

Cover/Signature Page - Abbreviated Template/Abbreviated Template with Curriculum

Institution Submitting Request: *University of Utah*

Proposed Title: *Hazards and Emergency Management Certificate*

Currently Approved Title:

School or Division or Location: *College of Social and Behavioral Science*

Department(s) or Area(s) Location: *Geography*

Recommended Classification of Instructional Programs (CIP) Code¹ (for new programs): *45.0702*

Current Classification of Instructional Programs (CIP) Code (for existing programs):

Proposed Beginning Date (for new programs): *08/01/2014*

Institutional Board of Trustees' Approval Date:

Proposal Type (check all that apply):

Regents' General Consent Calendar Items		
<i>R401-5 OCHE Review and Recommendation; Approval on General Consent Calendar</i>		
SECTION NO.		ITEM
5.1.1	<input type="checkbox"/>	Minor*
5.1.2	<input type="checkbox"/>	Emphasis*
5.2.1	<input checked="" type="checkbox"/>	(CER P) Certificate of Proficiency*
5.2.3	<input type="checkbox"/>	(GCR) Graduate Certificate*
5.4.1	<input type="checkbox"/>	New Administrative Unit
	<input type="checkbox"/>	Administrative Unit Transfer
	<input type="checkbox"/>	Administrative Unit Restructure
	<input type="checkbox"/>	Administrative Unit Consolidation
5.4.2	<input type="checkbox"/>	Conditional Three-Year Approval for New Centers, Institutes, or Bureaus
5.4.3	<input type="checkbox"/>	New Center
	<input type="checkbox"/>	New Institute
	<input type="checkbox"/>	New Bureau
5.5.1	<input type="checkbox"/>	Out-of-Service Area Delivery of Programs
5.5.2	<input type="checkbox"/>	Program Transfer
	<input type="checkbox"/>	Program Restructure
	<input type="checkbox"/>	Program Consolidation
5.5.3	<input type="checkbox"/>	Name Change of Existing Programs
5.5.4	<input type="checkbox"/>	Program Discontinuation
	<input type="checkbox"/>	Program Suspension
5.5.5	<input type="checkbox"/>	Reinstatement of Previously Suspended Program
	<input type="checkbox"/>	Reinstatement of Previously Suspended Administrative Unit

**Requires "Section V: Program Curriculum" of Abbreviated Template*

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:

Printed Name:

¹ CIP codes must be recommended by the submitting institution. For CIP code classifications, please see <http://nces.ed.gov/ipeds/cipcode/Default.aspx?y=55>.

Program Request – Abbreviated Template
University of Utah
Certificate in Hazards & Emergency Management
10/3/13

Section I: Request

The Geography Department at the University of Utah proposes to develop an undergraduate certificate program in Hazards & Emergency Management. The proposed certificate was provided to all Geography Department faculty via email in September 2013 for review. Suggestions received were incorporated and the proposal was discussed at the September 6, 2013 faculty meeting and subsequently approved. The proposed certificate takes advantage of the existing curriculum in hazards and emergency management in Geography along with courses in other departments on campus to provide an interdisciplinary, value-added educational opportunity for students that want to increase their knowledge in hazards and emergency management and their marketability for careers requiring this type of expertise.

Section II: Need

Recent disasters including Hurricane Sandy, the Oklahoma Tornadoes, and the Waldo Canyon Wildfire underscore the devastating toll that environmental hazards can take on life and property. Emergency management is the process of applying science, technology, planning, and management to deal with extreme events that can injure or kill large numbers of people, do extensive damage to property, and disrupt community life (Drabek, 1991). As populations in all hazardous areas increase, the need for well-trained emergency managers is growing. Utah is home to many environmental hazards such as extreme weather, earthquakes, flooding, wildfires, landslides, and hazardous materials releases. The University of Utah does not currently have a Certificate or Degree in Hazards & Emergency Management but a number of graduates in Geography and other majors have successfully gained employment in this area in local, state and federal agencies. In many of these cases, entry-level positions involved expertise in the application of geospatial technologies (GIS, remote sensing, or GPS). A formal curriculum in Hazards and Emergency Management would benefit our students by preparing them for a field with growing employment opportunities.

The proposed program will provide students with cutting-edge knowledge about hazards, emergency management, and geospatial technologies. By earning the certificate, students will:

- Understand the fundamentals of environmental hazards and how to reduce their impact.
- Understand the principles of emergency management.
- Develop skills in applying geospatial technologies to managing emergencies.
- Learn about the emergency management phases: mitigation, preparation, response, and recovery.
- Learn about approaches to dealing with terrorism and preserving homeland security.

This certificate would be valuable to a wide range of career options including but not limited to:

- Emergency managers that work in city, county, state, and federal government;
- Emergency managers that work in the private and non-profit sectors;
- Natural, technological, and social hazards researchers, planners, and policy-makers;

- Individuals in any field that want to improve their understanding of environmental threats and how to reduce their toll.

The decision to develop the certificate program is based on student and faculty interest and participation in the Department of Geography's hazards, terrorism, and emergency management courses: Natural Hazards (GEOG 3310/5310), Geography of Terrorism and Security (GEOG 3320/5320), and Geography of Disasters and Emergency Management (GEOG 3340/5340). These classes have steadily grown in total enrollment over the last decade, and students from across campus are well-represented with over 50% coming from majors outside Geography. Majors represented include Anthropology, Atmospheric Sciences, Civil Engineering, Economics, Environmental Studies, Geology and Geophysics, City and Metropolitan Planning and more. Emergency Management is a very interdisciplinary field that is relevant to a wide variety of majors and career options, and an organized curriculum would improve student marketability.

There are no certificate programs in Hazards and Emergency Management in the State of Utah, although there are programs in Fire and Rescue (UVU) and Emergency Medicine (U of U). One similar program was identified at Colorado State University Global Campus. This program <http://csuglobal.edu/educational-programs/lifelong-learning/certificates-of-completion/undergraduate-emergency-management/> consists of 5 classes. Because of this example, we propose a minimum of 5 classes for our certificate.

The certificate as designed is meant to be an attribute of an existing course of study for a student or may be earned independently after the successful completion of a bachelor's degree. It is anticipated that in the future a sufficient number of the courses would be available in an on-line format and the certificate would potentially be offered to non-matriculated students in the context of Continuing Education. As a value-added option for existing students and as a future option for non-matriculated students, this certificate contributes to the governor's **66% by 2020** program, the intent of which is to provide Utahns post-secondary educational opportunities to maintain and strengthen our local work force.

Section III: Institutional Impact

The proposed certificate program would be managed in the Geography Department in the College of Social and Behavioral Science at the University of Utah. The core hazards and emergency management coursework has already been developed in this department, and the development of a new certificate will take advantage of the existing infrastructure while providing undergraduates an opportunity to complement their degree with a "value added" component to enhance marketability. As an interdisciplinary certificate, there will be a financial benefit to Atmospheric Sciences, Environmental Studies & Sustainability, Family & Consumer Studies, Geology & Geophysics, and Health Promotion & Education, Political Science, Psychology, and Sociology, as students who might not have taken one of the courses may now do so in pursuit of the certificate. Contact has been made with departments who might have relevant coursework to contribute. Specifically, contact has been made with Dr. Perry from Atmospheric Sciences, Dr. Brown from Family & Consumer Studies, Dr. Solomon from Geology & Geophysics, Dr. Chatelain from Health Promotion & Education, Dr. McCool from Environmental Studies & Sustainability, Dr. Drews from Psychology, Dr. Svedin from Political Science, and Dr. Melton from Sociology who have provided suggestions for coursework.

All required courses are taught at least once per year and there is a commitment from the Geography Department to continue to do so. No new faculty or staff are required, and the program would take advantage of recent faculty additions in Geography. Core emergency management courses in the

Department of Geography are taught by Andrea Brunelle, Larry Coats, Tom Cova, and George Hepner. Because the Department of Geography has experience managing the Geographic Information Science certificate, the new administrative burden is not extensive. The Undergraduate Director will direct the certificate as part of their departmental duties. Students pursuing the Certificate can receive advising from the Undergraduate Director, Department Advisor, or Certificate Director which will reduce the burden on any one person. Courses proposed as electives will be vetted by the Director of the Certificate and must meet the following criteria: 1) offered at the 3000 level or higher, and 2) include at least 2 weeks of material directly related to emergency management that is explicitly indicated on the syllabus. A small interdisciplinary committee of 3 faculty will evaluate changes to the program.

Section IV: Finances

No new costs are associated with the development of this certificate program. Revenue from increased student enrollments will benefit all departments involved.

Section VI: Program Curriculum

All Program Courses

Category	Course Prefix & Number	Title	Credit Hours
Required	GEO 1000 <i>or</i> GEOG 3310	Natural Disasters <i>or</i> Natural Hazards	3
	GEOG 3320	Geography of Terrorism and Homeland Security	3
	GEOG 3340	Geography of Disasters and Emergency Management	3
	Sub-Total		9
Substantive Electives (select 2)	ATMOS 1010	Severe and Unusual Weather	3
	FCS 3620	Environment and Behavior	3
	GEO 1030	Earthquakes and Volcanoes	3
	GEO 5170	GeoHazards and Engineering Geomorphology	3
	GEOG 5215	Climate Change Impacts	3
	GEOG 5230	Pyrogeography	3
	HEDU 2720	Emergency Medical Response	3
	PSY 3171	Human Factors	3
	POLS 5965	Crisis Management	3
	SOC 3569	Terrorism, Violence, and Aggression	3
	Sub-Total		6
Technical Electives (select 1)	GEOG 3140	Introduction to Geographic Information Systems (GIS)	4
	GEOG 3110	Earth from Space: Remote Sensing of the Environment	3
	Sub-Total		3-4
Total			18-19

New Courses to Be Added in the Next Five Years

Over the last 3 years the core courses have been developed and approved. No new needed courses are planned at this time however new electives can be added per the vetting process described above.

Recommended Program Schedule

The core courses are offered so that the sequence can be completed in 3 semesters (fall, spring, fall sequence). Electives may be taken throughout the sequence, however we will advise that they be taken after the initial core course has been completed.

Semester 1	Course Prefix and Number	Course Title
Fall (two core courses)	GEOG 3310 or GEO 1000	Natural Hazards Natural Disasters
	GEOG 3140	Introduction to GIS
Semester 2		
Spring (two core courses)	GEOG 3340	Geography of Disasters & Emergency Management
	GEOG 3320	Geography of Terrorism & Homeland Security
Semester 3		
Fall (+ 3 electives)	XXXX	Elective 1
	XXXX	Elective 2
	XXXX	Elective 3

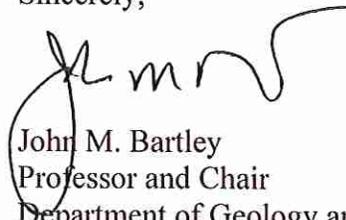
October 22, 2013

Prof. Ann Darling
Chair, Undergraduate Council
Sterling Sill Center
195 S Central Campus Drive, RM 00132
Salt Lake City, UT 84112

Dear Prof. Darling:

I write to endorse the proposal being submitted by Dr. Tom Cova from the Geography Department for an Undergraduate Certificate in Hazards & Emergency Management. Members of my department and I have reviewed the certificate program proposal and we feel an appropriate level of inclusion, and that any impacts from the certificate to my college/department will be positive.

Sincerely,



John M. Bartley
Professor and Chair
Department of Geology and Geophysics

October 21, 2013

Dear Undergraduate Council;

I am writing to endorse the proposal being submitted by Dr. Tom Cova from the Geography Department for an Undergraduate Certificate in Hazards & Emergency Management.

The certificate program proposal has been reviewed by me and my department chair Robert Mayer and we feel an appropriate level of inclusion and that any impacts from the certificate to my college/department will be positive.

Sincerely,

Barbara B Brown



October 22, 2013

UGS Committee
University of Utah

Dear Colleagues:

We are pleased to provide a letter of support for the proposal from the Geography Department to create a new Undergraduate Certificate in Hazards & Emergency Management. We think this certificate will have considerable appeal to students majoring in Environmental and Sustainability Studies, and thus will have a positive impact on our Program. We have reviewed the proposal and provided feedback, and fully support Dr. Cova's proposal.

Thank you.

Daniel McCool
Professor of Political Science
Director, Environmental and Sustainability Studies Program
Co-director, Sustainability Curriculum Development



October 19, 2013

Undergraduate Council
University of Utah
Salt Lake City, Utah 84112

Dear Undergraduate Council;

I am writing to endorse the proposal being submitted by Dr. Thomas Cova for an Undergraduate Certificate in Hazards and Emergency Management. The certificate program proposal has been reviewed by me and members of the Department of Geography and was unanimously approved. The proposed certificate program provides a complement to our other certificates in Climate Change, and Geographic Information Science (GIS), and Geospatial Intelligence. This interdisciplinary certificate also builds on the existing strengths in issues related to natural and anthropogenic hazards and how humans and society respond to them in our department, college and across campus. This certificate will provide students the opportunity to get a focused education in an area that is becoming even more relevant with the impacts global change.

Sincerely,

A handwritten signature in cursive script that reads 'A Brunelle'.

Andrea Brunelle
Associate Professor and Chair

October 15, 2013

Dear Undergraduate Council;

I am writing to endorse the proposal being submitted by Dr. Thomas Cova and the Geography Department for an Undergraduate Certificate in Hazards and Emergency Management. The certificate program proposal has been reviewed by me and members of my college and it has received unanimous approval by all involved. As indicated in Dr. Brunelle's letter, the certificate builds on the strengths of the geography program's other certificate programs. The certificate program will be of positive benefit to the college.

Sincerely,

A handwritten signature in black ink that reads "Cynthia A. Berg". The signature is written in a cursive style with a long, sweeping flourish at the end of the name.

Dr. Cynthia Berg
Interim Dean

To: Undergraduate Council

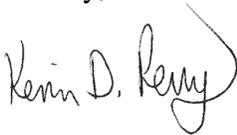
From: Dr. Kevin D. Perry, Chair
Department of Atmospheric Sciences
University of Utah

Date: October 22, 2013

Re: Letter of Support for Undergraduate Certificate in Hazards & Emergency Management

I am writing to endorse the proposal being submitted by Dr. Tom Cova from the Geography Department for an Undergraduate Certificate in Hazards & Emergency Management. The certificate program proposal has been reviewed by me and members of my department and we feel an appropriate level of inclusion and that any impacts from the certificate to my department will be positive.

Sincerely,



Dr. Kevin D. Perry



October 21, 2013

Dear Undergraduate Council;

I am writing to endorse the proposal being submitted by Dr. Tom Cova from the Geography Department for an Undergraduate Certificate in Hazards & Emergency Management. The certificate program proposal has been reviewed by me and members of my college/department and we feel an appropriate level of inclusion and that any impacts from the certificate to my college/department will be positive.

Sincerely,

Heather C. Melton
Associate Professor
Department of Sociology
University of Utah
801-581-3108
Heather.melton@soc.utah.edu



October 21, 2013

Dear Undergraduate Council;

I am writing to express my strongest support for the proposal being submitted by Dr. Tom Cova from the Geography Department for an Undergraduate Certificate in Hazards & Emergency Management.

The certificate program proposal has been reviewed by me and members of my college/department and we feel an appropriate level of inclusion and that any impacts from the certificate to my college/department will be positive.

Regards,

A handwritten signature in blue ink, appearing to read 'Frank A. Drews', written in a cursive style.

Frank A. Drews, PhD

Associate Professor Cognitive Psychology, University of Utah.
Director of the Center for Human Factors in Patient Safety at the VAMC Salt Lake City
Director of the Human Factors Certificate Program, University of Utah
Adjunct Assistant Professor, Department of Anesthesiology, University of Utah.
Adjunct Assistant Professor, Educational Psychology, University of Utah
Adjunct Assistant Professor, Department of Biomedical Informatics, University of Utah
Adjunct Assistant Professor, Internal Medicine, University of Utah



October 21, 2013

Dear Undergraduate Council;

I am writing to endorse the proposal being submitted by Dr. Tom Cova from the Geography Department for an Undergraduate Certificate in Hazards & Emergency Management. The certificate program proposal has been reviewed by me and members of my college/department and we feel an appropriate level of inclusion and that any impacts from the certificate to my department will be positive.

Sincerely,

A handwritten signature in black ink that reads "LES CHATELAIN". The signature is written in a cursive, slightly slanted style.

Les Chatelain
Interim Department Chair