

Utah Valley University
Curriculum Items
Board of Trustees
January 14, 2014

Proposal:

It is proposed that UVU add the following program: **Certificate of Completion in Aviation Fire Officer**. A name change from the Department of Languages to the **Department of Languages and Cultures** is also proposed. In addition, the three year follow-up for the **BS in Botany** is submitted for approval.

Background:

The purpose of the **Certificate of Completion in Aviation Fire Officer** is to provide aviation emergency services employees with career progression opportunities and credentialing for obtaining leadership roles within aviation emergencies services. This certificate will prepare students to function in an aviation emergency services leadership position as well as municipal, county, state, and federal fire and emergency organizations. The Certificate of Completion in Aviation Fire Officer (**AFO**) will be the first credentialing program of its kind in the State of Utah, the United States, as well as internationally for the aviation fire and emergency services career field. The AFO certificate is a 30-credit program with a focus on aviation fire and emergency service leadership. The courses consist of airport firefighting, aircraft related mass-casualty incidents, current topics in aircraft mishaps, airport operations for the emergency responder, and aviation terrorism.

In the last two decades, traditional language and literature programs have gradually evolved to encompass a wider, more inter-disciplinary approach that acknowledges the reality that linguistic proficiency is only possible with greater cultural fluency. Accordingly, the field has expanded to include a broad offering of cultural studies courses. A name change from the Department of Languages to the **Department of Languages and Cultures** will keep in line with the changes in the discipline at UVU. A number of UVU programs, including the Deaf Studies Major, the Chinese Studies Minor, and the new Russian Studies Minor, fit into the cultural studies model.

The **BS in Botany** was approved in June of 2010 by the State Board of Regents and is now being submitted for its three-year follow-up.

Recommendation:

The President and the Senior Vice President for Academic Affairs recommend that the Board of Trustees approve the proposed actions as summarized above and detailed in the attached documents.

Cover/Signature Page – Full Template

Institution Submitting Request: Utah Valley University
Proposed Title: Certificate of Completion in Aviation Fire Officer
School or Division or Location: College of Aviation and Public Services
Department(s) or Area(s) Location: Department of Emergency Services
Recommended Classification of Instructional Programs (CIP) Code¹ (for new programs): 43.0203
Proposed Beginning Date (for new programs): Fall 2014
Institutional Board of Trustees' Approval Date: Pending

Proposal Type (check all that apply):

Regents' Agenda Items		
<i>R401-4 and R401-5 Approval by Committee of the Whole</i>		
SECTION NO.		ITEM
4.1.1	<input type="checkbox"/>	(AAS) Associate of Applied Science Degree
4.1.2	<input type="checkbox"/>	(AA) Associate of Arts Degree
	<input type="checkbox"/>	(AS) Associate of Science Degree
4.1.3	<input type="checkbox"/>	Specialized Associate Degree
4.1.4	<input type="checkbox"/>	Baccalaureate Degree
4.1.5	<input type="checkbox"/>	K-12 School Personnel Programs
4.1.6	<input type="checkbox"/>	Master's Degree
4.1.7	<input type="checkbox"/>	Doctoral Degree
5.2.2	<input checked="" type="checkbox"/>	(CER C) Certificate of Completion
5.2.4	<input type="checkbox"/>	Fast Tracked Certificate

Chief Academic Officer (or Designee) Signature:

I certify that all required institutional approvals have been obtained prior to submitting this request to the Office of the Commissioner.

Signature

Date: *MM/DD/YEAR*

Printed Name: Ian Wilson

EXECUTIVE SUMMARY
Utah Valley University
Certificate of Completion in Aviation Fire Officer
April 4, 2013

Program Description

As aviation grows, the possibilities of aviation incidents and accidents grow along with it. The individuals called upon to respond, rescue, and mitigate these incidents are known as Aircraft Rescue Fire Fighters—men and women who receive specialized training far above and beyond the common structural firefighter and who operate in a sector of emergency services known as Aircraft Rescue Fire Fighting or more commonly ARFF. Currently, the State of Utah only offers these responders the Aircraft Rescue Fire Fighter Certification. Though an extremely important certification, such training only scratches the surface of what the aviation fire and rescue responder truly needs to understand.

The Certificate of Completion in Aviation Fire Officer (**AFO**) will be the first credentialing program of its kind in the State of Utah, the United States, as well as internationally for the aviation fire and emergency services career field. The AFO certificate is a 30-credit program with a focus on aviation fire and emergency service leadership. The courses consist of airport firefighting, aircraft related mass-casualty incidents, current topics in aircraft mishaps, airport operations for the emergency responder, and aviation terrorism.

Role and Mission Fit

The Certificate of Completion in Aviation Fire Officer is an education program preparing the graduating student to function in an aviation emergency services leadership position as well as municipal, county, state, and federal fire and emergency organizations. This outcome fits perfectly with the role and mission of the Utah System of Higher Education for Type II institutions as set forth in Regents' Policy (R312).

Faculty

Number of faculty with Doctoral degrees	Tenure	1	Contract	3	Adjunct	2
Number of faculty with Master's degrees	Tenure	2	Contract	3	Adjunct	14
Number of faculty with Bachelor's degrees	Tenure	1	Contract	0	Adjunct	6
Other Faculty	Tenure	0	Contract	0	Adjunct	0

Market Demand

The State of Utah operates over 54 airports that range in operations from international, regional, and general aviation to military services. In 2008 there were over 21,000,000 airline passengers served throughout the State with more than 500,000 take-offs and landings. With a constant growing population, Utah will continue to see a growth in the aviation sector well into the future. Research was conducted throughout the summer of 2010, surveying 32 aircraft rescue firefighting professionals on their perception of career-specific programs. The outcome of the survey showed 72% of the respondents stated an interest in career-specific aviation fire and rescue certificate and degree programs. Furthermore, 80% of those surveyed that already possessed a college degree stated that they would return to school to pursue a career-specific aviation fire and rescue program.

Student Demand

There are three student categories of interest for the Certificate of Completion in Aviation Fire Officer. Category one students are the local, state, and national government employees, private sector employees working for contract agencies, and nontraditional adult students. The people functioning in these vital areas have a tremendous need for credible, reliable, and high quality education/training. With the dynamic and changing needs of this important arena, innovation, creativity, and timely delivery of programs are the expectation. Category two students include the traditional student seeking a degree in higher education. With the increased development of jobs in related industries and governmental agencies, students wishing for a career in aviation emergency management or related arenas need quality and accredited educational opportunities. Their expectation is to gain the needed knowledge, skills, and abilities to secure meaningful employment in their chosen field. Category three students are defined as the employees of public and private industry. Aviation incidents and terrorist attacks seem focused on disruption of economic well-being and public morale; the need for awareness as well as initial-response education specific to aviation emergencies for the private sector are apparent and can be filled by a graduate of the Aviation Fire Officer Certificate.

Statement of Financial Support

At this time, the source of funding for this program will be from legislative appropriation, reallocated funds, and/or certain grants/gifts which may be available. Government and public service agencies offer full and/or partial tuition assistance/reimbursement programs as an added benefit to their full-time employees which should help sustain the program.

Legislative Appropriation	<input checked="" type="checkbox"/>
Grants.....	<input type="checkbox"/>
Reallocated Funds.....	<input type="checkbox"/>
Tuition dedicated to the program	<input type="checkbox"/>
Other	<input type="checkbox"/>

Similar Programs Already Offered in the USHE

Utah Valley University is the only state sponsored institution of higher education that offers Certificates of Completion, A.S. and A.A.S. degrees in Fire and Emergency Services. There are no existing programs within USHE pertaining to this subject matter.

Program Description – Full Template
Utah Valley University
Certificate of Completion in Aviation Fire Officer
05/12/2013

Section I: The Request

The Department of Emergency Services located in the College of Aviation and Public Services at Utah Valley University requests approval to offer a Certificate of Completion in Aviation Fire Officer effective Fall 2014.

Section II: Program Description

Complete Program Description

This certificate will prepare students to function in an aviation emergency services leadership position as well as municipal, county, state, and federal fire and emergency organizations.

Purpose of Degree

The purpose of the AFO certificate is to provide aviation emergency services employees with career progression opportunities and credentialing for obtaining leadership roles within aviation emergencies services.

Institutional Readiness

The Aviation Fire Officer Certificate will have little impact on the existing administrative structure. Currently, the department of Emergency Services has both full-time and adjunct faculty capable of teaching the program's courses.

Faculty Category	Faculty Headcount – Prior to Program Implementation	Faculty Additions to Support Program	Faculty Headcount at Full Program Implementation
With Doctoral Degrees (Including MFA and other terminal degrees, as specified by the institution)			
Full-time Tenured	1		1
Full-time Non-Tenured	3		3
Part-time Tenured			
Part-time Non-Tenured	2		2
With Master's Degrees			
Full-time Tenured	2		2
Full-time Non-Tenured	3		3
Part-time Tenured			
Part-time Non-Tenured	14		14
With Bachelor's Degrees			
Full-time Tenured	1		
Full-time Non-Tenured			0
Part-time Tenured			
Part-time Non-Tenured	6		6
Other			
Full-time Tenured			0
Full-time Non-Tenured			
Part-time Tenured			
Part-time Non-Tenured	17	1	18
Total Headcount Faculty			
Full-time Tenured	4	0	4
Full-time Non-Tenured	6	0	6
Part-time Tenured	0		0
Part-time Non-Tenured	39	1	40
Total Department Faculty FTE (As reported in the most recent A-1/S-11 Institutional Cost Study for "prior to program implementation" and using the A-1/S-11 Cost Study Definition for the projected "at full program implementation.")	15.8	0.63	16.43

Departmental Faculty

Staff

No additional staff will be required for this program.

Library and Information Resources

Current library holding and electronic databases are sufficient, and no additional library resources are needed.

Admission Requirements

Standard admission requirements apply for this certificate.

Student Advisement

Emergency Services has one full-time and one part-time advisor. Current emergency services advisors will be used for this program.

Justification for Graduation Standards and Number of Credits

The courses included for this certificate are based in part upon professional standards, FAA codes and guidelines, and the professional experience of faculty members. In addition, faculty members work with and are part of the Aircraft Rescue and Firefighting working group. Some students seeking this certificate already work in the industry and most likely already have a degree. The purpose of the certificate for these individuals is to provide knowledge to enhance safety as well as increase promotional opportunities.

External Review and Accreditation

This program was established through a coordinated partnership between Utah Valley University and the Aircraft Rescue Fire Fighting Working Group (ARFFWG). The ARFFWG is an internationally established professional organization for the aviation fire and rescue industry. The ARFFWG provided content review and consultation for the development of the program.

Projected Program Enrollment and Graduates; Projected Departmental Faculty/Students

Data Category	Current – Prior to New Program Implementation	PROJ YR 1	PROJ YR 2	PROJ YR 3	PROJ YR 4	PROJ YR 5
Data for Proposed Program						
Number of Graduates in Proposed Program	0	10	15	20	20	20
Total # of Declared Majors in Proposed Program	0	15	20	25	25	25
Departmental Data – For All Programs Within the Department						
Total Department Faculty FTE <i>(as reported in Faculty table above)</i>	15.80	16.43	16.43	16.43	16.43	16.43
Total Department Student FTE <i>(Based on Fall Third Week)</i>	340	348	350	353	353	353
Student FTE per Faculty FTE <i>(ratio of Total Department Faculty FTE and Total Department Student FTE above)</i>	21.52	21.15	21.30	21.45	21.45	21.45
Program accreditation-required ratio of Student FTE/Faculty FTE, if applicable: (Provide ratio here:N/A)	15.80	16.43	16.43	16.43	16.43	16.43

Expansion of Existing Program

The Proposed program is not an expansion of an existing program.

Section III: Need

Program Need

As aviation grows, the possibilities of aviation incidents and accidents grow along with it. The individuals called upon to respond, rescue, and mitigate these incidents are known as Aircraft Rescue Fire Fighters—men and women who receive specialized training far above and beyond the common structural firefighter, and who operate in a sector of emergency services known as Aircraft Rescue Fire Fighting or more commonly ARFF. Currently, the State of Utah only offers these responders the Aircraft Rescue Fire Fighter Certification. Though an extremely important certification, such training only scratches the surface of what the aviation fire and rescue responder truly needs to understand. The AFO certificate provides the next level of professional development opportunity for those seeking employment in, or those already employed in, the aviation fire service.

Labor Market Demand

The State of Utah operates over 54 airports that range in operations from international, regional, and general aviation to military services. In 2008 there were over 21,000,000 airline passengers served

throughout the State with more than 500,000 takeoffs and landings.² With a constant growing population, Utah will continue to see a growth in the aviation sector well into the future.

Student Demand

Research was conducted throughout the summer of 2010, surveying 32 aircraft rescue firefighting professionals on their perception of career-specific programs. The outcome of the survey showed 72% of the respondents stated an interest in career-specific aviation fire and rescue certificate and degree programs. Furthermore, 80% of those surveyed that already possessed a college degree stated that they would return to school to pursue a career-specific aviation fire and rescue program.

Similar Programs

The Certificate of Completion in Aviation Fire Officer will be the first credentialing program of its kind in the State of Utah, the United States, as well as internationally for the aviation fire and emergency services career field.

Collaboration with and Impact on Other USHE Institutions

No USHE institution currently offers a Certificate of Completion in Aviation Fire Officer. The current certification offered by the Utah Fire and Rescue Academy (Part of UVU's College of Aviation and Public Services) is called "Airport Firefighter." UFRA is the sole-provider of this certification in Utah.

Benefits

The benefits of offering this AFO certificate include the increased ability to provide professional development opportunities and credentials for emergency responders within the aviation industry and those seeking employment within the aviation industry.

Consistency with Institutional Mission

UVU's Emergency Services is the sole role provider for fire and emergency services education in the state of Utah. The AFO certificate helps UVU meet the needs of emergency responders in Utah.

Section IV: Program and Student Assessment

Program Assessment

Upon completion of the Certificate of Completion in Aviation Fire Officer, students will be able to address safety and operations associated with aircraft rescue and firefighting procedures. Students will understand theories and fundamentals associated with leadership within an airport rescue firefighting organization. Graduates will understand how to locate and use past aircraft accident and mishap data from various government agencies in order to develop relevant lesson plans, operation guidelines, and training courses for emergency responders. Graduates will be able to identify ways to deal with the threats associated with terrorism and the aviation industry as they relate to the emergency service response. Students will possess a working knowledge of ground operations, communications, layout, movements, and functions to operate effectively within the boundaries of an airport in order to mitigate complex aviation emergency incidents within unfamiliar settings that responders face associated with daily operations of an airport.

² Airmav. Utah Airports. Web. 8 Aug. 2011.

The measures to be used for assessing the program follow the rubrics set forth by the *American Association of Colleges and Universities' Valid Assessment of Learning in Undergraduate Education (VALUE)*. Each course in the Aviation Fire Officer Certificate Program has established benchmarks, practiced, and assessed by smaller projects and assessments, which culminate into individual course capstone projects. These projects are meant to glean the student's ability to solve problems, their ability to retain information, critical thinking, written communications, and ethical reasoning. Each course requires a final reflective exam, thus offering the learner a rich-secondary learning experience with a goal of fostering lifelong learning.

Expected Standards of Performance

Upon completion of the Aviation Fire Officer Certificate program, students shall be expected to perform the following:

1. Define the role and qualifications of the airport firefighter.
2. Discuss airport and aircraft familiarization.
3. Discuss safe practices associated with airport firefighting operations.
4. Describe aircraft rescue and firefighting apparatus and equipment.
5. Identify fire extinguishing agents associated with aerospace firefighting.
6. Discuss tactical objectives associated with aircraft emergency response.
7. Describe airport emergency planning.
8. Identify hazardous situations associated with aircraft fire rescue and fire suppression activities.
9. Discuss the incident management systems.
10. Discuss the role of command, its structure and components.
11. Define the operation structures within the emergency response system.
12. Identify hazardous conditions and ways to mitigate situations.
13. Cite examples of databases pertaining to the aerospace mishaps.
14. Discuss current mishaps within the aviation sector.
15. Describe the investigation process associated with aircraft accidents.
16. Describe how to properly use aviation database information.
17. Report on database findings.
18. Discuss the threats towards the aviation industry involving terrorism.
19. Describe the historical components and the extremist groups associated with terrorism.
20. Identify counterterrorism groups and the aspects of preventing terrorist acts.
21. Describe the aspects of aviation security.
22. Review concerns and controls associated with aviation security.
23. Discuss specific airport operation systems.
24. Describe the characteristics associated with airport operations.
25. Identify services at airports.
26. Review high hazard, emergency, and security concerns at airports.
27. Describe airport accesses and movement.
28. Discuss terminal operations.

Section V: Finance

Department Budget

Three-Year Budget Projection							
Departmental Data	Current Departmental Budget - Prior to New Program	Departmental Budget					
		Year 1		Year 2		Year 3	
		Addition to Budget	Total Budget	Addition to Budget	Total Budget	Addition to Budget	Total Budget
Personnel Expense							
Salaries & Wages	\$510,514	\$20,648	\$531,162	\$6,586	\$537,747	\$609	\$538,357
Benefits	\$869,828	\$2,189	\$872,017	\$698	\$872,715	\$65	\$872,779
Total Personnel Expense	\$1,380,342	\$22,836	\$1,403,178	\$7,284	\$1,410,462	\$674	\$1,411,136
Non-personnel Expense							
Travel	\$14,500	\$0	\$14,500	\$0	\$14,500	\$0	\$14,500
Capital	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Library	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Current Expense	\$33,030	\$2,500	\$35,530	\$0	\$35,530	\$0	\$35,530
Total Non-personnel Expense	\$47,530	\$2,500	\$50,030	\$0	\$50,030	\$0	\$50,030
Total Expense (Personnel + Current)	\$1,427,872	\$25,336	\$1,453,208	\$7,284	\$1,460,492	\$674	\$1,461,166
Departmental Funding							
Appropriated Fund	\$1,427,872	\$25,336	\$1,453,208	\$7,284	\$1,460,492	\$674	\$1,461,166
Other:							
Special Legislative Appropriation							
Grants and Contracts							
Special Fees/Differential Tuition							
Total Revenue	\$1,427,872	\$25,336	\$1,453,208	\$7,284	\$1,460,492	\$674	\$1,461,166
Difference							
Revenue - Expense	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Departmental Instructional Cost/Student Credit Hour* (as reported in institutional Cost Study for "current" and using the same Cost Study Definition for "projected")	\$140	na	\$139	na	\$139	na	\$138

* Projected Instructional Cost/Student Credit Hour data contained in this chart are to be used in the Third-Year Follow-Up Report and Cyclical Reviews required by R411.

Funding Sources

Additional adjunct faculty will be needed to teach the new sections of the required courses. Tuition from the new student enrollments will be sufficient to cover the projected costs.

Reallocation

No program reallocation is required.

Impact on Existing Budgets

No impact to existing budgets is expected.

Section VI: Program Curriculum

All Program Courses (with New Courses in Bold)

Course Prefix and Number	Title	Credit Hours
Required Courses		
ESAF 2100	Airport Firefighter	3
ESAF 2110	Aircraft Related Mass Casualty Incidents	3
ESAF 2120	Aircraft Mishaps	3
ESAF 2130	Aviation Terrorism Response	3
ESAF 2140	Airport Operations for the Emergency Responder	3
Sub-Total		15
Elective Courses		
	Any Emergency Services or related advisor approved courses	15
Sub-Total		15
Total Number of Credits		30

Program Schedule

Fall of First Year (Course Prefix and Number)	Course Title	Credit Hours
ESAF 2100	Airport Firefighter	3
ESAF 2110	Aircraft Related Mass Casualty Incidents	3
ESAF 2120	Aircraft Mishaps	3
ESAF 2130	Aviation Terrorism Response	3
ESAF 2140	Airport Operations for the Emergency Responder	3
Semester total:		15
Spring of First Year (Course Prefix and Number)	Course Title	Credit Hours
	Any emergency Services or related approved courses	15
Semester total:		15

Section VII: Faculty

Fulltime Faculty

Eric Russell (Fulltime Faculty-Tenure Track)

- Doctor of Education in Organizational Leadership
- Master of Science in Executive Fire Service Leadership
- Captain (ret.) United States Air Force Fire and Emergency Services

John Fisher (Fulltime Faculty-Tenure Track)

- Doctor of Philosophy in Education

- International Emergency and Disaster Relief Consultant

Jeff Maxfield

- Doctor of Education (Fulltime Faculty-Tenured)

Rodger Broome (Fulltime Faculty-Tenure Track)

- Doctor of Philosophy in Psychology

Gary Noll (Fulltime Faculty-Tenured)

- Master of Education
- Fire Chief (ret.) United States Air Force Fire and Emergency Services

Part time/Adjunct

Thomas Sturtevant (Part time Faculty-Non-Tenure Track)

- Doctor of Education
- Associate Dean

Matthew McNabb (Part time Faculty-Non-Tenure Track)

- Master of Science in Fire and Emergency Service Administration
- Corporal-Oklahoma City Fire Department

Gaylen Fish (Part time Faculty-Non-Tenure Track)

- Master of Science in Emergency Management
- Assistant Chief-Utah Air National Guard Fire and Emergency Services

Jenny Nichols (Part time Faculty-Non-Tenure Track)

- Bachelor of Science in Emergency Services
- Assistant Chief-United States Air Force Fire and Emergency Services