HAWAII COMMUNITY COLLEGE
PROGRAM REVIEW REPORT

Tropical Ecosystem and Agroforestry Management

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July 1, 2013 to June 30, 2014

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Program/Unit Review at Hawaii Community College is a shared governance responsibility related to strategic planning and quality assurance. It is an important planning tool for the college budget process. Achievement of Program/Unit Outcomes is embedded in this ongoing systematic assessment. Reviewed by a college-wide process, the Program/Unit Reviews are available to the college and community at large to enhance communication and public accountability.

Review Outline

Cover Sheet

Outline Page

CERC Rubrics Definitions and Score sheet

Program Description

3YR Review Report Summary

Part I: Quantitative/Qualitative Indicators

    A. Annual Report of Program Data (ARPD) Data Grid

    B. ARPD Data Analysis

    C. Trends & Other Factors

Part II: Analysis of the Program

    A. Alignment with Institutional Mission & Learning Outcomes (ILOs)

    B. Program Mission

    C. Strengths & Weaknesses

Part III: Program Student Learning Outcomes and Assessment

    A. Evidence of Industry Validation for CTE Programs

    B. Expected Level of Achievement

    C. Course(s) Assessed

    D. Assessment Strateg(y/ies) & Instrument(s)

    E. Results of Program Assessment

    F. Other Comments

    G. Next Steps

Part IV: Action Plan

    A. Course Review

    B. Goals & Planning

    C. New Goals and Alignment

    D. Perkins Core Indicator Action Plans (For CTE)

Part V: Resource Implications

    A. Cost Item 1

    B. Cost Item 2

Part VI: Justification for Program Existence

Program Description

Students learn to actively manage Hawai`I's native forest ecosystems, grow native plants, establish agroforestry operations, use Global Positioning Systems (GPS), and Geographic Information Systems (GIS). Internships give students on-the-job training with potential employers.

3yr Review Report Summary

Faculty member on sabbatical

CERC Comments and Feedback

CERC Comments:

Program has not been reviewed as yet by CERC

CERC provided recommendations intended as suggestions for improvement. Provide a brief response to the suggestions made. i.e. Were the suggestion(s) valid? What change(s) were made as a result of the suggestion(s)?, etc.

Need Example that includes in depth explanation:

Nothing to respond to

Part I: Quantitative/Qualitative Indicators
A. Annual Report of Program Data (ARPD) Data Grid
The following spreadsheet contains data from Program's ARPD for the past three (3) years.

	2010-2011	2011-2012	2012-2013
Overall Program Health	Cautionary	Unhealthy	Cautionary
Demand Indicators			
Demand Health Call	Healthy	Unhealthy	Unhealthy
Number of Majors	61	46.5	35
SSH in All Program Classes	277	204	239
Efficiency Indicators			
Efficiency Health Call	Unhealthy	Unhealthy	Cautionary
Average Class Size	9.8	7.6	7.4
Fill Rate	60%	43.3%	42.7%
Number of Low-Enrolled (<10) Classes	4	10	12
Effectiveness Indicators			
Effectiveness Health Call	Cautionary	Cautionary	Cautionary
Successful Completion (Equivalent C or Higher)	89%	89%	78%
Withdrawals (Grade = W)	0	0	1
Persistence (Fall to Spring)	71%	65.3%	66.6%
Unduplicated Degrees/Certificates Awarded	8	7	3
Transfers to UH 4-yr	2	4	0
Distance Education (DE): Completely On-Line Classes			
Number of DE Classes Taught	0	0	0
Enrollment DE Classes	n/a	n/a	n/a
Fill Rate	n/a	n/a	n/a
Successful Completion (Equivalent C or Higher)	n/a	n/a	n/a

Withdrawals (Grade = W)	n/a	n/a	n/a

	2009-2010	2010-2011	2011-2012
Perkins IV Core Indicators **Met or Not Met**			
1P1 Technical Skills Attainment	Met	Not Met	Met
2P1 Completion	Met	Met	Not Met
3P1 Student Retention or Transfer	Met	Met	Not Met
4P1 Student Placement	Not Met	Not Met	Met
5P1 Nontraditional Participation	Met	Met	Met
5P2 Nontraditional Completion	Not Met	Not Met	Met

B. ARPD Data Analysis

Based on the data from the ARPD, analyze the program's strengths and weaknesses in terms of demand, efficiency, and effectiveness.

Demand Health - Healthy	**Efficiency Health - Cautionary**	**Effectiveness Health - Cautionary**
The TEAM Program has an overall health rating of "Healthy." This is an improvement from last year's "Unhealthy" score on the Demand. However, we still feel that 2 County jobs in our field is well-below what is actually available to our graduates. We would like to see the codes reselected to more accurately reflect the substantial number of jobs available to our graduates in the State and County in future reports. For example, before CIP codes (2010) were changed the number of County jobs was nine-times what it is listed at today.	Our Efficiency Health Call is "Cautionary," as it was in last year's report. The number of Majors to FTE BOR Appointed Faculty (#12) is Healthy at 32:1. However, our Fill Rate (#10) is disappointingly low at 33.8% which brings down the overall score for Efficiency Health. The low fill rate for our majors courses is something that we are trying to address. Fall 2014, we worked with another program to allow students in our business-oriented course to take an ag-business course in place of our under-enrolled course. In Spring 2014 we did not offer our forest pest management course, instead asking that both freshmen and sophomores take it in Spring 2015. We are also working to increase	Our Effectiveness Health Call is "Unhealthy." Although 88% of majors successfully completed their courses, the persistence from fall to spring was 59%. Only 4 students (<13% of declared majors) graduated during this year. Seventy-five percent of these students transferred to a 4-year degree. The low number of jobs reported in the County (#2) adversely affects the effectiveness health call since we will obviously be attempting to graduate more than 2 students per year from our program.

	enrollment through making connections with local high schools.	

Overall Health - Cautionary

Distance Education: Completely On-line Classes

> None offered

Perkins IV Core Indicators

> We have met our goals for all but one of the six Perkins IV Core Indicators. Our students have a high successful completion rate (88%) and 50% meet the Perkins 2P1 Completion. We had 100% attainment of our Student Retention or Transfer goal (3P1). However, we are concerned about the Perkins Placement rate (4P1) which is only 57.14%. Our records indicate that all of our 2013-14 graduates either transferred to UH Hilo (75%) or were employed after graduation (25%) and we are not entirely sure where the discrepancy lies. Over 31% of our students are non-traditional (female) students (5P1) and 100% of our non-traditional students graduated (5P1). Thus, we have exceeded both 5P1 and 5P2 Perkins goals (127% of 5P1 and over 600% of 5P2). We have also exceeded the 1P1 goal with 100% of our students reaching Technical Skills Attainment.

Performance Funding (**Graduation, Native Hawaiian, STEM, Transfer, Degree**)

> Since last year we have doubled the number of degrees and certificates awarded, but have awarded somewhat fewer of them to Native Hawaiian students. All of our degrees are in STEM fields. We have approximately the same number of Pell Recipients as last year (over 70% of all majors). This year a large percentage of our graduates (75%) transferred to a 4-year degree program after graduation.

C. Trends & Other Factors

Describe trends including comparisons to any applicable standards, such as college, program, or national standards from accrediting associations, etc. Include, if relevant, a summary of Satisfaction Survey Results, special studies and/or instruments used, e.g., CCSSE, etc. Describe any external factors affecting this program or additional program changes not included elsewhere.

Part II: Analysis of the Program

A. Alignment with Institutional Mission & Learning Outcomes (ILOs)

1) College Mission Alignment

Hawai`i Community College (HawCC) promotes student learning by embracing our unique Hawai`i Island culture and inspiring growth in the spirit of *"E `Imi Pono."* Aligned with the UH Community Colleges system's mission, we are committed to serving all segments of our Hawai`i Island community.

	Information modified since previous 3 yr review

Describe how this Program supports the College's Mission

Example: The SUBS program's faculty and staff fosters excellence in education, workforce development, academic advising and co-curricular activities that focus on engaging, challenging and transforming students to strive for academic excellence, personal growth, contributing members of the Hawai`i Island Community.
Last Modified on: 10-14-2013

We actively challenge our students to learn about the unique factors affecting Hawaii's ecosystems and agriculture and require them to meet high academic standards before graduation.

2) ILO Alignment

a) ILO1: Our graduates will be able to communicate effectively in a variety of situations.

	Information modified since previous 3 yr review

Describe how this Program supports this ILO

Example: The SUBS program's curriculum prepares our graduates to communicate effectively by requiring the students to participate in: 1) small and large group discussions, both online and face-to-face; 2) individual and group presentations; 3) role play of interviewing and counseling skills; 3) fieldwork at practicum sites; 4) service learning activities on campus and in the greater community.
Last Modified on: 10-14-2013

Our classes expose the students to a broad range of communication and scenarios. Most classes require student oral presentations and/or writing assignments. Students are writing everything from short essays to lab reports and multi-page research and/or proposals.

b) ILO2: Our graduates will be able to gather, evaluate and analyze ideas and information to use in overcoming challenges, solving problems and making decisions.

	Information modified since previous 3 yr review

Describe how this Program supports this ILO

Example: The SUBS program's curriculum provides challenging assignments, practicum placements and in class practicum seminars that require our students to examine, discuss, and synthesize information to form conclusions for problem solving and decision making.
Last Modified on: 10-14-2013

TEAM is a STEM degree and much of the focus of the program and courses is on teaching students

to gather, evaluate, and analyze information and use this information to solve problems and make decisiosn. The majority of the courses required for the TEAM major require a laboratory class/section to be taken simultaneously. Through these lab and field experiences, our students learn to gather, evaluate and analyze information related to the natural world and the life sciences.

c) ILO3: Our graduates will develop the knowledge, skills and values to make contributions to our community in a manner that respects diversity and Hawaiian culture.

Information modified since previous 3 yr review

Describe how this Program supports this ILO

Example: The SUBS program's curriculum honors the cultural values and shared experiences of our students to encourage respect and understanding for diverse cultural communities and the host Hawai`ian culture. This is accomplished through class discussions and assignments, practicum placements and service learning activities that relate to local and Hawai`ian cultural practices.
Last Modified on: 10-14-2013

The majority of our courses are taught specifically for the Hawaiian environment. We feel that it is impossible to teach about the natural environment without teaching the human relationship to it; in Hawaii that includes a knowledge and respect of Hawaiian ideas and values. We also require a Hawaiian Studies course (HWST 105) for all of our majors that further bridges the gap between Western science and Hawaiian values.

B. Program Mission

(Official Program Mission)

Students learn to actively manage Hawaiʻi's native forest ecosystems, grow native plants, establish agroforestry operations, use Global Positioning Systems (GPS), and Geographic Information Systems (GIS). Internships give students on-the-job training with potential employers.

C. Strengths and Weaknesses
1) Strengths (Top 3 defined)

State Strength	Using supporting evidence, describe why this is a strength
S1. • Internships provide real world experience for TEAM students.	This past year, TEAM faculty coordinated internships for 10 students with local natural resource management agencies. In the past, many of our graduates have gone on to obtain employment with the agency they interned with and many will obtain p/t employment with their internship agency during their tenure in the program
S2. • The program has a strong relationship with its Advisory Board	We meet with our Advisory Board on a biannual basis (December and May) this strengthens the program and helps us to arrange internship opportunities for students.
S3. • The Program has the financial support of the USDA Agricultural	The grant is used to purchase materials and supplies, employ student workers and provide training to program participants. It provides a

Education and Technology Incubator grant	much broader range of experiences and resources to our students than we could otherwise provide. The grant is a collaboration between three Hawaii CC programs (HLS, AG, TEAM) and 10 UH campuses and provides the ability to interact with students and faculty outside the program	

2)Weaknesses (Top 3 defined)

State Weakness	Using supporting evidence, describe why this is a Weakness	Proposed solution
W1. • Under-prepared students that require remedial/developmental education prior to entering the program	As for many Hawaii CC programs, many of our entering students do not meet the requirements for taking College level courses and are destined to spend 1-4 semesters taking remedial courses before beginning TEAM-required coursework. This reduces enrollment in program courses and leads to a poor graduate to major ratio	Need for better support during remedial education and more summer bridge programs, especially for mathematics. A STEM Center where math and science are specifically targeted would help to provide support for our students.
W2. • Lack of articulation agreement with 4-year degrees at UHH	Approximately half our graduating students intend to continue their studies and the other half enter the workplace directly. Although we once had an articulation agreement ready to sign with UHH CAFNRM, UHH changed their requirements before it was signed and the pathways were no longer valid. Because of the lack of an articulation agreement, TEAM graduates have to spend a minimum of 3 additional years when going from a Hawaii CC A.S. to a UHH B.S. or B.A. program	Faculty from the TEAM program have begun discussion with faculty from UHH Geography, Environmental Science, and Environmental Studies programs over how to best move students between the programs. This will need administrative support to turn it from faculty-faculty discussions to official MOU.
W3. • Low enrollment	With only 32 students in the program (#3) and many of the students needing remedial coursework before beginning TEAM classes, our fill rate for TEAM classes (#10) is disturbingly low	Need to increase recruitment efforts. Need to work on agreements with High School Natural Resource programs and with high school counselors to promote TEAM as a viable college option. Request support from the Hawaii CC Administration and staff to educate the public about the program and to help make necessary contacts with high school counselors and students.

Part VI: Justification for Program ExistencePage 12

Part III: Program Student Learning Outcomes and Assessment
Program Student Learning Outcomes
List the Program Learning Outcomes.

	Program Student Learning Outcomes	Applicable Courses
1	Apply basic ecosystem concepts to natural resource management.	AG 175, AG 175L
2	Use an understanding of general scientific concepts in design of forestry systems.	AG 175, AG 175L
3	Use knowledge of applicable laws and regulations to make decisions about managing ecosystems.	
4	Apply effective interpersonal and communication skills.	AG 175, AG 175L
5	Recognize collect and interpret field data.	
6	Apply effective management practices to commercial or conservation efforts.	AG 175, AG 175L

A. Evidence of Industry Validation for CTE Programs

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, the recommendations for, approval of, and/or participation in, assessment by the program's advisory council can be submitted. – Describe the documentation; i.e. 9/27/2013 Minutes of ACC Advisory Council; Completed Rubrics by Advisory Council Members.

Forest TEAM Advisory Board Meeting: Dec. 5th, 2014 2:00 – 4:30 P.M.

1. **Review minutes of the Oct. 4th, 2013 meeting:**

   (SEE COMPUTER)
2. **Changes in the board membership:**

   No major changes since October, 2013. Tom is in the field today. Tom is on instead of Nick.
3. **Program Updates:**

   <u>Student employees</u>:
   - Rosa Motta (Le'i) is on board as the new administrative assistant
   - Edward Bufil, Agroforestry who is the greenhouse manager is at the National Park 2 days per week and has classes 10 hours per week; has been working on a seedling production ramp up.
   - Cole Rogers and Trisha Piilani-Pelanca are working in the Demonstration area
   - The recruiter position has not been filled; Le'i and Trisha will be assisting

with student

Recruitment.

Majors:

- Went from 41 to 29

- Recruited 15 (mostly word of mouth)

- 1 West Hawaii recruit; not much on the West side

Grants:

- USDA FY 2012/13 was spent out in August

- FY 2013/14 still has approximately 98K

- USDA 14/15 has not been tapped into

- HLS & AG : 30K

- 30K Overhead (40% no matter what)

- Open for input and ideas for the 15/16 Grant (submitted in Jan 15)

Distance Education:

- No students in Kona are taking classes via distance education.

- GIS night classes possibly be offered on neighbor islands; looking for tech person; 60 credit certificate; want to network so that connections can be made between different areas; it was successful in Fall 2014 so it is open for Spring 2015

Recruitment: Lēʻī will be assisting with recruitment

Other:

-Orlo is going on Sabbatical (Spring and Fall 2015); Zach Mermal will be teaching Silviculture (AG 245) and Capstone (AG 291); Tim S. will be teaching Field Mapping (GEOG 170)

- Course Development
Nick Cetch made a chainsaw course recommendation; iliahi projects with Forest Solutions; suggestions for a chainsaw use/trailer tow course with OCET; HFI is sponsoring a series of chainsaw courses (weekly modules); Rick Lopez; start from the beginning and progress with experience; U.S. Forest Service has park rangers certified to teach and certify; possible assistance with Fire Science.

-AG project at Kamoleao (Panaewa Community Garden, 5 acres)

-Earth day plants 1,000 plants every year; C.R. is a gatherer

-Bio Blitz - TEAM Volunteer/ Attendees

- Idea: cell biodiversity; scientists and students will look at life and what plants and animals are doing incorporating traditional field leaders with cultural experts; it will be beneficiary for both scientists and Hawaiian lifestyle perpetuators to explore each othersʻ perspective

- Hoping to provide free meals for volunteers

- There will be educational and public teams
- Goal: to do a bird count and to foster a sense of place and what it means to be where they are in the park

4. Reports

Conferences:
- 1 every 5 years World Congress on Agroforestry (Feb 2014 Pam attended in New Delhi)
- Diverse and Global; new recognition of reforestation as a carbon mitigation; there is big $ on agroforestry now
- Hawaii Conservation Conference - 2 HCC students had posters up on iliahi heartwood
-2015 HCC will be held at UH Hilo; we need to push to submit posters and gather volunteers and have a TEAM booth
-Agroforestry and Climate Change - Tropical Islands and Pacific Dimensions
- May 2014 Nebraska USDA Conference; USDA 2015 will be held in Washington D.C. again; N.American Colleges and Teachers of Agriculture; 2016 Hosting at Manoa

Internships (Spring 2014):
Jeffery Piper with the U.S. Forest Service
James Marlin iliahi heartwood analysis; Waele Lee
Keahilaka Balez with the U.S. Forest Service

Internships (Spring 2015):
Tisha Piilani-Pelance with Mauna Kea Watershed alliance; they had a issue with no available vehicles so we hope to get her an internship in the future where s he can actually get into the field.
Matthew Kahoʻohanohano DLNR Maui (USDA Funded)
Hanoa Puaʻa Frietas DLNR Maui (PIPES)
James Akau USFS (LSAMP) - Hamakua Streams
Amlan Fujimura DLNR Kauai (KUPU)
Sean Kirpatrick - PARC Aquaculture (PIPES) - Talapia in Panaewa
Charles Machado Kamoleao Community Garden (USDA)

New Work/Study Arrangements
Alu Like - need host; pay minimum but can pay additional from other funding
National Park - co-op arrangement accounts 50/50; GIS, nursery
HYCC/ KUPU/ USDA/ 3 Mountains Alliance

Employment/Continuing Education of recent graduates
Lori Bothwell - EPA Scholarship to complete MA on mainland
Taite Winthers-Barcelona - SCEP USFS with KMR restoration
Aaron Osorio - RCUH Mauna Kea watershed project
Shane Hiraoka - Forest Solutions
Edward Bufil - UHH and USFS Biocontrol on psycat; TEAM greenhouse manager
Cole Rogers - UHH and TEAM Agroforestry

Josaiah Jones - KUPU year long internship with NWR at Hakalau

Suggestions:

Potential Planning for Distance Learning for those affected by the Puna lava   flow

Small house lot project in town

3 workers, 5 month support with BISK to take out Albesia in Puna

NRCS needs workers; don't have funds; pathway is a new career minded

internship; Earth Team Volunteer; farm bill & conservation practices

Recruitment

Dryland Forest Restoration Frail around WHCC

B. Expected Level of Achievement

Describe the different levels of achievement for each characteristic of the learning outcome(s) that were assessed.
That represented "excellent," "good," "fair," or "poor" performance using a defined rubric and what percentages
were set as goals for student success; i.e. 85% of students will achieve good or excellent in the assessed activity."

C. Courses Assessed - List the course(s) (Alpha/#) assessed during this reporting period.

AG 175, PLO #1,2,4,6
AG 175L, PLO #1,2,4,6

Changes Implemented as a result of Assessment	Evaluation of the changes that were implemented
Change 1:	*Evaluation of Change 1:*
Change 2:	*Evaluation of Change 2:*
...	

D. Assessment Strateg(y/ies) & Instrument(s)

Strategy/Instrument 1: *Questions from Final Exam*
Strategy/Instrument 2:
Strategy/Instrument 3:
Strategy/Instrument 4:
...

E. Results of Program Assessment - Provide a summary of assessment results.

AG 175:
Questions that addressed the CLOs were assessed based on the following rubric: Correct answers were considered to meet the goal, incorrect answers failed to meet. For essay questions, it was considered exceeding if the student answered all portions of the question in a very clear and detailed manner with no factual errors; meeting if they answered most of the question in a clear manner with few errors; failing to meet if they did not answer the majority of the question and were not clear in their answer. There were 3 questions that addressed CLO1, 10 that addressed CLO 2, 15 CLO3, and 4 that addressed CLO 4. Each question was rated as 3=exceed, 2=meet, 1=failed to meet* and the pooled scores of each student were averaged. Because each CLO has a different maximum average (depending on the number of essay questions) we considered the overall score to be exceeds expectations only if the student got 100% of possible points. Meeting was considered an average score of over 1.6 and failing to meet was an average score of 1.6 or less.

For all CLOs it was predicted that at least 75% of the students would either meet or exceed the skills assessed in the rubric. The same criteria were given to PLOs.

* for non-essay questions the scores were only 1 = failed to meet; 2 = meet; it was not possible to be scored a 3 (exceeds) for these questions
CLO 1—Five students met the objective and one exceeded. For this CLO we had 100% attainment.

CLO 2 - Four students met the objective, one exceeded and one failed to meet. For this CLO we had 83% achievement.

CLO 3 - Five students met the objective and one exceeded. For this CLO we had 100% achievement.

CLO 4 -- Four students met the objective, one exceeded and one failed to meet. For this CLO we had 83% achievement.

AG 175L:
A final exam was given to the students. Questions that addressed the CLOs were assessed based on the following rubric: Correct answers were considered to meet the goal, incorrect answers failed to meet. For essay questions, it was considered exceeding if the student answered all portions of the question in a very clear and detailed manner with no factual errors; meeting if they answered most of the question in a clear manner with few errors; failing to meet if they did not answer the majority of the question and were not clear in their answer. There were 3 questions that addressed CLO1, 10 that addressed CLO 2, 15 CLO3, and 4 that addressed CLO 4. Each question was rated as 3=exceed, 2=meet, 1=failed to meet* and the pooled scores of each student were averaged. Because each CLO has a different maximum average (depending on the number of essay questions) we considered the overall score to be exceeds expectations only if the student got 100% of possible points. Meeting was considered an average score of over 1.6 and failing to meet was an average score of 1.6 or less.

For all CLOs it was predicted that at least 75% of the students would either meet or exceed the skills assessed in the rubric. The same criteria were given to PLOs.

* **for non-essay questions the scores were only 1 = failed to meet; 2 = meet; it was not possible to be scored a 3 (exceeds) for these questions**
CLO 1—Two students met the objective and four failed to meet. For this CLO we had only 33% attainment.

CLO 2 – Five students met the objective, and one failed to meet. For this CLO we had 83% achievement.

CLO 3 – Five students met the objective and one exceeded. For this CLO we had 100% achievement.

F. Other Comments

Need example here:

G. Next Steps

Need example here:

We failed to meet the objectives for CLO1: Recognize important agroforestry species in the field. However, I feel that this is more of a failure of the measure than a failure of actual teaching. It is difficult to assess student recognition of species in a paper exam situation. I would like to explore alternate methods of assessment for this lab class. I have spoken to Joyce Hamasaki about the possibility of using immediate assessment while still in the field with students (LiveText) and would like to explore this method for assessing the laboratory portions of my classes.

Part IV Action Plan
A. Course Review
a) 5 year Course Review Schedule with completion dates
State which courses where reviewed, original scheduled and actual review date.

Course Alpha Number	Course Title	Scheduled Review Date	Actual Review Date
AG 130	AGROFORESTRY BUSINESS MANAGEMENT	2014-2015	9/2013
AG 175	AGROFORESTRY	2018-2019	9/2013
AG 175L	AGROFORESTRY LAB	2018-2019	9/2013
AG 190V	INTERNSHIP	2017-2018	4/2001
AG 192	SELECTED TOPICS IN FOREST ECOSYSTEM MANAGEMENT	2015-2016	4/1992
AG 245	TROPICAL SILVICULTURE & FOREST PLANT PROPAGATION	2015-2016	4/2002
AG 245L	TROPICAL SILVICULTURE AND FOREST PLANT PROPAGATION LAB	2015-2016	4/2002
AG 275	FOREST PEST MANAGEMENT	2016-2017	4/2002
AG 275L	FOREST PEST MANAGEMENT LAB	2016-2017	12/2001
AG 291	FOREST ECOSYST MNGMENT	2018-2019	6/2009
GEOG 170	FOREST ECOSYSTEM SURVEYING, INVENTORYING, AND MONITORING	2016-2017	4/2002
GEOG 170L	FOREST ECOSYSTEM SURVEYING, INVENTORYING, AND MONITORING LABORATORY	2016-2017	11/2000
GEOG 180	GEOGRAPHIC INFORMATION SYSTEMS IN FOREST ECOSYSTEM MANAGEMENT	2017-2018	4/2002
GEOG 180L	GEOGRAPHIC INFORMATION SYSTEM IN FOREST ECOSYSTEM MANAGEMENT LABORATORY	2017-2018	11/2000

b) Next 5 yr 20% Course Review Schedule

Course Alpha Number Title		2015-2016	2016-2017	2017-2018	2018-2019
AG 130 - AGROFORESTRY BUSINESS MANAGEMENT					
AG 175 - AGROFORESTRY					√
AG 175L - AGROFORESTRY LAB					√
AG 190V - INTERNSHIP				√	
AG 192 - SELECTED TOPICS IN FOREST ECOSYSTEM MANAGEMENT		√			
AG 245 - TROPICAL SILVICULTURE & FOREST PLANT PROPAGATION		√			
AG 245L - TROPICAL SILVICULTURE AND FOREST PLANT PROPAGATION LAB		√			
AG 275 - FOREST PEST MANAGEMENT			√		
AG 275L - FOREST PEST MANAGEMENT LAB			√		
AG 291 - FOREST ECOSYST MNGMENT					√
GEOG 170 - FOREST ECOSYSTEM SURVEYING, INVENTORYING, AND MONITORING			√		
GEOG 170L - FOREST ECOSYSTEM SURVEYING, INVENTORYING, AND MONITORING LABORATORY			√		
GEOG 180 - GEOGRAPHIC INFORMATION SYSTEMS IN FOREST ECOSYSTEM MANAGEMENT				√	
GEOG 180L - GEOGRAPHIC INFORMATION SYSTEM IN FOREST ECOSYSTEM MANAGEMENT LABORATORY				√	

B. Goals & Planning

List Program Goals and specify which goals addressed/completed during review period. Give a progress report for each goal and describe the degree to which the goal was achieved over the review period.

Goals	Progress Evaluation & Evidence of Achievement
Survey graduates In progress	Use survey results to revise Program
Assess Learning Outcomes	IN progress. Completed for 2 courses.
Work with the Advisory Board to continue adapting and revising the program to meet the needs of the employers	Continue to meet with Board. Have increased meetings from annual to twice/year
Complete articulation agreement with UHH and UHM	In slow progress
Work with the Natural Resources Career Pathways program to increase enrollment	In progress
Continue to work with potential employers to provide internship opportunities for students	Continual. 10 internships arranged for Spring/Summer 2014.
Continue to work with Jr Forest TEAM club throughout Hawai'i Island	temporarily suspended due to manpower constraints
Assess PLOs	Regular assessment as per 5-year plan. Changed to CLO assessment. PLO will be assumed to be assessed as the matching CLO are covered
Assess CLOs	Regular assessment as per 5-year plan
Work with local organizations to provide service learning opportunities	Continual. Service Learning opportunities provided through TEAM or HawCC Service Learning on a regular basis: 2-5 per month

Additional Comments

Additional comments regarding previous goals

C. New Goals and Alignment
State Goal 1

Goal 1

Increase Program enrollment

State ILO(s) Goal 1 aligns with and provide supporting reasoning
Example: Goal 1 aligns with ILO2 (Critical Thinking) by … Goal 1 aligns with ILO3 (Community contribution) by ...
Goal 1 aligns with ILO2 (Information analysis) in that new students will be strongly educated in data gathering and analysis through the goals of the program.

State Strategic Plan (SP) Reference(s) Goal 1 aligns to and provide supporting reasoning
Example: Goal 1 aligns with SP A1.1.c by ... Goal 1 aligns with SP B.1.c by … Goal 1 aligns with SP B.3.b by …

Proposed New SP Action Strategy/Strategies (if applicable)

State Academic Master Plan Reference(s) Goal 1 aligns to and provide supporting reasoning
Goal 1 Aligns with the AMP Underserved Populations: Native Hawaiians AND Low Income in that the majority of the students we attract are from low-income families and a large percentage of our students are native Hawaiian.
Goal 1 aligns with the AMP Green Curricula and Sustainability in that it is probably the "greenest" program on campus, teaching students how to improve the sustainability of both agriculture and forests.
Goal 1 aligns with the AMP Graduation, Remediation and Workforce Training. Although a large percentage of our students arrive needing remedial courses, the program is very good at helping them to graduate once they have entered Program courses and we have an excellent track record of student placement in the workforce. We have a strong reputation as producing quality workers.
Goal 1 aligns with the AMP Increasing Graduates in STEM. We are a STEM program and if we can attract

more students into the Program, we will increase the number of STEM graduates from this campus

Proposed New AMP Action Strategy/Strategies (if applicable)

	STEM	Graduation Remediation Workforce	Student Transfer	Underserved Populations	Green Curricula	Program Development
Example: *Increase the number of STEM Degree programs at HawCC*						**X**

UH System Collaboration (if applicable)

We are talking with faculty from UHH Environmental Science, Environmental Studies, and Geography programs to work out an articulation for our students to their 4-year degree programs. This will provide more opportunities for TEAM graduates

Calendar of planned activities for Goal 1 - In chronological order, briefly describe the procedures/activities planned to achieve Goal 1

Activity	When will the activity take place
Contact Administration to request help in recruiting students	*Spring 2015*
Work with staff to create recruitment brochures and slide shows	Spring-Fall 2015
Visit High Schools	Spring 2016

State Goal 2

Goal 2

State ILO(s) Goal 2 aligns with and provide supporting reasoning

Example: Goal 2 aligns with ILO2 (Critical Thinking) by …   Goal 2 aligns with ILO3 (Community contribution) by ...

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State Strategic Plan (SP) Reference(s) Goal 2 aligns to and provide supporting reasoning

Example: Goal 2 aligns with SP A1.1 by ...

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Proposed New SP Action Strategy/Strategies (if applicable)

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State Academic Master Plan Reference(s) Goal 2 aligns to and provide supporting reasoning

Example: Goal 2 aligns with AMP A1.1 by ...

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Proposed New AMP Action Strategy/Strategies (if applicable)

	STEM	Graduation Remediation Workforce	Student Transfer	Underserved Populations	Green Curricula	Program Development

UH System Collaboration (if applicable)

Part VI: Justification for Program ExistencePage 25

Calendar of planned activities for Goal 2 - In chronological order, briefly describe the procedures/activities planned to achieve Goal 2

Activity	When will the activity take place

D. Perkins Core Indicator Action Plans (For CTE)

List specific action plans for any Perkins Core Indicator for which this program did not meet the goal.

Perkin's Indicator	Action Plans	When will the activity take place
2P1		
3P1		
4P1	Work with Advisory Board to ensure employers know about our students	Already begun. Ongoing. However, according to our records we had 100% job placement or transfer for our graduates. We are not sure where the discrepancy lies.
1P1		

Part V: Resource Implications

A. Cost Item 1

Description	Type	Cost
STEM Center	Structure	ca $1,000,000

State Strategic Plan (SP) Reference(s) Cost Item 1 aligns to and provide supporting reasoning

Example: Cost Item 1 aligns with SP A1.1 by ...

| |
| |
| |

State Academic Master Plan (AMP) Reference(s) Cost Item 1 aligns to and provide supporting reasoning

Cost Item 1 aligns with the AMP Increasing Graduates in STEM. Having a dedicated STEM Center will improve our campus reputation in regards to STEM, thus attracting more STEM students and will provide support for STEM students, helping to improve graduation rates.

Cost Item 1 aligns with the AMP Graduation, Remediation and Workforce Training. Many of our students are in need of remediation and tutoring to help them graduate. A STEM Center will help to provide in ways that faculty alone cannot.

Cost Item 1 Aligns with the AMP Underserved Populations: Native Hawaiians AND Low Income in that the majority of the students we attract are from low-income families and a large percentage of our students are native Hawaiian many of these students need STEM support that would be provided with a STEM Center

| |

State Strength (From Part II. Section C) Cost Item 1 addresses and provide supporting reasoning

S1. • Internships provide real world experience for TEAM students.

State Weakness (From Part II. Section C) Cost Item 1 addresses and provide supporting reasoning

W1. • Under-prepared students that require remedial/developmental education prior to entering the program

Briefly explain why Cost Item 1 is necessary to meet priorities of program and/or to address strengths and/or weaknesses.

A STEM Center on campus would provide a place where students in need of academic assistance could find tutoring. It would also provide space to house a "clearinghouse" of internship opportunities in the STEM fields. This would be helpful to students, faculty advisors, and potential mentors/employers.

B. Cost Item 2

Description	Type	Cost
Faculty Release Time	Personnel	$7,000

State Strategic Plan (SP) Reference(s) Cost Item 2 aligns to and provide supporting reasoning

Example: Cost Item 2 aligns with SP A1.1 by ...

State Academic Master Plan (AMP) Reference(s) Cost Item 2 aligns to and provide supporting reasoning

Cost Item 2 aligns with AMP Student Transfer by helping to provide a pathway for students with a TEAM degree to seamlessly transfer to a 4-year program.

State Strength (From Part II. Section C) Cost Item 2 addresses and provide supporting reasoning

Example:

State Weakness (From Part II. Section C) Cost Item 2 addresses and provide supporting reasoning

W2. • Lack of articulation agreement with 4-year degrees at UHH

Briefly explain why Cost Item 2 is necessary to meet priorities of program and/or to address strengths and/or weaknesses.
TEAM faculty are primarily teachers with a 27-hour per year course load. There is release time for working with Program and Grant related duties but those duties are sufficiently time intensive to leave little free time for working on an articulation agreement with the 4-year UH campuses. An additional 3-6 hours release time would allow a TEAM faculty member to prioritize the articulation with one or both of the campuses

C. Cost Item 3

Description	Type	Cost
Jr. TEAM coordinator	Personnel	$150/week

State Strategic Plan (SP) Reference(s) Cost Item 3 aligns to and provide supporting reasoning
Example: Cost Item 2 aligns with SP A1.1 by ...

State Academic Master Plan (AMP) Reference(s) Cost Item 3 aligns to and provide supporting reasoning
Cost Item 3 aligns with AMP Increasing Graduates in STEM. If we can attract new students by working with the high schools we will likely graduate more of them and TEAM is a STEM degree. Students who participate in Jr. TEAM are less likely to be under prepared when entering College.

State Strength (From Part II. Section C) Cost Item 3 addresses and provide supporting reasoning
Example:

State Weakness (From Part II. Section C) Cost Item 3 addresses and provide supporting reasoning
W1. • Under-prepared students that require remedial/developmental education prior to entering the program

Briefly explain why Cost Item 3 is necessary to meet priorities of program and/or to address strengths and/or weaknesses.
This would allow us to hire a student coordinator to work with Jr. TEAM club. The Jr. TEAM Club is a high school club that works as a recruiting and program promotion tool for TEAM. Many high schoolers do not know that the program exists and/or are unaware that opportunities exist for working with natural resources management. Having a student tasked with running this program will help us to recruit students into the program and interact with them while before they apply, hopefully encouraging them to put more effort into the courses they need to gain the pre-requisite skills for a college-level science degree.

Part VI: Justification for Program Existence

Write a brief statement describing the value of this program to the College.

STEM Education is being increasingly recognized as an important, but overlooked aspect of American education. Green Curriculum and understanding of ecological sustainability are important academic pathways and recognized by the AMP as two of the most important goals of the College. The TEAM program provides a solid STEM education for Hawaii CC students with an emphasis on sustainable/green practices. Our graduates are highly sought-after by employers (for example, 2 2104 MOU between Hawaii CC/TEAM with the US Forest Service: one for a 2-year scholarship and internship for a low-income, native Hawaiian student, the other for two 5-year rotating student internships with the Hilo USFS).