

2024 Annual Report of Program Data

Fire Science



1. Program or Unit 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.

Upon completion of this program, students will have the knowledge to prepare for a career with federal, state, and local fire and emergency service agencies, with an emphasis on Structural Fire Fighting, Wildland Fire Suppression, Hazardous Materials Incidents, Fire Prevention and Investigation, Emergency Medical Technician, Fire Management and Administration, and Incident Command System.

After earning the Associate in Science (A.S.) Degree, students have the opportunity to pursue a Bachelor's Degree in Fire Administration from an accredited university through distance learning.

Health and physical requirements vary with different employers in the Fire Service field, so prospective students should seek advice before enrolling.

2. Program Student Learning Outcomes or Unit/Service Outcomes

Program Learning Outcomes	ILO Alignment
PLO 1: Meet the minimum academic training requirements of the National Fire Protection Association's (NFPA) Standard 1001, Standard for Fire Fighter Professional Qualifications (Fire Fighter I).	ILOs 1, 2, 3, 6
PLO 2: Perform as fully qualified wildland firefighters (FFT2) in accordance with National Wildfire Coordinating Group PMS 310-1 standards.	ILOs 1, 2, 3, 6
PLO 3: Utilize the Incident Command System to manage a wide variety of planned and un-planned incidents.	ILOs 1, 2, 3

PLO 4: Demonstrate knowledge of modern fire service strategies, tactics, and management for both structural and wildland fire incidents.	ILOs 1, 2, 3, 6
PLO 5: Meet the requirements for National Fire Protection Association's (NFPA) 472, Standard for Professional Competence of Responders to Hazardous Materials Incidents for the Awareness and Operational Levels.	ILOs 2, 3
PLO 6: Apply the principles of interpersonal communication, cooperative teamwork, supervision, and management for leadership in the fire service.	ILOs 1, 3
PLO 7: Apply theoretical principles of the chemistry of fire and hydraulics to solve water supply problems.	ILO 2

Due to the workload of a single faculty Program Coordinator, I was unable to assess student learning outcomes. However, I will work with the Assessment Coordinator to get the program back on track with assessments.

3. Analysis of the Program/Unit

<https://uhcc.hawaii.edu/varpd/index.php?y=2024&c=HAW&t=CTE&p=3005>

The population of the Island of Hawai`i continues to grow and age. The demand for firefighters and emergency medical services by the federal, state and local fire service agencies remains high for student employment. There is also an increase in employment opportunities in the private sector who provides fire protection systems such as sprinklers for business.

Demand:

- The number of majors has declined slightly from 93 to 80. I believe this is due to a low unemployment rate and a good economy.
- The number of Native Hawaiians enrolled has declined slightly from 48 to 44.

Efficiency:

- I am the only BOR faculty member who teaches and serves as the Fire Science Program Coordinator. I administer the program by supervising 9 Lecturers on the Manono and Palamanui Campuses.
- There has been a slight decline in class size. There is also a slight decline in the number of majors due to a healthy economy and low unemployment rate.

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- The number of low enrollment classes is on the Palamanui Campus. We are taking a proactive approach to increasing class enrollment by attending numerous high school career fairs and informing the community of the Fire Science program on the Kona side.
- The Fill Rate for F-2-F classes is 51.1%. However, the Fill Rate for DE classes are 79%. I do not believe this is a significant issue.

Effectiveness:

- The Successful Completion rate is at 86%.
- The number of unduplicated degrees/ Certificates awarded has increased to 43. The Fire Science program consistently accounts for approx. 20% or higher of all AS degrees awarded by the college.

Distance Indicators:

- The number and enrollment in DE classes have remained steady. Some students prefer DE classes over F-2-F classes.
- Successful Completion is at 92%.
- Persistence remains high at 90%

Perkins Indicators:

- All Perkins Indicators were met.

Performance Indicators:

- The total number of degrees and certificates awarded remains high at 68.
- The number of degrees and certificates awarded to Native Hawaiians was 36.
- 27 students were Pell Recipients.
- 3 students transferred to a UH 4-yr. program.
- Emergency Medical Responder (EMR) 40 hrs.,4 credits has been added to the FS curriculum. The course is designed to better prepare our students for taking the Emergency Medical Technician (EMT course).

4. Action Plan

The following is from the Comprehensive Report of AY18-19 to AY20-21.

- Provide students with the educational requirements by the State of Hawai'i for Emergency Medical Technician Licensure.
Timeline: Fall 2025
Results: The State Legislature in 2021 passed legislation identifying 4 levels of EMT Licensure in the State of Hawai'i. We now provide the educational requirements for our students to obtain Licensure as an EMT Non-Transport.
- Increase enrollment in the Palamanui campus by 10% by informing the Kona side communities of the availability of the Fire Science program at Palamanui.
Timeline: Continuous

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Results: We are continually promoting the Fire Science program at the Palamanui Campus by attending numerous high school career day events.

- Address the issue of identified classroom space for Fire Science and EMT classes on the Manono Campus and provide storage space at the Palamanui Campus for fire equipment. *Supplies are currently stored at the Kona Airport Fire Station and the Hualalai Fire Brigade Station (near the Pāalamanui Campus). A Matson Container would resolve this issue.*

Timeline: Fall 2024

Results: The FS program has been using classrooms 139 and 215 in Bldg. 383 when available. It would be beneficial if classrooms were identified for the FS program.

Matson has donated a 20 ft container which now allows us to store our EMT and fire equipment at the Palamanui Campus. However, we continue to store some equipment at the Hualalai Fire Brigade Station because it is advantageous to have the equipment there.

- Increase Successful Completion to 95%.

Timeline: Continuous

Results: Our current Successful Completion rate is 92%. We will continually work on improving.

- Disposition of Fire Engine.

Timeline: Fall 2025

Results: We are currently in the process of removing the Fire Engine.

Proposed Action Plan:

The Fire Science program is currently in a good position with high enrollment, high graduation and students finding employment opportunities. The State of Hawai'i now considers wildland fire the number 1 threat to the State due to the Lahina Fire. The following action items will improve the overall program.

1. With the support of the Administration, HawCC needs approval to add Emergency Medical Technician-Advanced Life Support (ALS) which is 38 hrs. and 1.3 credits to our curriculum. This would allow our students to apply for Licensure at the EMT-Transport level from the Department of Commerce and Consumer Affairs (DCCA).
2. Plan to pursue the possibility of establishing an Internship Program with the Hawai'i Fire Dept.
3. Meet with the FS Advisory Board members to ensure the current curriculum meets industry standards and the needs of the community.
4. Explore an 8-week curriculum.
5. Explore ways to increase student hands-on experience.
6. Promote professional development for lecturers.
7. Open a discussion with the Administration on tailoring low enrollment Fire Science Courses at Palamanui due to demographics.

All action items align with the [Ka'ao Ka'ika'i Strategic Plan AY2023 - AY2029:](#)

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MISSION: To promote lifelong learning, Hawai'i Community College will emphasize the knowledge and experience necessary for Kauhale members to pursue academic achievement and workforce readiness. Aligned with the mission of the UH Community Colleges, we are committed to serving all segments of our Hawai'i Island community.

5. Resource Implications

Special Resource Requests not included in your operating "B" budget

*Detail any special resource requests not funded by your regular operating budget, including reallocation of existing resources (physical, human, financial) to support action or Perkins plans. *Note that CTE programs seeking future funding via UHCC System Perkins proposals must reference their ARPD Section 4. Action Plan and this ARPD Section 5. Resource Implications to be eligible for funding.*

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

I AM requesting additional resource(s) for my program/unit.

Total number of items being requested: 0 (4 items max.)