

HAWAI'I COMMUNITY COLLEGE PROGRAM COMPREHENSIVE 3-YEAR REVIEW REPORT

Fire Science

Date November 15, 2015

Review Period

July 1, 2012 to June 30, 2015

AY 2012-13, AY 2013-14, and AY2014-15

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Program/Unit Review at Hawai'i 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 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/program-unit-review/>

PART I: ANALYSIS OF PROGRAM

• Overall Program Health: **Cautionary**

- Majors Included: FS Program CIP: 43.0203

Demand Indicators		Program Year			Demand Health Call
		12-13	13-14	14-15	
1	New & Replacement Positions (State)	65	65	67	Unhealthy
2	*New & Replacement Positions (County Prorated)	9	10	11	
3	*Number of Majors	80	101	102	
3a	Number of Majors Native Hawaiian	43	56	53	
3b	Fall Full-Time	54%	60%	63%	
3c	Fall Part-Time	46%	40%	37%	
3d	Fall Part-Time who are Full-Time in System	1%	3%	0%	
3e	Spring Full-Time	52%	53%	56%	
3f	Spring Part-Time	48%	47%	44%	
3g	Spring Part-Time who are Full-Time in System	2%	5%	1%	
4	SSH Program Majors in Program Classes	736	1,077	1,116	
5	SSH Non-Majors in Program Classes	106	90	61	
6	SSH in All Program Classes	842	1,167	1,177	
7	FTE Enrollment in Program Classes	28	39	39	
8	Total Number of Classes Taught	17	17	17	

Note: For AY 13-14 the Demand Indicators were “Healthy”. For 14-15 it is now “Unhealthy”. When asked how it went from Healthy to Unhealthy while the numbers remained virtually the same, I was told that the formula was changed. This new formulation has an impact on my Program’s Overall Program Health. See 2015 Annual Review Report.

Efficiency Indicators		Program Year			Efficiency Health Call
		12-13	13-14	14-15	
9	Average Class Size	18	24.6	24.6	Cautionary
10	*Fill Rate	65.1%	92%	92%	
11	FTE BOR Appointed Faculty	1	1	1	
12	*Majors to FTE BOR Appointed Faculty	79.5	100.5	102	
13	Majors to Analytic FTE Faculty	45.7	57.7	58.6	
13a	Analytic FTE Faculty	1.7	1.7	1.7	
14	Overall Program Budget Allocation	\$87,063	\$104,925	Not Yet Reported	
14a	General Funded Budget Allocation	\$57,743	\$62,659	Not Yet Reported	
14b	Special/Federal Budget Allocation	\$0	\$10,977	Not Yet Reported	
14c	Tuition and Fees	\$29,320	\$31,289	Not Yet Reported	
15	Cost per SSH	\$103	\$90	Not Yet Reported	
16	Number of Low-Enrolled (<10) Classes	0	0	0	

*Data element used in health call calculation

Last Updated: October 7, 2015

Effectiveness Indicators		Program Year			Effectiveness Health Call
		12-13	13-14	14-15	
17	Successful Completion (Equivalent C or Higher)	87%	86%	94%	Healthy
18	Withdrawals (Grade = W)	3	2	0	
19	*Persistence Fall to Spring	59.3%	74.5%	82.8%	
19a	Persistence Fall to Fall	43.1%	51.5%	54.3%	
20	*Unduplicated Degrees/Certificates Awarded	8	19	17	
20a	Degrees Awarded	6	14	10	
20b	Certificates of Achievement Awarded	2	6	11	
20c	Advanced Professional Certificates Awarded	0	0	0	
20d	Other Certificates Awarded	0	0	0	

21	External Licensing Exams Passed	Not Reported	Not Reported	N/A
22	Transfers to UH 4-yr	1	2	0
22a	Transfers with credential from program	0	0	0
22b	Transfers without credential from program	1	2	0

Distance Education: Completely On-line Classes		Program Year			
		12-13	13-14	14-15	
23	Number of Distance Education Classes Taught	0	0	0	
24	Enrollments Distance Education Classes	N/A	N/A	N/A	
25	Fill Rate	N/A	N/A	N/A	
26	Successful Completion (Equivalent C or Higher)	N/A	N/A	N/A	
27	Withdrawals (Grade = W)	N/A	N/A	N/A	
28	Persistence (Fall to Spring Not Limited to Distance Education)	N/A	N/A	N/A	

Perkins IV Core Indicators 2013-2014		Goal	Actual	Met	
29	1P1 Technical Skills Attainment	91.00	86.11	Not Met	
30	2P1 Completion	47.00	33.33	Not Met	
31	3P1 Student Retention or Transfer	75.21	73.61	Not Met	
32	4P1 Student Placement	68.92	64.00	Not Met	
33	5P1 Nontraditional Participation	17.50	8.16	Not Met	
34	5P2 Nontraditional Completion	16.00	13.33	Not Met	

Performance Funding		Program Year			
		12-13	13-14	14-15	
35	Number of Degrees and Certificates	8	20	21	
36	Number of Degrees and Certificates Native Hawaiian	2	9	11	
37	Number of Degrees and Certificates STEM	Not STEM	Not STEM	Not STEM	
38	Number of Pell Recipients	39	46	43	
39	Number of Transfers to UH 4-yr	1	2	0	

*Data element used in health call calculation

Last Updated: October 7, 2015

- College Mission:

The Fire Science program prepares individuals with the academic knowledge for entry employment in the Fire Service field as well as meeting the needs of in-service professionals. The Fire Service at the federal, state, or local level provides emergency first responders to help the residents of the Island of Hawai`i. The program addresses the unique resource requirements of the Island of Hawai`i.

- Institutional Learning Outcomes (ILOs):

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

Firefighting is a team effort. Incidents can vary in size and complexity from small two individual incidents, on up to large complex incidents where up to 2,000 personnel are involved. Effective communications between members of an Emergency Incident is crucial to the safety and success of the operation. Students are taught to use a variety of tools to communicate effectively, whether you are communicating with one individual or you need to communicate with thousands of personnel.

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

There is no book on how to fight fires. Each incident is a unique experience, and students are taught the first step in responding to any type of incident is to “Size-up” the situation. This requires the student to maintain Situational Awareness, obtain data from a variety of sources, analyze the data, formulate a plan, consistently evaluate the effectiveness of the plan and make modifications if necessary.

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

The Fire Service is responsible for a variety of incidents that provide emergency services to the community. Services provided but not limited to are; structural and wildland fire suppression, hazardous materials, search and rescue, and emergency medical service. Students are also taught that they have a responsibility to be good stewards of the land. Fire suppression efforts should take into consideration the protection of cultural and natural resources.

- 2008-2015 Strategic Plan: the Program's alignment with the 2008-2015 Strategic Plan and the value of the Program to the College in terms of achieving that Strategic Plan's goals and initiatives.

Strategic Outcome

B: Address critical workforce shortages and prepare students for effective engagement and leadership in a global environment.

Performance Measures:

B.1 Increase the number of degrees awarded and/or transfers to UH baccalaureate programs that lead to occupations where there is a demonstrated state of Hawai'i shortage of qualified workers, or where the average annual wage is at or above the U.S. average (2006=\$38,651).

The annual salary for a Hawai'i County Firefighter is \$44,691.

The Fire Science program continues to increase the number of graduates. The UH System currently does not offer a Baccalaureate in Fire Science. Our students are currently enrolled through distance learning provided by Colorado State University's Fire and Emergency Services Administration program.

Graduation Rates

Year	Certificate of Achievement	Associate of Science	Total
2013	2	5	7
2014	6	14	20
2015	10	7	17

The Fire Science program provides the federal, state or local fire service agencies with a pool of highly educated and motivated students. Fire Service agencies are increasing the educational requirements for employment due to constantly changing “Standard of Care”, along with the latest technological developments, and equipment used by firefighters.

The Fire Science degree greatly enhances the student’s employment opportunity. Employment in the fire service provides well-paying jobs and a good career.

- Assessment results: discuss how the overall results of course-level assessments during the 3-year period under review demonstrate the Program’s achievements or challenges in meeting its Program Learning Outcomes (PLOs).

PLO website: <http://hawaii.hawaii.edu/assessment/outcomes.php#plo>

Fire 207 Hazardous Awareness Operations and Fire 202 Fire Hydraulics were assessed. The courses assessed demonstrate that the students are exceeding the Expected Level of Achievement. No further changes are expected. See Annual Review Report.

- CERC comments and feedback: based on the CERC comments and feedback from your most recent Comprehensive Review, discuss CERC’s recommendations and your Program’s successes and/or challenges in implementing them.

1. **CERC Comment**: Reviewers wondered what the student demand is for a bachelor’s program in Hawai’i.

Feedback: Two HFD personnel have received their BS from Colorado State University (CSU), and we have approx. six students currently enrolled in the CSU program. The requirement for higher education in the fire service has not diminished. When asked if a BS program were available at UH-Hilo, approx. 20 of my senior students indicated they would continue their education. Having a program that addresses the limited resources available and the unique cultural impact on the residents of the State of Hawai’i during emergency operations cannot be replaced by a distance learning program from Colorado.

2. **CERC Comment:** Internship courses undoubtedly better prepares students for the workforce and the partnership with the Hawai'i Fire Department is invaluable. However, the narrative should have included a more detailed explanation of how the proposed new Fire 293 course would fit overall into the program.

Feedback: Even though the Hawai'i Fire Department Fire Chief supported this initiative, the Hawai'i County Corporate Council would not approve the agreement over concerns of the students being injured and County liability. For this reason I am no longer pursuing adding this course to the curriculum.

3. **CERC Comment:** How will dedicated classroom space benefit the learners and the program? What is the justification for a dedicated classroom?

Feedback: The term dedicated is inappropriate. A better term would be identified classroom space. Currently the Nursing program and UH-Hilo are providing the required classroom space. However, this is available on a semester by semester request. If for some reason these classrooms were unavailable, it would have a significant impact on one of the college's largest programs.

Other successes, challenges/barriers, concerns, and/or other issues not addressed elsewhere in this Comprehensive Report.

- Successful submitted a proposal for Carl D. Perkins funding for a "Bullex Fire Extinguisher Training System". This system allows students a realistic experience in using a fire extinguisher effectively. The cost for the units totaled \$34,000.00.
- I also support new technologies that promote learning. For our Fire 101 Essentials of Fire course "Resource One" came out with a new online supplement to the Essentials text. I purchased one iPad and the Social Science Dept. purchased another iPad for our Lecturers to monitor the progress of students as they complete the online assignments.

PART II: ACTION PLAN

For this section, describe and discuss your Program's Action Plan for the 3 year period from July 1, 2015 through June 30, 2018. For each action strategy or tactic, provide details about the goal, expected level of success, implementation timeline, and any challenges or barriers you anticipate may affect implementation or success.

Action Plans must align with the new Hawai'i Community College 2015-2021 Strategic Plan. Discuss how the Program's Action Plan aligns with and supports the 2015-2021 Strategic Plan's Initiatives, Strategies, and Tactics.

HGI Action Strategy 3:

Anticipate and align curricula with community and workforce needs. Tactics

- Utilize current State and Hawai'i Island information about workforce, employment and salaries from the Department of Labor and Industrial Relations, Economic Modeling Specialist International and other sources.
- Follow up with graduates and employers regarding Hawai'i CC students' preparation for the workforce and community.
- Engage systematically with community-based groups to inform program offerings and curricula.
- Develop new programs that are responsive to Hawai'i Island's community needs.

As the population of the Island of Hawai'i continues to grow, the demand for fire and emergency medical services will continue. A career in the fire service serves the community and provides high paying jobs for our students. All these align to all four tactics.

1. In the Fall, 2016 semester, Emergency Medical Technician (EMT) training will be added to the Fire Science curriculum. This is a 16 credit course that will be presented in the fall and spring semesters. Initially we will hire a full time Lecture. Considering the expertise required to administer, and the workload involved, this should eventually be filled by a full time tenure tracked faculty member.
2. Once the FAA Regional Training Facility is built at the Kona Airport, I will explore the possibility of offering the Fire Science program at the Palamanui campus. Finding qualified instructors, classroom space, and resources to duplicate the current program will require a challenge.

3. I will continue to pursue a Bachelor of Science in Fire and Emergency Service Administration degree program at UH-Hilo. Having a traditional classroom program vs. a distance learning program would increase the number Fire Science graduates pursuing a higher education.

The above align with the HawCC 2015-2021 Strategic Plan.

PART III: Budget Items

For this section, describe and discuss your Program's cost-item "budget asks" for the 3 year period from July 1, 2015 through June 30, 2018. For each budget item, describe the needed item in detail, including cost(s) and timeline(s).

Budget asks for all categories of cost items may be included in the 3-year Comprehensive Review. Explain how the item aligns with the Hawai'i Community College 2015-2021 Strategic Plan (see link above in Part II). Identify and discuss how each item aligns with the Strategic Plans Initiatives, Goals, Action Strategies, and Tactics.

1. A full time Lecturer position required to teach the EMT courses has an annual salary of \$52,008 plus 42.45% benefits.
2. EMT supplies will be needed to administer the courses. I am currently formulating the equipment list and costs, and plan to request Perkins Funding.

This aligns with HGI Action Strategy 3. (See above)