

# SB3073

## Testimony

Measure Title: RELATING TO THE UNIVERSITY OF HAWAII AT HILO.

Report Title: UH Hilo; School of Aeronautical Science; Appropriation (\$)

Description: Establishes a school of aeronautical science at University of Hawaii at Hilo to offer a bachelor of science in aeronautical science. Makes appropriation.

Companion:

Package: None

Current Referral: HEA, WAM

Introducer(s): KAHELE, BAKER, CHUN OAKLAND, DELA CRUZ, ENGLISH, ESPERO, GABBARD, GALUTERIA, GREEN, INOUE, KEITH-AGARAN, KIDANI, KOUCHI, NISHIHARA, SHIMABUKURO, SLOM, TANIGUCHI, TOKUDA, Harimoto, Ihara, Kim, Riviere, Ruderman, L. Thielen, Wakai





# **UNIVERSITY OF HAWAII SYSTEM**

## **Legislative Testimony**

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Testimony Presented Before the  
Senate Committee on Higher Education and the Arts  
Tuesday, February 9, 2016 at 1:30pm  
by  
Don Straney, Chancellor  
University of Hawai'i at Hilo

### **SB 3073 – RELATING TO THE UNIVERSITY OF HAWAII AT HILO**

Chair Taniguchi and members of the committee:

My name is Donald Straney, Chancellor of the University of Hawai'i at Hilo and I am presenting the University's testimony in support of SB3073. This bill will help advance the development of a degree program of aeronautical science.

For the past two years, I have been working with the late Senator Gilbert Kahele to establish an aeronautical science program at the University of Hawai'i at Hilo. Together we have had to work through a number of issues in trying to develop plans for the program to be successful and financially sustainable. Beginning with a comprehensive study of opportunities and options, we have developed a four year curriculum for the degree program. We are in the final stages of identifying a provider of flight instruction and securing facilities at the Hilo airport to house the program.

Aeronautical science programs are expensive for students because of the number of flight hours required. These programs are complex for a campus due to the need to contract with a third party to provide both the flight instruction and the aircraft and simulators required. We continue to develop our recruiting strategy and the business plan for the program.

The University appreciates the financial support provided by this bill. This measure will help alleviate the significant funding component to make the program sustainable and more affordable to potential students. UH-Hilo will also be pursuing approval from the UH Board of Regents in order to establish a new degree, and legislative appropriation specific to the program will help ensure financial sustainability. Board of Regents' approval for the program is required before we can recruit students.

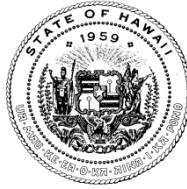
The University requests that SB3073 be amended so that its funding appropriation is spent over multiple years, rather than via a single year appropriation in FY2016-17. Section 2 of SB3073 specifies that funds be "appropriated out of the general revenues of the State of Hawaii the sum of \$500,000 or so much thereof as may be necessary for fiscal year 2016-2017 for implementation costs, including salaries and facilities, of establishing a school of aviation at the University of Hawaii at Hilo."

In order to establish the aeronautical science program, it would be optimal to provide \$250,000 in the inaugural year to establish the program (FY2016-17), but the University would request annual funding be added to the UH-Hilo base in the budget. UH will work with the Legislature to ensure the funding can be appropriated into the base budget at UOH210 – University of Hawai'i Hilo.

We seek the ability to attract outstanding aeronautical science educators to provide their knowledge and experience in the program building process. A recurring yearly allotment of \$250,000 in appropriated aeronautical science faculty positions is the single best way to ensure Senator Kahele's vision is realized. UH Hilo shares the Senator's vision of a "world-class aviation training program" established in Hilo to provide opportunities for the youth of our community and beyond.

The University supports the intent of this bill to work towards achieving Senator Kahele's dream that our keiki can earn an aeronautical science degree in the state and enter careers in aviation.





**Testimony by:**  
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DIRECTOR

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IN REPLY REFER TO:

**STATE OF HAWAII**  
**DEPARTMENT OF TRANSPORTATION**  
869 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813-5097

February 9, 2016  
1:30 p.m.  
State Capitol, Room 224

**S.B. 3073**  
**RELATING TO THE UNIVERSITY OF HAWAII AT HILO**

Senate Committee on Higher Education and the Arts

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The Department of Transportation (DOT) **supports** this bill to provide funds to the school of aviation at the University of Hawaii at Hilo (UHH).

The UHH aviation program will create degree programs in aeronautics and provide opportunities for Hawaii's youth to pursue professional aviation careers within the state, as well as attract students from throughout the country and Pacific region. Aviation is essential to our island state and its economy, and this program will strengthen the State's aviation capabilities.

Thank you for the opportunity to provide this testimony.

Aloha all,

The need for a School of Aviation in the State of Hawaii is still a great one. It should be a four year Bachelor of Science degree complete with all the necessary levels of flight training. I; however strongly believe that this school of aviation should be on Oahu versus Hilo. Instead of establishing a new school of aviation at UH Hilo from scratch, the old Honolulu Community College program should be moved to the UH West Oahu campus, and it should be a 4 year bachelor degree while still having all the flight training done at nearby Kalaeloa Airport.

**Why UHWO instead of UH Hilo:**

- 1) **Save the State money:** UHWO is already well established and can accommodate a new School of Aviation. All academics commensurable to any bachelor degree plus the majority of all aeronautic courses should be taken at the UHWO campus. All the flight and simulator training should be done at the Kalaeloa airport where the facilities (hangar and ramp area) are already establish and is already at a reasonable price. The cost of leasing the flight training aircraft and running a flight school that is up to the standards of a 4 year bachelor program would be the same if not more reasonable than at UH Hilo. The simulator equipment and training materials from the old HCC aviation program are already established and can be transferred to the new 4 year program.
- 2) **Save the students money.** The student base is larger on Oahu than in Hilo and if the majority of the students are from Oahu, they will not have to incur the additional cost of housing and transportation. Most students especially in an aviation program are working students and it would be easier for them to support themselves on Oahu than Hilo in the majority of cases.
- 3) The **weather** at Kalaeloa is more conducive to flight training than the weather at Hilo.

**Why should the State establish a 4 year Bachelor of Science, School of Aviation:**

- 1) I am a recently retired Hawaiian Airlines pilot and while I was there, I was the chairperson for Hawaiian Airlines Pilots “Aviators for Education”. We are over 60 volunteer pilots willing to share our experiences to those interested in careers in aviation. We averaged over 60 events per year, mostly at schools and average impacting over 4000 students per year. I know, first hand that there is a great interest in our students wanting to become pilots or to have careers in aviation.
- 2) There will be a great need for future pilots and we must start training them now. According to the USA Today’s article “Pilot Shortage Looms for Airlines” dated January 7, 2013; it states that globally they estimate the need for 8000 pilots/ year. For the next 10 to 20 years, 460,000 pilots will be needed internationally; 69,000 just in North America.
- 3) The School of Aviation should be at the University level not the community college level. Not only would that allow it to become a first class 4 year bachelor’s program but also should be marketed as an International Flight Training Center. This would make it essential to not only local students, but it would attract students from all over the Asian Pacific Basin.

If you have any questions or need clarification, please call me at (808) 780-7116.

Mahalo Nui Loa,

Harold H. Fujii

Retired Hawaiian Airlines Captain

REPORT TO THE 2013 LEGISLATURE

HCR107/SCR156 SD1

URGING THE CREATION OF AN EXPLORATORY COMMITTEE TO  
CONSIDER THE ESTABLISHMENT OF  
AN INTERNATIONAL AVIATION TRAINING CENTER AT  
THE HILO INTERNATIONAL AIRPORT AND AN  
ADVANCED AVIATION DEGREE TRAINING PROGRAM  
AT THE UNIVERSITY OF HAWAII AT HILO

JANUARY 2013

A Report to the 2013 Legislature  
In Response to HCR107/SCR156 SD1

HCR107/SCR156 SD1 request that the Governor convene a ten-member exploratory committee with two members each representing 1) the University of Hawai'i at Hilo, 2) the Hawai'i Community College, 3) the Department of Transportation Hilo Airport Division, 4) the Hawai'i County Office of Research and Development and 5) the Hawai'i aviation community, who will provide the technical expertise on aviation in Hawai'i and implementation of the program and be selected from a list of Federal Aviation Administration licensed Part 121 commercial aviation pilots that hold a current airline transport type rating, fly class one medical, and operate aircrafts in Hawai'i. This exploratory committee is requested to examine the feasibility and necessary resources of establishing an international aviation training center at the Hilo International Airport and an advanced aviation degree training program at the University of Hawai'i at Hilo and to report its findings and recommendations, including any budget requests and proposed legislation.

### Introduction

This report consists of two parts: 1) a summary of efforts to examine the future of aeronautics and 2) a report on the findings and recommendations of the aviation exploratory committee convened by the Governor in the summer of 2012.

### Background Summary

The University of Hawai'i (UH) strategic plan goals are articulated with the higher education and workforce needs of the state in the *University of Hawai'i System Strategic Outcomes and Performance Measures, 2008-2015*. One of these measures is to increase degrees in science, technology, engineering and math (STEM) fields. In order to stimulate high tech and high wage economic sectors for the state and its citizens, the State of Hawai'i is on record at the executive level, the legislative level, and the university level arguing for the need to invest in STEM education and economics. One crucial area of opportunity that fits in all of these areas is aeronautics. Hawai'i is already deeply invested in moving forward in attempting to grow an aerospace and aeronautics sector. In 2013, a team of University of Hawai'i electrical and mechanical engineering students will be the first in the nation to launch its student built satellite by NASA. On Hawai'i Island, Mauna Kea will host the largest telescope in the world at the Thirty Meter Observatory. Aeronautics is a baseline building block of studies and knowledge for these and others. In addition, aviation (fixed wing and rotary) are crucial forms of transportation for this ocean state. Aeronautics not only supports these other aerospace knowledge suites, it is a hub for other crucial STEM programs such as meteorology, safety science, engineering, avionics, and others. Aviation is an applied STEM program that will draw many young students to these educational areas. Additional aeronautical curriculum offerings would allow the University of Hawai'i system to excel in applied and basic science, technology, engineering and mathematics fields that would provide the essential aeronautical training curriculum for its graduates to be competitive in the global aviation industry.

## Findings

The aviation exploratory committee was tasked with conducting an assessment to identify relevant needs in the global aeronautical spectrum. Findings from this assessment are as follows:

### Pilot Demand

There was an overall consensus by the committee that the aviation industry as a whole is facing a global pilot shortage in the near future. Over the next 20 years, passenger travel demand will grow annually at 5.0% and cargo will grow at 5.8% with emerging markets in the Asia-Pacific region leading the way. In order to meet the demand due to retirements and attrition, 19,000 pilots need to be trained annually. Currently, there are 12,000 pilots being trained at all US flight schools and aviation university programs. Boeing, the largest aircraft maker in the world, projects 466,650 pilots and 596,000 maintenance mechanics will need to be trained by 2030. Boeing and Airbus base these numbers on 30,000 new aircraft orders as the aging worldwide aircraft fleet is retired. In addition, the entry of Unmanned Aircraft Systems (UAS) into the civilian aviation flight structure by 2015 will add to the increased demand for pilots further increasing the projected pilot shortage. In Hawai'i, hundreds of students attend mainland aviation programs accounting for millions of dollars in revenue leaving the State. The primary reason for this is the required level of academic and practical flight training in the aeronautical field is non-existent in Hawai'i. In the fall of 2013 the FAA is expected to increase the flying hour requirements and level of training for pilots flying in Part 121 operations which encompass all major US airlines. These increased standards will no doubt increase the safety of US passenger operations but will make it more difficult for a pilot to attain their Airline Transport Certificate (ATP) requiring more flight hours and advanced training. The baseline standard at major US airlines today, to include Hawai'i based Hawaiian Airlines, prefer applicants who have attained a baccalaureate (4 year) degree, airline transport certificate (ATP), received their primary training either from an accredited institution or the military and have a significant number of flight hours. Currently there are no programs in the State of Hawai'i that can prepare a student for this high level of qualification. In addition, Hawai'i, which has the best strategic geographical location to Asia, is best poised to benefit from the Asia-Pacific market if Hawai'i had a world class aviation program.

### Location

Hilo, Hawai'i provides the perfect environment for a world class international aviation training center. Hilo's unique meteorological conditions, underutilized land at Hilo International Airport, low air traffic activity, active air controller and radar facilities, excellent instrument training and convenient location of the airport to Hawai'i Community College (HawCC) and UH-Hilo (UHH) is ideal. In addition, Hilo offers relatively inexpensive housing and a local culture that is compatible with many Asia-Pacific international students who would be attracted to the program. As mentioned before, UH Hilo's Astronomy program and its associated 'Imiloa Astronomy Center, world class telescopes on Mauna Kea and the future UH-Hilo Department of Engineering would all complement the aviation training center and associated programs outlined below.

## Recommendations

The exploratory committee is recommending that the Chancellors of the University of Hawai'i at Hilo and Hawai'i Community College reconstitute an aviation exploratory committee upon the final report being submitted to the legislature and governor to further its research into the proposed aeronautical program. Utilizing a 2+2+2 base model for the International Aviation Training Program the committee's recommendations are as follows:

### Proposed Aeronautical Training Programs at Hawai'i Community College and UH-Hilo

1. Professional Helicopter Pilot- Associates of Applied Science (Hawai'i Community College)  
(\*See appendix A1)
2. Professional UAS Pilot- Associates of Applied Science (Hawai'i Community College)  
(\*See appendix A2)
3. Professional Airplane Pilot- Bachelors of Science (University of Hawai'i at Hilo)  
(\*See appendix A3)

### Proposed International Aviation Training Center at Hilo Airport

4. (\*See appendix A4)

### Future Related Aeronautical STEM & Advanced Degrees at Hawai'i Community College and UH-Hilo

5. Hawai'i Community College AAS in Aerospace Operations
  - Avionics/UAV Electronics (Integrate with marine radio and electronic instrumentation)
  - Flight dispatch / Flight Service Specialist / Meteorologist
  - Air Traffic Control
  - Space Launch & Control
  - Aviation Business Administration
6. University of Hawai'i at Hilo BS in Aerospace Operations Management -Three specialties within the degree:
  - Flight Operations Management (Flight Dispatch, Flight Service Specialist, Meteorologist, Air Traffic Control, Space Launch & Control)
  - Maintenance Management (Airframe & Power plant, Avionics, UAV Electronics)
  - Management & Logistics (Aviation Business Administration & Aviation Safety)
7. University of Hawai'i at Hilo Potential Advanced Aeronautical Degree Programs (MAS)
  - Master of Aeronautical Science
  - Master of Science in Aeronautics
  - Master of Science in Aerospace Engineering
  - Master of Science in Aviation Management
  - Master of Business Administration in Aviation Management (MBA-A)

### Proposed Legislative Funding for Fiscal Year 2013

8. The committee recommends that the 27th Hawai'i State Legislature appropriate \$350,000 for the hiring of a Program Coordinator (1) and an APT Support Staff (1) who will begin in the Spring of 2014, a Feasibility Study, an Economic Impact Study, and a draft Authorization To Plan (ATP) for each of the proposed degree programs and associated campuses which will be submitted to the University of Hawai'i Council of Chief Academic Officers (CCAO) for review. In addition, the program coordinator will draft a complete program proposal for each of the programs which will describe the programs in detail. The program coordinator will work in conjunction with the exploratory committee and the Hilo community to complete the necessary studies and planning.

### Proposed Implementation Schedule

9. Assuming future resources are provided, the following proposed implementation schedule is recommended:
  - A. Aviation committees report submitted - Spring 2013
  - B. 27th Legislature Appropriation - Fiscal year 2013 Budget (\$350,000)
  - C. Program Coordinator & Staff on Contract - Spring 2014 to Spring 2015
  - D. Authorization to plan & program proposal, economic/feasibility studies completed- Spring 2015
  - E. Program plan finalization & Board of Regents review & final approval - Spring 2016
  - F. Interim facilities completed - Fall 2016
  - G. Faculty hired - Fall 2016
  - H. Inaugural class enrolled - Spring 2017

Signed,

Hawai'i Aviation Exploratory Committee

Dr. Ken Morris  
Dr. Bruce Mathews  
Noreen Yamane  
Joyce Hamasaki  
Steve Santiago  
Henry Bruckner  
Elizabeth Dykstra  
Jane Horike  
Bo Masuyma  
Kaial'i Kahele

## **APPENDIX A1: Draft Curriculum: Professional Helicopter Pilot- AAS (HawCC)**

### **CURRICULUM (60 total credits)**

#### **Credits: Course Title/Description:**

##### **15 General Education courses**

- 4 Private Pilot Helicopter Ground** Fundamentals of aerodynamics, helicopter operation and performance, and instruments. Fundamentals of navigation, human errors, Federal Aviation Administration (FAA) requirements, weather systems and hazards.
- 5 Private Pilot Helicopter Flight** Fundamentals of basic helicopter operations. Includes one-on-one supervised cross-country flights. Flight training including supervised and solo cross-country flights and intermediate operations. Preparation for FAA private pilot helicopter oral and practical exam.
- 4 Instrument Pilot Helicopter Ground** Instrument navigation, Instrument Flight Rule (IFR) traffic system and procedures, dead reckoning, IFR Radio navigation, use of various instrumentation systems, IFR charts, weather reports and forecasts, transponders, radars, radio aids, anti-icing/deicing systems, preflight checks, aeronautical decision making.
- 5 Instrument Pilot Helicopter Flight** Flight by reference to instruments. Emphasis on instrument preflight, navigation, approach, emergency, and post-flight procedures. Includes the combination of a FAA approved flight-training device simulator and actual flight time in preparation for FAA instrument pilot helicopter oral and practical test.
- 3 Commercial Pilot Helicopter Ground** Designed for students who are both private pilot and instrument flight rated for helicopter flight and are seeking the commercial pilot rating. Includes advanced helicopter components, advanced aerodynamics and advanced performance. Includes advanced helicopter components, cross country flight, and commercial FAA regulations.
- 6 Commercial Pilot Helicopter Flight** Advanced helicopter flight operations and navigation, including mountain flying techniques. Preparation for FAA commercial pilot oral and practical test.
- 3 Flight Instructor Helicopter Ground** Instructional strategies and planning, communications, student evaluation, the learning process and flight instructor responsibilities.
- 4 Flight Instructor Helicopter Flight** Techniques for giving one-on-one instruction to helicopter student pilots and critiquing student performance. Preparation for FAA flight instructor helicopter oral and practical test.



- 2 Flight Instructor Instrument Helicopter Ground** Instrument pilot teaching techniques utilizing Instrument Flight Rules (IFR) regulatory guidelines. Preparation to take the FAA flight instructor instrument helicopter written test and a portion of the oral and practical exam.
- 2 Flight Instructor Instrument Helicopter Flight** Teaching flying in clouds and poor weather solely by reference to aircraft instruments. Includes teaching in a flight-training device (simulator). Preparation for FAA flight instructor instrument helicopter and oral practical test.
- 1 Helicopter Pilot Preventative Maintenance** Basic helicopter maintenance theory, documentation, and standard industry practices to return an aircraft to service in accordance with the FAA standards. Emphasis on maintenance tasks that pilots are authorized to perform on helicopters.
- 2 Helicopter 135 Tour Operations** Rules, operating limitations, and procedures for FAA Part 135 helicopter operations. Emphasis placed on helicopter tour flying techniques in Hawai'i. Compliance, safety, and procedures for professional helicopter pilots flying 135 operations.
- 1 Career Planning and Preparation** A course in which students will discuss and develop short-term and long-term job and career goals, conduct career research using various University and industry resources, prepare a personal job search portfolio, prepare resumes and letters of application, and gain insights and proficiency in interviewing skills so they are better prepared to enter the job market upon graduation. Students will participate in simulated interview scenarios, will be expected to correspond with at least one company, and will be involved in the evaluation of letters, resumes, and interviews.
- 3 Industry Internship** Designed to combine classroom theory with practical application through job-related experiences. Students are actively employed in aviation business, industry, government, and a variety of organizations and agencies with a work focus which relates to their academic training and career objectives.

## **APPENDIX A1: Draft Cost Structure: Professional Helicopter Pilot- AAS (HawCC)**

### **2014/2015 Tuition**

- In-State \$1,212 per term for 4 terms = \$4,848 Total
- Out-of-State \$3,552 per term for 4 terms = \$14,208 Total

### **Flight Lab Fees**

- \$130,900 Total for all courses (using the Robinson R22)
- \$183,200 Total for all courses (using the Robinson R44\*)

*\* Safety Consideration - any person over 200 pounds must fly the R44*

### **Certificates Earned:**

- Private Pilot
- Instrument Rating
- Commercial Pilot Single-Engine
- Flight Instructor
- Flight Instructor – Instrument

### **Total Degree Cost (Tuition & Flight Fees)**

#### **In-State Tuition**

- \$135,748 in the R22 (\$67,874 per year)
- \$188,048 in the R44 (\$94,024 per year)

#### **Out-of-State Tuition**

- \$145,108 in the R22 (\$72,554 per year)
- \$197,408 in the R44 (\$98,704 per year)

## APPENDIX A2: Draft Curriculum: Professional UAS Pilot- AAS (HawCC)

### CURRICULUM (60 total credits)

#### Credits: Course Title/Description:

##### 15 General Education courses

- 4 Private Pilot Airplane Ground** Fundamentals of aerodynamics, airplane operation and performance, and instruments. Fundamentals of navigation, human errors, FAA requirements, weather systems and hazards.
- 5 Private Pilot Airplane Flight** Fundamentals of basic airplane operations. Includes one-on-one supervised flights. Flight training including supervised and solo cross-country flights and intermediate operations. Preparation for FAA private pilot airplane oral and practical exam.
- 4 Instrument Pilot Airplane Ground** Instrument navigation, Instrument Flight Rule (IFR) traffic system procedures, dead reckoning, IFR Radio navigation, use of various instrumentation systems, IFR charts, weather reports and forecasts, transponders, radars, radio aids, anti-icing/deicing systems, preflight checks, aeronautical decision making.
- 5 Instrument Pilot Airplane Flight** Flight by reference to instruments. Emphasis on instrument preflight, navigation, approach, emergency, and post-flight procedures. Includes the combination of a FAA approved flight-training device simulator and/or actual flight time in preparation for the FAA instrument pilot airplane oral and practical test.
- 3 Commercial Pilot Airplane Single Engine Ground** Designed for students who are both private pilot and instrument flight rated for airplane flight and are seeking the commercial pilot single engine rating. Includes advanced airplane components, advanced aerodynamics and advanced performance.
- 6 Commercial Pilot Airplane Single Engine Flight** Advanced airplane flight operations and navigation including mountain flying techniques. Preparation for FAA commercial pilot single engine oral and practical test.

- 2 UAS Operations** Fundamentals of Unmanned Aircraft System (UAS) Operation. Includes concept of operations, types of systems, applications, and optionally piloted vehicles.
- 2 UAS Aircraft and Ground Systems** Fundamentals of UAS Aircraft and ground systems. Includes basic component operation and use of airframe systems, the power plant, flight controls, and avionics.
- 2 UAS Communications, Telemetry, and Sensors** Essentials of UAS communication, telemetry, and sensor systems. Includes basic component operation and use of transmitters, computer control systems, and sensor packages. Single and multiple point failure modes, electromagnetic interference, and satellite communication theory are reviewed.
- 2 UAS Human Machine Interface** Fundamentals of UAS Human-Machine Interface. Includes UAS crew coordination, human factors, ergonomics, and factors impacting control and operation.
- 3 UAS Fixed-Wing Flight** Fundamentals of UAS Fixed-Wing Flight. Designed for the commercial and instrument rated pilot to safely operate fixed-wing UAS. Demonstrate judgment and consistent safe flying techniques especially during takeoff and landing.
- 3 UAS Rotor-Wing Flight** Fundamentals of UAS Rotor-Wing Flight. Designed for the commercial and instrument rated pilot to safely operate rotor-wing UAS. Demonstrate judgment and consistent safe flying techniques especially during takeoff and landing.
- 1 Career Planning and Preparation** A course in which students will discuss and develop short-term and long-term job and career goals, conduct career research using various university and industry resources, prepare a personal job search portfolio, prepare resumes and letters of application, and gain insights and proficiency in interviewing skills so they are better prepared to enter the job market upon graduation. Students will participate in simulated interview scenarios, will be expected to correspond with at least one company, and will be involved in the evaluation of letters, resumes, and interviews.
- 3 Industry Internship** Designed to combine classroom theory with practical application through job-related experiences. Students are actively employed in aviation business, industry, government, and a variety of organizations and agencies with a work focus which relates to their academic training and career objectives.

## **APPENDIX A2: Draft Cost Structure: Professional UAS Pilot- AAS (HawCC)**

### **2014/2015 Tuition**

- In-State \$1,212 per term for 4 terms = \$4,848 Total
- Out-of-State \$3,552 per term for 4 terms = \$14,208 Total

### **Flight Lab Fees**

- \$147,700 Total for all airplane courses in a Technologically Advanced Airplane (TAA) and all UAV flight courses
- \$101,300 Total for all airplane courses in a traditional primary trainer and all UAV flight courses

### **Certificates Earned:**

- Private Pilot
- Instrument Rating
- Commercial Pilot Single-Engine

Note: Currently, the FAA requires only a Commercial Single-Engine Certificate with Instrument Rating to be a UAV pilot. Students become “qualified” on both fixed-wing and on rotary-wing UAVs.

## **Total Degree Cost (Tuition & Flight Fees)**

### **In-State Tuition**

- \$152,548 (\$76,274 per year) in a TAA
- \$106,148 (\$53,074 per year) in a traditional primary trainer

### **Out-of-State Tuition**

- \$161,908 (\$80,954 per year) in a TAA
- \$115,508 (\$57,754 per year) in a traditional primary trainer

## **APPENDIX A3: Draft Curriculum: Professional Airplane Pilot- BS (UHH)**

### **CURRICULUM (120 total credits)**

#### **Credits: Course Title / Description:**

#### **46 General Education Courses**

- 4 Private Pilot Airplane Ground** Fundamentals of aerodynamics, airplane operation and performance, and instruments. Fundamentals of navigation, human errors, FAA requirements, weather systems and hazards.
- 5 Private Pilot Airplane Flight** Fundamentals of basic airplane operations. Includes one-on-one supervised flights. Flight training including supervised and solo cross-country flights and intermediate operations. Preparation for FAA private pilot airplane oral and practical exam.
- 4 Instrument Pilot Airplane Ground** Instrument navigation, Instrument Flight Rule (IFR) traffic system procedures, dead reckoning, IFR Radio navigation, use of various instrumentation systems, IFR charts, weather reports and forecasts, transponders, radars, radio aids, anti-icing/deicing systems, preflight checks, aeronautical decision making.
- 5 Instrument Pilot Airplane Flight** Flight by reference to instruments. Emphasis on instrument preflight, navigation, approach, emergency, and post-flight procedures. Includes the combination of a FAA approved flight-training device simulator and/or actual flight time in preparation for the FAA instrument pilot airplane oral and practical test.
- 3 Commercial Pilot Airplane Single Engine Ground** Designed for students who are both private pilot and instrument flight rated for airplane flight and are seeking the commercial pilot single engine rating. Includes advanced airplane components, advanced aerodynamics and advanced performance.
- 6 Commercial Pilot Airplane Single Engine Flight** Advanced airplane flight operations and navigation including mountain flying techniques. Preparation for FAA commercial pilot single engine oral and practical test.
- 1 Commercial Pilot Airplane Multiengine Ground** Designed for students who are both instrument and commercial single-engine rated for airplane and are seeking the commercial multiengine pilot certificate. Includes advanced airplane components and multiengine theory and procedures.
- 1 Commercial Pilot Airplane Multiengine Flight** Advanced multiengine airplane flight

operations. Preparation for FAA commercial pilot oral and practical test.

**3 Flight Instructor Airplane Ground** Instructional strategies and planning, communications, student evaluation, the learning process and flight instructor responsibilities.

**4 Flight Instructor Airplane Flight** Techniques for giving one-on-one instruction to airplane student pilots and critiquing student performance. Preparation for FAA flight instructor airplane oral and practical examinations.

**2 Flight Instructor Instrument Airplane Ground** Instrument pilot teaching techniques utilizing Instrument Flight Rules (IFR) regulatory guidelines. Preparation to take the FAA flight instrument instructor written test and a portion of the oral and practical exam.

**2 Flight Instructor Instrument Airplane Flight** Teaching flying in clouds and poor weather solely by reference to aircraft instruments. Includes teaching in a flight-training device (simulator). Preparation for FAA flight instructor instrument airplane oral and practical test.

**1 Airplane Pilot Preventative Maintenance** Basic airplane maintenance theory, documentation, and standard industry practices to return an aircraft to service in accordance with FAA standards. Emphasis on maintenance tasks that pilots are authorized to perform on airplanes.

**3 Aviation Safety** Designed to develop a knowledge of contributing factors affecting aviation safety and fostering control methods and techniques to reduce accidents related to aircraft and the aviation field.

**2 Aero Engines** The student will review the physics principles for momentum thrust and pressure thrust. The basic components of aero engines will be explored and the student will demonstrate an understanding of how thrust is produced, the advantages of the turbine engine, the concept of specific fuel consumption how the exhaust nozzle affects pressure thrust. Reciprocating, turboprop, and turbofan engine performance and operational characteristics will be covered.

**3 Airframe Systems** The student will be able to describe the basic operating principles of hydraulic systems and subsystems, electrical systems, fuel systems, landing gear and the basic airframe structure. Details of system components will be presented as well as consideration of subsystem and component failure effects.

**2 Aircraft Performance** The student will develop a fundamental understanding of the application of aerodynamic theory and principles to aircraft performance. This will include climbing and descending flight, fundamentals for calculating range and endurance, maneuvering flight and multi-engine aircraft operations. Application of the flight handbook charts and graphs pertinent to aircraft performance. The student will demonstrate the ability to make computations necessary to prepare for flying the

aircraft within its flight envelope. The student will be able to understand performance curves.

**3 Aerodynamics, Stability, and Flight Controls** Introductory course into transonic flight, supersonic flight and associated flight controls systems. Special emphasis will be placed on transonic flight and its effect upon aircraft design. The student will be able to explain the formation of shock waves, types of shock waves and the lift and drag problems associated with transonic flight. The student will demonstrate knowledge of stability axes and moments about these axes. The student will learn the basics of multi-engine center of gravity calculations and flight limitations based upon weight, density, configuration and airspeeds. Flight control design including fly by wire will be presented.

**2 Cockpit Resource Management and Human Factors** This course is designed to give the student an overview of human factors and the necessity for good man-machine interface and design. The student will gain an understanding for the application of the environmental factors, human factors, and organizational factors to the development of good cockpit communication and coordination. CRM techniques will be practiced by the crews in flight training.

**2 Aviation Law** The student will learn the basis for aviation regulation and what he/her needs to be concerned about in the commercial aviation industry. In addition, a brief history of aviation legislation will be introduced. The emphasis of the course is to teach the student how airlines operate and the interface among pilot groups, management, and labor union, which the professional pilot will encounter.

**3 Aviation Meteorology** Includes the following theoretical concepts: hydrostatic instability, baroclinic instability, thermal wind, and kinematic fields. These will be integrated into real-time weather analysis of synoptic patterns involving mid-latitude cyclones, advection, frontal systems, and jet streams. Practical application will be achieved through presentation of current and historical weather data emphasizing common hazards to aviation such as thunderstorms, strong winds, fog, icing, and turbulence. An introduction to weather forecasting concepts will be presented.

**3 Avionics and Flight Management Systems** This course will be designed around specific avionics and FMS systems that are installed in current aircraft. The student will learn how the cockpit displays work, the interface between the instruments and the aircraft systems, as well as procedures for using the modern electronic display and autopilot system. This course teaches the theory and principles governing flight with autopilot and flight management systems. Students will apply theory and principles by demonstrating good decisions and thought processes in autopilot and FMS simulators.

**3 International and Over Water Procedures** This course will study FAR Part 121 domestic and flag regulations and evaluate their impact on long range domestic and international flights. The student will be able to use ICAO, JAA, and FAA operational requirements



and typical air carrier Ops SPECS to plan domestic and transoceanic flight. CBT simulation programs may be used as necessary to demonstrate actual flight scenarios. High-altitude airspace, navigation, and approach procedure chart interpretation will be examined in detail. Students will study and use the concepts of MNPS and RVSM airspace, dispatch procedures, ETOPS, ETP, driftdown, track messages, LRN accuracy checks, Oceanic Air Traffic Control clearances, international METARs and TAFs, and emergencies and contingencies while on oceanic tracks.

**3 Airline Operations** A study of the scope and function of a major air carrier's organizational structure and the specific relationships of the operations department with those of marketing, maintenance, and safety are discussed. A study of corporate issues including the industry in general, market structure, certification, FAR Part 121 regulations, economic issues, mergers, corporate culture, and international topics will be included. From an operational perspective, topics include flight operations employment policies, domiciles, operating specifications, types of services provided, training, and passenger considerations.

**1 Career Planning and Preparation** A course in which students will discuss and develop short-term and long-term job and career goals, conduct career research using various university and industry resources, prepare a personal job search portfolio, prepare resumes and letters of application, and gain insights and proficiency in interviewing skills so they are better prepared to enter the job market upon graduation. Students will participate in simulated interview scenarios, will be expected to correspond with at least one company, and will be involved in the evaluation of letters, resumes, and interviews.

**3 Industry Internship** Designed to combine classroom theory with practical application through job-related experiences. Students are actively employed in aviation business, industry, government, and a variety of organizations and agencies with a work focus which related to their academic training and career objectives.

## **APPENDIX A3: Draft Cost Structure: Professional Airplane Pilot- BS (UHH)**

### **2014/2015 Tuition**

- In-State \$3,324 per term for 8 terms = \$26,592 Total
- Out-of-State \$9,324 per term for 8 terms = \$74,592 Total

### **Flight Lab Fees**

- \$143,800 Total for all courses (Using a Technologically Advanced Aircraft -TAA)
- \$94,200 Total for all courses (using a traditional primary trainer)

### **Certificates Earned:**

- Private Pilot
- Instrument Rating
- Commercial Pilot Single-Engine
- Commercial Pilot Multi-Engine
- Flight Instructor
- Flight Instructor – Instrument

### **Total Degree Cost (Tuition & Flight Fees)**

#### **In-State Tuition**

- \$170,392 in a TAA (\$42,598 per year)
- \$120,792 in a traditional primary trainer (\$30,198 per year)

#### **Out-of-State Tuition**

- \$218,392 in a TAA (\$54,598 per year)
- \$168,792 in a traditional primary trainer (\$42,198 per year)

## APPENDIX A4: International Aviation Training Center at Hilo International Airport



## SB 3073 Testimony

Submitted by Peter Forman- former coordinator of Honolulu Community College's Commercial Aviation program

I oppose this bill in its current form, but wish to suggest changes to this bill that could make it palatable to Hawaii's aviation community and a reasonable investment of the taxpayer's dollars.

### **What I agree with**

1) A pilot shortage of unprecedented magnitude is approaching, and Hawaii very much needs a collegiate flight training program. Unfortunately, the private sector is no longer capable of producing anywhere near a sufficient quantity of pilots to meet the state's needs.

2) Hawaii's collegiate flight program needs to be a 4-year, bachelor's degree program. Airlines prefer to hire candidates with bachelor's degrees and 4 years is needed to give enough time for all the required flying. The higher tuition fees charged at a 4 year institution are far enough above the fees at a community college to allow a properly-conceived flight program to be self-supporting.

### **The primary problem with SB 3073**

SB 3073 calls for creating a collegiate flight program at the University of Hawaii, Hilo campus. The problem with this request is that it lacks due diligence because two critical questions remain unanswered. Is a Hilo flight program likely to succeed? Is creating a program from scratch in Hilo a better idea than using the University of Hawaii's existing facilities at Kalaeloa's Hangar 111 for a comparable 4-year program? The legislature does not know the answers to these questions because efforts over the past 3 years to bring about a serious public discussion between advocates of Hilo collegiate training and Oahu-based collegiate flight training have never succeeded in being scheduled. To the question of which location offers a better chance of success, I believe the Oahu location wins by an enormous margin because:

\* Hilo has atrocious weather for visual flight training. In a typical year, Hilo receives 120 inches of rain and can receive 200 inches in a wet year. Kalaeloa Airport on Oahu, on the other hand receives on average 17 inches of rain per year and has excellent visual flight weather. Poor weather at Hilo would delay progress in various levels of training, it would discourage students from choosing that school, and it would adversely affect the safety of flight training.

\* Hilo Airport lacks the infrastructure for an aviation program of sufficient size to meet Hawaii's needs. Millions of dollars for the paving of aircraft parking areas and building of hangar and classroom facilities would be needed, and the legislature may not be in a position to provide those millions in the near future. Conversely, the University of Hawaii's Hangar 111 at Kalaeloa Airport on Oahu is a huge facility with modern classrooms and is now nearly empty because of the recent closure of Honolulu Community College's flight program. The facility costs UH one dollar per year to lease from the U.S. Department of Education. By the way, the HCC flight program had over 60 majors and was growing quickly at the time the plug was pulled.

\* The source of Hilo's flight students is questionable. Certainly, Big Island students who wish to pursue commercial aviation are suitable candidates, but the number of such students is limited.

What type of students typically attend public college flight programs? During my four years as HCC's flight program coordinator, I saw that more than 90% of the students fit into one of two categories: servicemen with VA benefits currently stationed on Oahu (or recently-separated servicemen with benefits), and students who work to pay their way through college flight training.

The number of VA students that Hilo attracts is likely to be proportional to the number of servicemen stationed on the Big Island, which is a small number compared to Oahu's population.

More importantly, though, is the question whether students who would normally attend a public collegiate flight program on Oahu (the type of students who attended HCC's program) are likely willing to attend a University of Hawaii flight program if it is located at Hilo? I think not because:

- \* Hawaii public college flight students are nearly all financially-constrained if they lack VA benefits. The extra cost of room and board is a major problem (compared to living at home) for the 70+% of students in the state who live on Oahu, but more importantly is the fact that these students would have to give up their jobs to relocate to Hilo. Employment opportunities are much more plentiful in Honolulu than in Hilo. The combined effects of substantially higher cost to attend college in Hilo plus the reduced employment opportunities there would not allow these students to progress in their training at a reasonable pace. Instead, these students would more likely choose other professions or pursue flight lessons at small Oahu flight schools (which have a much lower completion rate than collegiate programs).

- \* Hilo advocates in the past have cited students attending mainland flight programs as a major source of students at their program, but the number of students who could afford a mainland flight program but choose a program within Hawaii instead would be small until the Hawaii program becomes extremely robust. Why? I have visited Hawaii high schools and asked this very question of students who intended to leave the state for their collegiate flight training. These were nearly all students who had their parent's support for the cost of college or who would be beneficiaries of organizations such as the Kamehameha Trust. Money was not an object to them. They expressed a positive value to the experience of attending a large mainland aviation college and experiencing flight in mainland conditions. In other words, attending an aviation college on the mainland is a net positive to most of these students. Similarly, servicemen with 100% VA funding would more likely opt for a mainland school than a Hilo school if they had to leave their homes on Oahu during the training.

What we know about the potential of a collegiate flight program on Oahu is that there is sufficient interest from students to make it self-supporting. At the time termination of the Honolulu Community College flight program was announced, that program had over 60 majors and I had received more than 30 phone calls from students interested in enrolling during the next year. Hilo, in contrast, is an unknown and suffers from significant headwinds in attracting students.

### **The previous Hilo flight program proposal**

In the business plan envisioned for the original Hilo flight program, the students were originally to be mostly former servicemen with VA benefits pulled from around the country because the flight provider would be offering attractive airplanes and an attractive curriculum in return for charging the government more than double the going rate for flight instruction. Unfortunately for this flight provider, a Los Angeles Time reporter wrote a series of articles about the gross overcharging of the government by this Prescott flight provider and a Utah collegiate program, and concerned congressmen pressured the VA to enforce its rules. The Prescott, AZ.-based flight provider upon which the Hilo plan was modeled received an audit from the veteran's administration last year and instead of the required minimum 15% non-VA students in the program, the VA discovered 0% non-VA students and it terminated the flight provider's ability to enroll new students. Additionally, the Arizona college that employed this flight provider is still defending itself against a \$60 million whistleblower lawsuit related to the firing of the director of the college's flight program because he warned the college to distance itself from this flight provider, due to its defrauding of the veteran's administration. The unorthodox pricing scheme embraced by the original Hilo flight program raised major concerns in those of us who advocated an Oahu-based program and these concerns would have come out in a series of open meetings to compare one proposed flight program location against another, if those meeting had ever occurred.

Since the original plan for attracting students to the Hilo program and for funding part of the infrastructure requirements at Hilo is no longer feasible, due to the ongoing efforts of Congress to pressure the VA to enforce its rules, new means of funding Hilo's infrastructure and for filling Hilo's openings for flight students are needed. Can Hilo attract enough students for its proposed flight program to meet the state's critical need for pilots? We don't know because there has been no meaningful discussion on the subject. The best way to discover the weaknesses of a proposed program is to listen to the arguments of another group competing for the dollars because it has a competing program to offer. We have the perfect setup for such a discussion because we have people in the State of Hawaii advocating collegiate flight training within the University of Hawaii system at Hilo and also on Oahu at the Hangar 111 facility, presumably under the leadership of UH West Oahu.

Interestingly, the University of Hawaii cannot be considered a neutral party at this point in time. It has embraced the political decision to move flight training to Hilo and has acted to reinforce that decision. It has also been unwilling during the past three years to engage in a meaningful open discussion on the topic of where to conduct commercial flight training within the system.

Because the University of Hawaii has been unwilling to take on the due diligence of conducting the needed discussions to weigh the benefits of one location versus the other, due diligence falls upon the legislature, or a party it designates, should it wish to fund collegiate flight training within the University of Hawaii system.

### **A proposal**

I propose that specific reference to the Hilo campus be omitted from this bill and the bill instead become a bill to fund a bachelor's degree, 4-year flight training program within the University of Hawaii system.

I further propose that the legislature specify that a governor-appointed body hold timely but thorough discussions on the matter of feasibility of a flight program at one of these two locations and that the body designate which location provides the best opportunity for successfully training large numbers of pilots. A lively discussion between advocates of the two flight program locations is essential. Discussions should be open to the public. The body should also examine the likely enrollment in that program and determine the likelihood of that winning program becoming financially self-supporting within a reasonable time frame. Please note that an entity created by the former governor looked at the initial Hilo flight program proposal and failed to raise red flags about the unorthodox pricing structure of that program. One member of that body specifically asked if the Hilo program would replace or would be in addition to the Oahu flight program conducted by Honolulu Community College. That member was specifically told “in addition to.” With nothing to lose, the body moved forward with a recommendation that money be spent on the Hilo flight program. A body which includes dissenting views from a competing proposal would not make the same type of mistake.

Should the University of Hawaii choose not to implement collegiate flight training at the chosen location, either by announcement before or after the decision of the body, then funds should be withheld, unless the university changes its position on the matter. The university clearly has a horse in this race at the moment, and the careful decision-making process should not be interfered with. Ultimately, the University of Hawaii would need to justify to the public its decision to not implement a critical program that was funded by the legislature.

### **Why action is needed this year**

Once a University of Hawaii flight program begins operation, it will be four years before Hawaii’s aviation industry realizes any significant benefits from the program. By that time, the pilot shortage in Hawaii will be critical. By critical I mean that a sufficient number of pilots will not be available to fill a significant number of openings and some flight activities will be curtailed. Regional airlines (75 seats or less) in Hawaii may need to shrink, for lack of pilots, as they are currently shrinking on the mainland (also for a lack of pilots). A reduced number of flights by regional airlines in Hawaii means a likely loss of air service for some of the smaller destinations in the islands and increasing fares, due to fewer seats available to be sold. Fewer pilots mean that those pilots hired at the lower rungs of the industry will be hired at minimum time and with little or no choice of available candidates. Such a situation threatens the safety of flight with affected companies.

It is important to note, that the wrong decision on where to locate the University of Hawaii’s flight program can mean the difference between a highly successful program and one that is unsuccessful. While speed is needed in this process, an even more important component is a careful weighing of options before a decision is made.

### **Conclusion**

At the present time, the private sector is woefully unable to provide Hawaii with the needed number of pilots to prevent a severe pilot shortage. A collegiate flight program at the University of Hawaii is the logical solution. Such a program can quickly become self-supporting, if it is a well-run 4-year program at the proper location. Neither the University of Hawaii nor the

legislature has yet done the due diligence to determine the preferred location and the viability of proposed locations. That due diligence can be arranged through rewording of SB 3073 to fund a flight program at the University of Hawaii, but without stating which campus. The second component of the due diligence is to call for a body, appointed by the governor, to oversee a discussion including the competing solutions offered by advocates of a Hilo-based flight program and an Oahu-based flight program. That body will then recommend the optimal location for the flight program and provide some indication of the expected likelihood of success for that program. Only after this fact-finding process is complete should a campus be named for the upcoming flight program and funds be made available.

Respectfully submitted,  
Peter Forman



**From:** [mailinglist@capitol.hawaii.gov](mailto:mailinglist@capitol.hawaii.gov)  
**To:** [HEA Testimony](#)  
**Cc:** [rich@arconley.com](mailto:rich@arconley.com)  
**Subject:** Submitted testimony for SB3073 on Feb 9, 2016 13:30PM  
**Date:** Saturday, February 06, 2016 6:20:26 PM

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**SB3073**

Submitted on: 2/6/2016

Testimony for HEA on Feb 9, 2016 13:30PM in Conference Room 224

Submitted By	Organization	Testifier Position	Present at Hearing
richard E. Conley	Individual	Oppose	No

Comments: Let me first address who I am with regards to my testimony. I have been living on Oahu for the past 11 years. I came to Hawaii as a Captain on the B747 for Japan Airlines. I now fly as Captain and Line Instructor on the B737. As a local pilot in Hawaii and having been in the aviation instruction business for over 30 years I believe I know some key elements for a successful training facility. One of the most important elements is weather. Hilo in no way compares to the favorable weather we enjoy here on Oahu. Many of my young First Officers ask me about flight training in the USA for their ATP rating. The combination of weather accessibility from Japan and the existence of level 3 simulators would make Oahu the ideal location and could prove to be a steady stream of trainees for our island of Oahu.

Please note that testimony submitted less than 24 hours prior to the hearing, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

Do not reply to this email. This inbox is not monitored. For assistance please email [webmaster@capitol.hawaii.gov](mailto:webmaster@capitol.hawaii.gov)

Testifier: Robert P. "Rob" Moore, Chief Flight Instructor Galvin Flight Services Hawaii at the former Honolulu Community College Commercial Flight Training Program located at Kalaeloa Airport (the old Barbers Point NAS) from 2011 to 2015 and also President of the General Aviation Council of Hawaii

To: Senate Higher Education and the Arts Committee

Hearing: February 9, 2016, 1:20 PM

Measure: SB 3073

Aloha Chair Taniguchi and Committee Members,

As a professional pilot and a FAA Certified Flight Instructor, I fully support the need for a college-level program that graduates our Hawaii young adults with a degree in commercial aviation and a FAA commercial pilot certificate. HOWEVER, I cannot support this bill for the following reasons:

- University of Hawaii has deceived this Senate, the people of Hawaii and the students of the former HCC Commercial Aviation Program. UH **had** a degree producing Commercial Aviation Program that they just closed in June 2015. The HCC program had many students, was fiscally sound and was located at a first-class facility and location. State of the art airplanes and equipment were used to trained students. The former HCC program filled a big need to meet the existing pilot shortage in Hawaii and the rest of the world.
- Testimony was given last February 12, 2015 to the House Higher Education Committee on HB1413 to basically continue the HCC Commercial Aviation Program. A copy of my HB1413 testimony is attachment to my testimony

today. Approximately 15 students, five community pilots, two faculty members and two local airline company CEOs also gave testimony to keep the program open. UH, through Mr. John Morton, recommended closing the program for, I believe, political reasons. The bill for deferred by the Committee Chair.

- The choice of the Hilo location for flight training is poor due to less-than optimum weather, inadequate aviation facilities, poor alternate airport and aviation navigation facilities, small population base, and minimum area infrastructure to support the students financially while flight training. Please see my attached point paper addressing those areas.
- The funding of \$500,000.00 to support UH in this bill when UH said that they could not support a \$250,000 bill for existing program is illogical and appears to be favoritism.

Please do not be complicit with UH by passing this bill. If it is determined that Hawaii needs a Commercial Aviation Program, base it on Oahu and use the facilities that now exist.

Thank you for your time.

Attachments: 10 pages



Testifier: Robert "Rob" P. Moore, Chief Flight Instructor, Galvin Flight Services  
Hawaii and also Governmental Liaison with the General Aviation Council of Hawaii  
To: House Higher Education Committee  
Hearing: February 12, 2015, 2:00PM  
Measure: HB1413

Aloha Chair Representative Choy and Vice Chair Representative Ichiyama,

There is much discussion among University of Hawaii, Honolulu Community College, and the local aviation community regarding the continuation of HCC's Commercial Aviation Flight Training Program. This program produces Federal Aviation Administration (FAA) rated commercial pilots with a college degree in aviation. The program creates more FAA Commercial Pilots than any other organization in Hawaii and is needed to meet the existing pilot shortage. This is the only program like this in Hawaii and the only other programs similar to this are in the mainland. This program is to be closed at the end of the Spring Semester 2016 with flight training terminating June 30, 2015 as announced by HCC in a letter from Dean Chock dated March 3, 2014. The purported reason for closure is the low number of graduates and the high cost of the program. Getting a commercial pilot certificate is expensive (approximate costs are \$50-60K at HCC), but the payback is great when the student becomes employed as a pilot. This HCC flight training cost to the student is in-line with local flight schools on Oahu (outer Island are much more). However, the flight training program at HCC actually saves money for students by allowing students to get scholarships, grants, loans and Veteran Administration (VA) funding (please see the attached point paper). Other than loans, scholarships, grants and VA funding are non-existent or minimally available with non-college flight training programs. Regarding the program cost for HCC, HCC pays a small annual fee to the contractor who is on the record with HCC that he will waive his annual fee to keep the program going.

As to the number of graduates from the program, HCC controls that number through their management actions. The HCC program originally started in partnership with University of North Dakota (UND) which shipped many HCC aviation students to the mainland UND campus to get a 4-year degree and thus not counted as getting a HCC degree. The starting and stopping of the program throughout the recent years by HCC also exacerbated the low number of graduates by draining the two-year program pipe line to get a degree. When HCC tried to switch the flight provider in 2012, students faced with uncertainty, left the program. When the current flight provider's contract was later extended by HCC, many students again re-entered the program and started their two-year trek for a degree. The flight program again was energized and the program recently graduated 5 students last year and is ready to graduate 12 more this year. However since HCC announced the program closing in March 2014, 30 students from the program have relocated to the mainland to pursue aviation programs there.

Although students can go to work as a commercial pilot just with a FAA Pilot Certificate, most students want the degree to help improve their hiring and to provide an avenue to upper aviation management in the aviation industry. During the past four years of low numbers of HCC degree graduates, Galvin Flight Services Hawaii, which is locally owned, produced over 104 FAA pilot certificates. Unfortunately, HCC does not recognize these accomplishments in their statistics on how well the program is doing. Also there is great interest by the foreign aviation community in the HCC Commercial Aviation Program. HCC was recently contacted by a Korean company to bring at least 70 foreign students to the HCC aviation campus next year (see attached letter). Similar interest was expressed recently by Taiwan and the People's Republic of China companies. The possibility of this program to provide flight training to Pacific countries is endless.



Having a Hawaii college aviation program will bring much benefit to our community by having a program where local students can get a FAA Commercial Pilot certificate, a college aviation degree and work in the local aviation community. The HCC aviation program, located in the middle of the Pacific, also can become the gathering place for foreign flight training in addition to providing training to our Hawaii youth. With recent changes to the Federal Aviation Regulations that reward college-degree pilots to fill our commercial cockpits, the HCC aviation program is well-positioned with its simulation devices and facilities to expand the program into a four-year degree program or at least a two plus two-year degree program to support our Hawaii need. There was at one time a thought to have a college aviation program in Hilo. UH through HCC already has a flight training program that is at an excellent location with great weather and a fantastic facilities. By closing the program, UH risks the possibility of losing a multi-million dollar facility due to deed restrictions (see attached point paper) and paying back fifteen years of fair market value on the facilities to US Department of Education.

We should here talking about expanding the Commercial Aviation Program by making it a four-year program and by adding helicopter and drone (UAV) training to the curriculum to meet our local and national aviation demands. Local airline CEOs have also supported the continuation of the HCC Flight Training program at Kalaeloa in order to have a pipeline to supply their needs. Please support HB 1413.

Mahalo.

FAA Approved Flight School Partnership  
with  
Four-Year College Program  
Advantages

- Currently Honolulu Community College (HCC), part of the University of Hawaii (UH) system, has the only Commercial Flight Training in the State of Hawaii where a student can get their FAA Commercial Pilot Certificate and a college degree in Commercial Aviation.
  - Only other option for Hawaii youth wanting the same program is to go to the mainland at a greater cost
  - By offering both a college degree and a pilot certificate, allows students to receive a well-round aviation education
- Finances
  - The Veterans Administration rewards eligible students with unlimited funding to get **all** their FAA Pilot Certificates, to include Private Pilot, in a college-FAA approved flight school setting. The VA only funds eligible students in a non-college FAR 141 school setting beyond the Private Pilot Certificate and with a \$10K annual cap.
  - Student access for loans is better with a college program
- Accepting of Foreign Students
  - Only an approved FAA flight school or college may process foreign students for an F or M visas for flight training. This is required by Department of Homeland Security (ICE) for any flight training.
  - Only an approved FAA flight school may initiate the security check required by TSA before any foreign student can start flight training. Galvin Flight Services Hawaii (GFSH) currently provides this service.
- A FAA approved flight training school can reduced flight training hours for various pilot certifications versus a non-FAA approved school
  - Flight time hour reduction is achieved at the Private Pilot, Instrument Rating and Commercial Pilot levels (approximately a \$10K saving) versus a non-FAA approved school
- Current HCC Commercial Flight Training provider, GFSH, has significantly improved the program
  - GFSH is a locally owned company (owned by George Hanzawa of George's Aviation)
  - GFSH expanded the flight training program to include the use of FAA-recognized technically advanced aircraft (TAA) in the training program. GFSH is the only flight school in Hawaii that uses TAA thus providing "glass cockpit" training for students.



- GFSH was the first Hawaii FAA flight school to offer “computer based, on-line” ground training thus reducing costs and improving flight training.
- GFSH during the past three years have significantly improved the first time pass rate for student taking their FAA pilot practical test from the FAA examiner
- Working with the HCC Commercial Aviation Program Manager, GFSH assisted in significantly increasing student graduation rates, FAA written test rates and increase flight hours
- Current GFSH Chief Flight Instructor is the most experienced FAR 141 Certified Flight Instructor (CFI) in Hawaii; recognized by FAA as an Outstanding CFI of the Year and also recognized by the FAA as the Outstanding Safety Counselor of the Year
- Future expansion is limitless for the program
  - New FAA Airport Transport Pilot (ATP) rules foster a four year college program since required ATP hours are reduced
  - A four year college program would increase UH income by 2 ½ times than previous due to increase per credit tuition costs
  - In recent weeks, HCC and GFSH have been approach by foreign aviation leaders to have HCC/GFSH provide flight training to their country pilots through ab initio training thus placing UH in the center of the Asian-Pacific aviation expansion wave
  - With the assets of George’s Aviation and the need for helicopters for tourism in Hawaii, the current flight training could be expanded to include helicopter flight training
  - Individuals graduating from the HCC/GFSH Program can gain flight time building and experience with George’s Aviation charter flight program
  - Support from local aviation leaders is strong for interest in partnerships with the Commercial Aviation Program
  - Local airlines have approached the Commercial Aviation Program to include flight dispatch training to meet their needs for FAA Certified Flight Dispatchers
  - With the FAA designation of drone testing in Hawaii through the joint State partnership between Hawaii, Alaska and Oregon, drone flight training would be a natural fit



# Flight Training Program

on

Oahu

## Advantages

- Flying out of Kalaeloa Airport (Kapolei) offers students lower cost flying
  - Ground time is minimized due to lower taxi times
  - Flight time to practice area and other nearby airports (HNL, HDH, JRF)
- Initial flight training is easier at Kalaeloa Airport since operational tempo is low
  - Availability of high operational tempo airport is 10 minutes away (HNL)
- Kalaeloa Airport is in center of Hawaii Island chain
  - More options available for required cross country flying
  - Most cross country flying will be near land for increase flight safety
- First-class aviation facilities available at Kalaeloa Airport
  - Honolulu Community College/University of Hawaii has a 30 year Quitclaim Deed to Hangar 111 (approximately 4.52 acres of land) used only for educational program and plan set forth in application and deed and for no other purpose. If building not used per agreement, facilities revert to the US Government with possibilities of charges to HCC/UH for back fees.
  - Facilities include newly refurbished offices, classrooms, bathrooms, aircraft parking and a 10K gallon aviation fuel tank
- Weather on Oahu is great for initial and commercial flight training

Annual days of sunshine			
City	Sunny Days	Partly Sunny Days	Total Days With Sun
Hilo, Big Island	36	132	168
Honolulu, Oahu	90	181	271
Kahului, Maui	131	145	276
Lihue, Kauai	56	184	240

City	% Sun
Hilo, Big Island	41
Honolulu, Oahu	71
Kahului, Maui	67
Lihue, Kauai	59

- Oahu is the population base for Hawaii Islands (from 2010 US Census)
  - Oahu is 953,207 people with median age of 35-39.9
  - Hawaii Island 186,738 people with median age of 40-44.9

- Currently more than 70% of Hawaii's residents can drive to the Oahu flight training program
- Larger population base for FAA Certified Flight Instructors
- Bigger access by flight school graduates to Commercial Air Operators
- Availability of local FAA Certified Flight Instructors are more on Oahu versus any other Island
- There are more FAR 141 approved flight schools on Oahu if future contracts are needed to provide flight training and local assets are desired to be used
- More than 90% of flight students fund their flight training with local jobs which are more plentiful on Oahu
- Other costs are lower by operating a flight school on Oahu
  - Aviation fuel costs on Oahu are on an average of \$1.00 less per gallon than on outer Islands
  - Airplane maintenance costs would also be lower since more FAA aircraft maintenance shops are available on Oahu, thus have competitive pricing
- Access to a level C flight simulator is on Oahu (working agreement with Hawaiian Airlines)
- Closure on the UH/HCC Commercial Flight Training program on Oahu would cause the State of Hawaii to lose a 4.2 acre hangar 111 on Kalaeloa Airport according to the Quitclaim Deed and corresponding application, as amended



March 13, 2014

Mr. David Lassner, Interim President  
University of Hawai'i at Manoa  
Bachman Hall 202  
2444 Dole Street  
Honolulu, HI 96822

Dear Mr. Lassner,

I am writing to encourage the University of Hawai'i to revisit the decision announced to students last week to shutter the Honolulu Community College Commercial Aviation Program in 2016.

As the CEO of Hawai'i's largest aviation company I can attest to the importance of having high-quality aviation programs as part of the public University curriculum. Finding qualified local candidates to join our company in jobs that pay well and represent a career of employment in the community is a constant struggle and we would not want to see the pipeline of qualified candidates in the islands become even thinner. Over the last 5 years, we have increased our pilot workforce by 45 percent to 605. As we continue to grow, we'd be delighted to be able to see those jobs filled by students who grew up here and graduated from our state University system.

I understand this year 8-10 students will complete the requirements for their Associate in Science degrees with private, commercial, instrument and multi-engine ratings and certificates. They'll be able to begin work as a pilot or use their credits toward a four-year degree in other disciplines. Those are very encouraging numbers, and Hawaiian Airlines would be interested in developing a partnership with AVIT in which we use our resources to enhance the educational value provided to the future aviators of Hawai'i.

All of us who live here know that many of our young people do not come from families with the resources to send their children off-island for their post-high school education. Eliminating a program that provides our students with a path to one of the most lucrative and exciting careers in aviation is a huge disservice to your students and to your local aviation employers. Please do reconsider.

I am happy to talk further about this with you if you wish.

Sincerely,

Mark B. Dunkerley  
President and Chief Executive Officer





UNIVERSITY  
of HAWAII  
SYSTEM

## Commercial Aviation: URGENT UPDATE

1 message

Keala Chock <keala.chock@hawaii.edu>

Mon, Mar 3, 2014 at 10:44 AM \*

Cc: Frank Fenlon <fenlon@hawaii.edu>

Bcc: [REDACTED]

Dear Commercial Aviation Students,

We regret to inform you that Honolulu Community College has decided to close the AVIT Program effective Spring Semester 2016. The decision to close the program was not made lightly and took into consideration many factors such as the low level of degrees and certificates awarded since its inception and the financial burden to students and the college. As a current AVIT major we are committed to help you reach your academic goals. Over the next two months the College Administration will host a series of Town Hall Meetings and Academic Advising Sessions to help answer your questions and plan for the next two years. Our program counselors and faculty will work directly with each of you at these scheduled meetings to create a plan which will allow you to complete your academic goal.

What you need to do:

1. Attend a Town Hall Meeting and/or Academic Advising Session: **Wednesday, March 5, 2:00p.m. Hangar 111** or **Wednesday, March 12, 2:00p.m., Hangar 111**. You will have the opportunity at these gatherings to ask questions about the next steps and get individualized academic planning to help you complete your program within the 2-year timeframe.
2. Get a sense of how many flight hours you have left to complete your goals. We will be working with your program advisor and flight provider to create academic plans which will take into account your remaining flight hours.
3. If you haven't done so already, please apply for Financial Aid for the 2014-2015 Academic Year. If you have other financial arrangements that assist you in covering your tuition and fees, please be sure to have things in place over the next two years.

If you have questions, please contact Frank Fenlon at 845-9177 or email [fenlon@hawaii.edu](mailto:fenlon@hawaii.edu).

Regards,

Keala Chock, Dean  
Transportation & Trades  
Honolulu Community College



T'way Air Co., Ltd.  
Flight Operations Support Center, International Cargo Terminal,  
210, Haneul-gil, Gangseo-gu, Seoul, Korea



Mr. Peter Forman  
Coordinator  
Commercial Aviation Program  
Pacific Aerospace Training Center  
91-1259 Midway Road, Hangar 111  
Kalaheo, HI 96707 USA

Dear Mr. Forman,

Letter of Intent

We, T'way Air which is based in Seoul, Korea, have an intention to train our pilots based in Honolulu at your existing facility and utilize your established training programs offered from Honolulu Community College (HCC) starting from the 2nd half of 2015.

We are expecting to train 30 to 35 student pilots per year in 2015 initially to see whether HCC facilities including student housing and training programs can take more students in the very near future.

We are projecting to expand the program size to accompany 70 student pilots or more after 2 years and we ask for your cooperation to provide utmost pilot training program from Honolulu.

Please let us know what HCC can provide to accommodate our student pilots and programs that you can offer to meet our goals to train the students to become professionals with high competency.

We look forward to meeting you again to discuss the next steps in person soon.

Regards,

Chul-Ho Hahn  
CEO  
T'way Air

A handwritten signature in cursive script, appearing to read 'C. Hahn'.