areas. The Ag program will be collaborating with other ATE programs on the funding proposal to the legislature and on general planning and building of the structure.	**Benchmarks/Timelines:** Develop project with legislators and administration, organize ATE collaborators and begin planning in AY16-17
How can this action Goal lead to improvements in student learning and attainment of the program's learning outcomes (PLOs)? This project directly facilitates PLO 1-5 for the agriculture program Additionally the college as a whole benefits from the physical results of project as well as the inherent benefits of collaboration.	
Action Goal 3: Initiate the development of a Farm Manager position to assist with HCC farm operations	**Benchmarks/Timelines:** Submit job description and supporting documentation to

	administration in AY 16-17 with the goal of this position being approved by the legislature for permanent G-funding

This position would directly support PLO 1 and 3. With an increasing focus on the productive capacity of the farm, the organizational and production management responsibilities will also expand. This position will allow the instructional faculty to focus on their primary duties and will support all students in the program being offered the highest quality instruction and support they need to succeed.

RESOURCE IMPLICATIONS

NOTE: General budget asks are included in the 3-year Comprehensive Review. Budget asks for the following categories only may be included in the Annual review: health and safety needs, emergency needs, and/or necessary needs to become compliant with Federal/State laws/regulations.

Please provide a brief statement about any implications of or challenges with the program's current operating resources.

The resources are sufficient for the current needs of the farm, however the program is in a transition to refocus the productive capacity of the farm and integrate production within coursework. This requires a reorganization of responsibilities and development of at least 1 new instructional position. Additionally the processing and classroom facilities at the farm will need updating as the farm to table component continues to grow.

For budget asks in the allowed categories (see above):	
Describe the needed item(s) in detail.	

Include estimated cost(s) and timeline(s) for procurement.	
Explain how the item(s) aligns with one or more of the strategic initiatives of 2015-2021 Strategic Directions.	

http://hawaii.hawaii.edu/sites/default/files/docs/strategic-plan/hawcc-strategic-directions-2015-2021.pdf

LEARNING OUTCOMES ASSESSMENT

For all parts of this section, please provide information based on CLO (course learning outcomes) assessments conducted in AY 2015-16, and information on the aligned (PLOs) program learning outcomes assessed through those course assessments.

If applicable, please also include information about any PLO assessment projects voluntarily conducted by the program's faculty/staff.

Evidence of Industry Validation and Participation in Assessment (for CTE programs only)

Provide documentation that the Program has submitted evidence and achieved certification or accreditation from an organization granting certification in an industry or profession. If the program/degree/certificate does not have a certifying body, you may submit evidence of the program's advisory committee's/board's recommendations for, approval of, and/or participation in assessment(s). **Please attach copy of industry validation for the year under review and submit with the document.**

Courses Assessed

- List all program courses assessed during AY 2015-16, including those courses for which a follow-up "Closing the Loop" assessment was implemented during the review year.

Assessed Course Alpha, No., & Title	Semester assessed	CLOs assessed (CLO# & text)	CLO-to-PLO alignment (aligned PLO# & text)
AG 33 Greenhouse Construction	Fall	CLO 1: Develop familiarity and demonstrate safe use habits with basic tools of construction.	CLO 1: PLO 3 Operate and maintain tools and equipment.

		CLO 4: Work with other students safely and productively to complete projects.	CLO 1, 4: PLO 5 Interact with customers and coworkers in ways that effectively support the work to be accomplished.
AG 54B Tropical	Spring	CLO 1: Utilize good agricultural practices and commercial production methods to enhance production and marketing of field crops. CLO 2: Demonstrate mastery of tools of production while promoting environmentally sound and labor saving technique. CLO 4: Actively engage in a positive manner with classmates and community to complete projects and promote agricultural education	CLO 1,2: PLO 1 Plan and manage projects and cultivate horticultural crops using legal; sustainable; safe; and ecologically, biologically, and technologically sound practices. CLO 1: PLO 4 Set-up and manage a business enterprise. CLO 2: PLO 3 Operate and maintain tools and equipment. CLO 4: PLO 5 Interact with customers and coworkers in ways that effectively support the work to be accomplished.
"Closing the Loop" Assessments Alpha, No., & Title	**Semester assessed**	**CLOs assessed (CLO# & text)**	**CLO-to-PLO alignment (aligned PLO# & text)**
n/a			

Assessment Strategies

For each course assessed in AY 2015-16 listed above, provide a brief description of the assessment strategy, including:

a description of the type of student work or activity assessed (e.g., research paper, lab report, hula performance, etc.);	AG 33 Students were assigned to work in groups of three to test outcomes of using the Dumpy Level. A peer evaluation was conducted to determine skill, accuracy, safety, and productivity of the assignment. AG 54B: The students were assessed through hands-on skill demonstration during the production and marketing of potted peppers and tomatoes. Students took part in all aspects of propagation, irrigation and bench setup, transplanting, fertilization, integrated pest management, pruning and training, and finally marketing and sales. Every step of this process was assessed as the plants grew and the various elements of the project presented themselves over the second half of the spring semester.
a description of who conducted the assessment (e.g., the faculty member who taught the course, or a group of program faculty, or the program's advisory council members, etc.);	AG 33: The instructor conducted the assessment. AG 54B: The instructor and APT conducted the assessment.
a description of how student artefacts were selected for assessment (did the assessment include summative student work from all students in the course or section, OR were student works selected based on a representative sample of students in each section of the course?);	AG 33: The students worked in groups of 3 to test outcomes. AG 54B: Due to the small class size, all students' work was considered in the assessment.

a brief discussion of the assessment rubric/scoring guide that identifies criteria/categories and standards.	AG 33: The rubric covered the basic positions in dumpy level operation: Rod holder, shooter and recorder. AG 54B: Technical skills rubric covered propagation, media prep, bench setup, irrigation, transplanting, training, pruning, marketing, and sales. Soft skills rubric covered attendance, attire, instructions, workspace organization, skills/ techniques, initiative, teamwork, workflow, time management, and professional conduct.

Expected Levels of Achievement

- For each course assessed in AY 2015-16, indicate the benchmark goal for student success for each CLO assessed.
  - example 1: "85% of students will Meet Standard or Exceed Standard for CLO#1";
  - example 2: "80% of students will attain Competency or Mastery of CLO#4."

Assessed Course Alpha, No., & Title	**Benchmark Goal for Student Success for Each CLO Assessed**
AG 33 Greenhouse Construction	CLO 1,4: 80% of students are expected to meet or exceed standards in all rubric assessed projects and artifacts.
AG 54B Tropical Agriculture Prod.	CLO 1,2,4: 80% of students are expected to meet or exceed standards in all rubrics (4.25 for soft skills and 3 for technical skills rubric)

Results of Course Assessments

For each course assessed in AY 2015-16:	
provide a description of the summative assessment results in terms of students' attainment of the CLOs and aligned PLOs.	AG 33: 86% of the students mastered the skills of the dumpy level while demonstrating safe use habits with basic tools of construction (CLO 1). 100% of the students met the standards of working together safely and productively to use the dumpy level correctly (CLO4). AG 54B: 70% of students achieved our benchmark of 4.25 or higher on the soft skills rubric 85% of students achieved our benchmark of 3 or higher for the technical skills rubric

	These are interesting results as they demonstrate there is a minimal gap in understanding regarding the technical skills involved in this project. Instruction of the practical aspects of the course appears to be effective based on the individual demonstration of mastery by the majority of students in the class. The failure of students to fulfill basic soft skills required of this course however is a concern. While the proper attire and attitude are perhaps the most easily achieved points towards a students grade they appear to be holding students back more than the technical skills at the core of this course and program. CLO#1, CLO #2 Students demonstrated the effectiveness of the project and assessment by exceeding the benchmark set for the technical skills rubric. CLO#4 While 70% of students achieved the benchmark set on the soft skills rubric, this number is below our expectations and represents an important area for growth and development within the course and program.

Other Comments

Include any additional information that will help clarify the program's course assessment results.	
Include comparisons to any applicable College or related UH-System program standards, or to any national standards from industry, professional organizations, or	n/a

accrediting associations.	
Include, if relevant, a summary of student survey results, CCSSE, e-CAFE, graduate-leaver surveys, special studies, or other assessment instruments used that are not discussed elsewhere in this report.	Students had an overwhelmingly positive response to hands-on learning and particularly to the opportunity to repeat tasks throughout the semester. This aligns with our assessment findings that practice and repetition are key for technical skills attainment.

Next Steps – Assessment Action Plan

Describe the program's intended next steps to improve student learning, based on the program's overall AY 2015-16 assessment results. Include any specific strategies, tactics, activities, or plans for instructional change, revisions to assessment practices, and/or increased student support.	
Instructional changes may include, for example, revisions to curriculum, teaching methods, course syllabi, course outlines of record (CORs), and other curricular elements.	AG 54B: To address weaknesses regarding CLO#4 and the poor performance on the soft skills rubric we have several proposed innovations. -The importance of soft skills will be explained in greater detail in the project outline at the beginning of the assignment -Grades will be recorded daily throughout the project, and students with marks below the benchmark will be notified immediately of the effect on their grade The goal of these changes is to increase awareness of the soft skills and increase the quantity and timeliness of feedback to the students regarding their performance.
Student support and outreach initiatives may include, for example, wrap-around student services, targeted tutoring and/or mentoring, etc.	AG 54B: The primary shortcomings in this assessment were in the soft skills category. These are difficult areas to support because they draw from the experiences of our students outside of class. Students face a range of adversity including illnesses, domestic issues, and substance abuse problems to name a few. These problems are best targeted through access to counseling and mentoring.

Part VI. Cost Per SSH

Please provide the following values used to determine the total fund amount and the cost per SSH for your program:

General Funds = $_____
Federal Funds = $_____
Other Funds = $_____
Tuition and Fees = $_____

Part VII. External Data

If your program utilizes external licensures, enter:

Number sitting for an exam _____
Number passed _____

Tuesday | April 18, 2017

Hawaii Tribune Herald

Hawaii Tribune-Herald
Hilo HI

Culinary Collaboration: HCC departments partner to serve up local produce

Published November 18, 2016 - 12:05am

HOLLYN JOHNSON/Tribune-Herald HCC students (from left) Kanani Kaaekuahiwi, Michael Trang and Nick Soares clean vegetables to put in food baskets Thursday morning during their farm to table program at the University of Hawaii at Hilo Agriculture Farm in Panaewa in preparation for an annual poinsettia and vegetable sale that they hold at Hawaii Community College.

By KIRSTEN JOHNSON Hawaii Tribune-Herald

It’s close to noon Thursday and the kitchen inside Cafe Standard — Hawaii Community College’s student-run, short-order restaurant — is bustling.

Jericho Tobin, a second-year culinary arts student, tosses together his self-created Thai salad — a sizzling plate of lollo rosso lettuce, grilled shrimp, shallots, roasted peanuts, cilantro and basil, topped with a spoonful of homemade kabocha squash-and-curry dressing.

“It’s kind of like an inverted vinaigrette,” the 23-year-old Tobin explains, as he drizzles the dressing over his creation and proudly pushes it over the counter.

Nearby, another student adorned in a white chef’s uniform tosses tomatoes onto a fattoush salad. And a third student-chef sprinkles cucumbers as the finishing touches on a bahn mi chicken sandwich.

These are just a few of the leafy greens and vegetables used to create Cafe Standard’s menu items, complex enough to find at any high-end Hilo eatery.

But at most restaurants in Hawaii, the vast majority of those vegetables are shipped from the mainland. Here, the opposite is true — up to 90 percent of Cafe Standard greens are grown about 4 miles away in greenhouses at the University of Hawaii at Hilo Agriculture Farm in Panaewa.

It’s all part of a “farm-to-table” partnership between HCC’s agriculture and culinary arts programs. The collaboration, which began two years ago, means much of the produce culinary students use to prepare meals at Cafe Standard, the campus cafeteria and its fine dining restaurant is grown locally at the farm by HCC’s agriculture students.

The concept is unique — instructors say no other UH campus in the state features a culinary-ag partnership like it. But they believe it could be easily replicated at other schools.

Ultimately, they say it shows students in both programs ways to support the local community and become more food independent — particularly in a state where up to 90 percent of food is imported from the mainland.

“Eventually, (culinary students) will get to that point in their career where they’re going to be in charge of a kitchen and going to think ‘Do I buy this case of mainland potatoes which might be cheaper? Or do I buy the local case?’” said culinary instructor Brian Hirata.

“And hopefully, all this collaboration will kind of stick with them and they’ll think, ‘I’ll stick with the local because it’s a better product, it’s better for the community and it’s more sustainable.’”

The state has taken measures aimed at increasing its food independence. For example, in September, Gov. David Ige pledged at an international conservation conference to double local food production in the state by 2030.

The University of Hawaii at Hilo also features a program called “Local First” in which up to 65 percent of food served at its campus dining halls is locally grown.

Lew Nakamura, HCC agriculture instructor, said it’s unlikely Hawaii would ever see the majority of its food produced locally, mainly because of densely populated places on Oahu.

But he thinks each island can become more self-sufficient — “grow for your own island … might be the model,” he said, and HCC’s partnership demonstrates that.

In the future, the agriculture and culinary programs want to sync their programs even more, Nakamura added, so that harvest is closely tied to culinary menu offerings.

“We are just lucky we have a good culinary program willing to take (our product),” Nakamura said. And we’re pretty confident the students can produce. As long as we can get someone willing to accept it. And the feedback we’ve gotten on this program everything is amazing. I don’t see why other (culinary and agriculture) programs can’t get into it.”

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