

Hazards and Emergency Management Certificate

As extreme events increase at all scales due to population growth in hazardous areas, the rise of terrorism and climate-change, there's a growing need for highly-trained people to address issues in disaster mitigation, preparedness, response, and recovery. Utah is essentially a real-world hazards lab and home to many environmental hazards including extreme weather, avalanches, earthquakes, floods, wildfires, landslides, and hazardous materials releases. To address this need the Department created an undergraduate Certificate in Hazards & Emergency Management. The hazards tradition in Geography began with Merrill Ridd's class on Wasatch Hazards in the late 1970s, and Fred May ran a very successful FEMA-approved certificate program in the 1990s as Director of the Center for Natural & Technological Hazards. This new certificate will continue this tradition. 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

The certificate blends interdisciplinary coursework on various threats with those associated with management, decision making, and human response in emergencies. This certificate would be valuable to a wide range of career options including, but not limited to:

- Emergency managers who work in city, county, state, and federal government;
- Emergency managers who work in the private and non-profit sectors;
- Natural, technological, and social hazards researchers, planner, and policy-makers;
- Individuals in any field who want to improve their understanding of environmental threats and how to reduce their toll.

Program Curriculum

All Program Courses

All courses for the certificate must be taken for a letter grade and completed with a C or better

Required

- GEO 1000: Natural Disasters (3.0)
-OR-
GEOG 3310: Introduction to Natural Hazards (3.0)
-AND-

- GEOG 3320: Geography of Terrorism & Security (3.0)
- GEOG 3340: Geography of Disasters & Emergency Mgt (3.0)

Sub-Total9

Substantive Electives (select 2)

- ATMOS 1010: Severe and Unusual Weather (3.0)
- FCS 3620: Environment and Behavior (3.0)
- GEO 1030: Earthquakes and Volcanoes (3.0)
- GEO 5170: GeoHazards & Engineering Geomorphology (3.0)
- GEOG 5215: Climate Change Impacts (3.0)
- GEOG 5230: Pyrogeography (3.0)
- HEDU 2720: Emergency Medical Response (3.0)
- PSY 3171: Human Factors (3.0)
- POLS 5965: Crisis Management (3.0)
- SOC 3569: Terrorism, Violence and Aggression (3.0)

Sub-Total 6

Technical Electives (select 1)

- GEOG 3100 Intro to GIS and Cartography (5.0)
- GEOG 3110 Earth from Space: Remote Sensing of the Environment (3.0)

Sub-Total (minimum) 3-5

Certificate Total 18-20 credits

Model 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 advise that they be taken after the initial core course has been completed.

Semester 1

Fall (one core course)

- GEOG 3310: Introduction to Natural Hazards
or
GEO 1000: Natural Disasters

Semester 2

Spring (two core courses)

- GEOG 3340 Geography of Disasters & Emergency Management
- GEOG 3320 Geography of Terrorism & Homeland Security

Semester 3

Fall (three electives)

- XXXX Elective 1
- XXXX Elective 2
- XXXX Elective 3

Students that declare a certificate with the Geography Advisor should be aware that the certificate will NOT show up on their CIS page with their other degree declarations. For all questions, scheduling, and declaring: book an advising appointment with the Geography undergraduate advisor by clicking the "Book Now" bubble on the Home page.

It is the responsibility of the student to submit an Application for Certificate Completion form for any and all certificates pursued through the Geography Department during the student's last semester before graduation (or during the last semester of coursework to complete the certificate for non-matriculated students or students who have already graduated). The Certificate Completion form can be picked up in the Geography Main Office or from the Geography Advisor and must be submitted to the Geography Advisor before grades are posted.

