AUTHORIZATION TO PLAN (ATP) AN ACADEMIC PROGRAM  (Revised 06/12/07)

Please complete all sections with an emphasis on items 7, 8, 9 and 10. The ATP is not to exceed 5 pages.

1. School/College and Department/Unit
   Hawaii Community College, Liberal Arts Division, Social Sciences Dept.

2. Chair/Convener of Planning Committee
   Mr. Jack M. Minassian, 933-3235

3. Program Category:  X New ___Modified ___ Interdisciplinary

4a. Degree or Certificate Proposed:
   Certificate of Achievement (C.A.) in Fire Science
   Associate in Science (A.S.) Degree in Fire Science

4b. List similar degrees or certificates offered in UH System:
   Honolulu Community College offers a C.A. and A.A.S. Degrees in Fire Science

5. Planning
   a. Planning period (not to exceed one year or reapplication is necessary)
      Planning period will be from August 1, 2007 to August 1, 2008.

   b. Activities to be undertaken during the planning phase
      • Develops course curriculum and course outlines.
      • Recruit lecturers for specific courses.
      • Works with facility staff for providing classroom space.
      • Actively recruits students for the program.
      • Provides counseling for students pursuing a career in the fire service.
      • Develops a brochure for the program.
      • Promotes and represents the Fire Science program with various fire service organizations such as: Big Island Wildfire Coordination Group, California, Nevada, and Hawaii Wildfire Council, Hawaii Fire Chiefs Organization, West Hawaii Wildfire Management Organization, FIREWISE, etc.
      • Develops a Fire Science Advisory Board to provide support and guidance for the fire science program represented by the various fire service organizations.
      • Develops video conferencing pedagogy capabilities.
      • Works with the West Hawaii campus to provide courses for residents of the entire island.
      • Develops procurement support for instructor materials, student workbooks, etc.

   c. Submission date of program proposal
      Proposed Date of Implementation:  Fall 2008
d. Workload/budget implications during planning period
   Most of the planning is currently being completed by Mr. Jack M. Minassian.

6. Program Description (Objectives and relationship to campus mission and strategic plan)
The Fire Science Program is a four-semester program which prepares individuals for entry employment in the Fire Service field as well as meeting the needs of the in-service professionals. Emphasis is placed on four basic areas of fire safety: Prevention and Inspection, Fire Control, Rescue and Emergency Medical, and Management and Administration. Students completing the program may earn a Certificate of Achievement (C.A.), or an Associate in Science Degree (A.S.). The Program will provide a wide range of Fire Science courses to include: Wildland Fire, Structural Fire, Hazardous Materials, Crash and Rescue, and Incident Management System courses to be developed similar to Honolulu Community College. Initially courses would be taught at night utilizing classrooms that would normally remain vacant.

The Hawaii Community College Fire Science program will offer a Certificate of Achievement after students have completed 30 credit units, and an Associate in Science Degree after completing a minimum of 60 credit units.

Upon completion of this program the student will demonstrate knowledge and skills required to respond appropriately to fire and emergency situations at the private, city, state, or federal level with emphasis in one or more of the following areas:
- Wildland Fire Fighting
- Hazardous Materials Handling
- Structural Fire Suppression
- Natural Disaster Response
- First Responder
- Emergency Medical Technician
- Prevention and Investigation
- Incident Command System

The establishment and maintenance of a Fire Science Program would provide numerous benefits for our local population with the fire protection agencies across the State of Hawaii.

7. Program Justification (Needs and Rationale. Include, as appropriate, internal and external factors driving need for this program; description of needs assessment; number of interested student per year; need for such a program in relation to workforce development, graduate studies, etc.)

   The employment and training demands for a Fire Science Program by our local County Fire Department, National Parks Service, State Department of Transportation Airports Division, State Department of Land and Natural Resources Division of Forestry and Wildlife, U.S. Fish and Wildlife Service, U.S. Army and others indicates the need for a Hawaii Community College based Program.

Although Honolulu Community College has a Fire Science Program there is justification as to why Hawaii Community College should offer a similar program. Foremost is economics. Residents of the Island of Hawaii who decide that they would like to pursue a career in the fire science have determined they could not afford to attend college on Oahu. Travel to and the general cost of living on Oahu compared to Hilo is significant.
Hilo also offers a wide variety of affordable housing for students. Working with the Hawaii County Fire Department, we can customize the program curriculum to meet the needs of the Island of Hawaii. Oahu is highly urban with some rural areas, whereas the Island of Hawaii is mostly rural with urban areas that continue to grow. For Island of Hawaii residents who are members of the numerous volunteer fire departments, having a fire science program on Hawaii offers the opportunity to take fire specific courses for those who do not wish to pursue a degree program. Hawaii Community College should provide employment opportunities for residents by local fire agencies on Hawaii Island rather than having to recruit firefighters from off-island.

By providing classes towards a C.A., or A.S. degree in Fire Science at Hawaii Community College, the Hawaii County Fire Department would recognize and acknowledge the degree for entry level positions and for career advancements and promotion.

Presently, candidates vying for an entry level fire fighter recruit position are not recognized or credited for having a fire science degree based on lack of availability to the general and local population. Historically, approximately 5-10 applicants already have a degree. Once a program is established and maintained, credit for a degree in Fire Science could be developed and implemented.

Presently, the County of Hawaii Fire Department recognizes the possession of a Fire Science degree through the allocation of education and experience points for each candidate. Although few employees currently possess a Fire Science degree due to a lack of an available and accessible program, individuals who have already obtained an educational degree have demonstrated that their educational and physical capabilities allow them to qualify for higher ranking positions. As an example, during a recent promotional process for Fire Equipment Operator, only one candidate possessed an A.S. Degree in Fire Science and he attained the maximum obtainable points for the Education and Experience component of the selection process which assisted in the overall assessment score and subsequent promotion. It would be desirable to be able to require a Fire Science Degree as a minimum qualification for specific ranked positions; however, until the program is made available and accessible to the employees, it would be discriminatory to have such requirements.

Currently the County of Hawaii Fire Department maintains the employment of over 330 uniformed fire fighters/emergency medical services providers as well as a cadre of over 325 volunteer fire fighters. Given the current economic trends and the construction boom, the service demands and resource inventory needs will increase. Concurrently, the restructuring and reorganization of the department necessary to meet these challenges will result in an increase in recruitment and career advancement opportunities.

The County of Hawaii Fire Department is currently challenged with filling 346 vacant positions and 107 new positions for existing Fire Stations. These numbers would increase with the development of new fire stations. Over the past two years, Hawaii County has trained 102 new fire fighter recruits and will be training another 40 fire fighter recruits through September of 2006.
In the Hawaii County Fire Department Annual Report 2001-2002, the Hawaii County Fire Department takes great pride in being the only Fire Department in the State to incorporate the Emergency Medical Services Program into its primary mission profile. Having personnel dual-trained and capable of providing a variety of specialized functions makes for operational flexibility and efficiency and has manifested in a direct impact on victim survivability as well as promoting a more consistent and efficient transition of victim care. The Hawaii Fire department's newest firefighters were the first recruits to undergo basic emergency medical technician training and receive EMT-B certification. Effective training is the key to providing quality service and to better serve the public.

The Hawaii County Fire Department Volunteer Division represents another unique concept implemented to support the delivery of critical emergency services. The delivery of fire protection and other essential services to the island’s many remote and isolated “pocket” communities would be a financial and logistical impossibility without the support of an active volunteer fire fighter program. Presently, the Hawaii County Fire Department’s Volunteer program consists of 23 Volunteer Companies and over 300 Volunteer Fire Fighters.

The Fire Science program will afford opportunities for members of the volunteer fire departments to upgrade their skills by attending individual fire courses.

The County of Hawaii is home to Pohakuloa Training Area (PTA), the largest DOD installation in the State of Hawaii, and the Keaukaha Military Reservation with 509 acres. It is also home to four National Park Services sites and four airports.

**County of Hawaii National Parks Services**
- Pu'ukohola Heiau National Historic Site: 85.30 acres
- Pu`uhonua o Honaunau National Historical Park: 182 acres
- Kaloko-Honokohau National Historic Park: 1160 acres
- Hawai`i Volcanoes National Park: 333,000 acres

**County of Hawaii Airports**
- Hilo International Airport: 1,391 acres
- Kona International Airport at Keahole: 3,450 acres
- Upolu Airport: > 20 acres
- Waimea-Kohala Airport: 90 acres

• The following agencies are involved with fire incidents on the Island of Hawaii:
  o Hawaii County Fire Department
  o State of Hawaii Division of Forestry and Wildlife
  o National Park Service
  o U.S. Fish and Wildlife Service
  o U.S. Army
  o Hawaii County Civil Defense
All are members of the Big Island Wildfire Coordinating Group (BIWCG).

• The population of the Island of Hawaii continues to grow which will increase the number of human caused fires and demand for better fire protection.
Since the 1960s, alien fire adapted grasses have become established on the Island of Hawaii altering the natural fire regime from a low frequency, low intensity to a high fire frequency and high fire intensity fire regime.

Increased construction on Hawaii Island increases the Wildland Urban Interface problem.

Over the past several years, periods of droughts have exposed even normally non-flammable portions of Hawaii Island to extreme fire behavior.

Currently there is no program available for the residents of the Island of Hawaii who are interested in pursuing an academic education in Fire Science.

8. Description of resources required
   a. Faculty (existing and new FTEs)
      Existing FTE of 0.4 Lecturer, and new FTE of 1.0 Faculty and 0.2 Lecturer.
   b. Library resources (including an evaluation of current resources and an estimate of the cost of additional resources required)
      Some new library resources are anticipated, and will be identified during the planning process.
   c. Physical resources (space, equipment, etc.)
      Office space will be required for the Fire Science faculty, and storage space for equipment necessary to support the program.
   d. Other resources required (staff, graduate assistantships, etc.)
      The National Park Service and Hawaii County Fire Department have agreed to provide some equipment necessary for instructing students in fire fighting operations. Rather than HCC purchase the equipment, it will be cost effective to borrow from these agencies.

9. Five-Year Business Plan. Provide a five-year projected budget for the program that includes:
   a. Annual costs to implement the program
      See attached Excel program.
   b. Projected enrollment and estimated tuition revenue.
      See attached Excel program.
   c. How will be program be funded?
      The program will be funded by: a) Rural Development Grant  b) Campus tuition and fees for lecturer positions.
   d. Does the current or proposed budget (Department/College/Campus) include funds or a request for funds for the proposed program? Please provide details.
      The college plans to request funding for 1 FTE faculty position in the next Biennium request, as well as funding for support costs including lecturer costs.
   e. Given a “flat budget” situation, how will the proposed program be funded?
      The college would be forced to draw down on its reserve fund surplus to pay for a program that is projected to break even within four years.
   f. Mini Cost Revenue Template (Excel; top of next page)
### PROGRAM COSTS

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<td>Other</td>
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### REVENUES

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<td>Other Sources of Income</td>
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<tr>
<td><strong>TOTAL Revenues</strong></td>
<td>58,575</td>
<td>65,175</td>
<td>72,600</td>
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10. Impact on current courses or programs. None are anticipated.

11. If this program is multidisciplinary, provide evidence of commitment for support from the colleges, departments, programs, and/or individuals expected to participate. N.A.

Reviewed by: *The ATP has completed the campus approval process prior to review by Council of Chief Academic Officers*

**Campus Chief Academic Officer:**
Comments and Recommendations:

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Print Name  Signature  Date

**Council of Chief Academic Officers (Systemwide Consultation):**
Comments/Recommendations:

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Print Name  Signature  Date

**Chancellor:** ___ Approved  ___ Disapproved

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Print Name  Signature  Date
(Final signed copy is provided to the Vice President of Academic Planning and Policy for Program Action Report)