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A Course on Natural Disasters as Part of an Academic Curriculum

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Background

While several American universities do offer an academic course on the topic of Natural Disasters, it is not common. When such a course does exist, it is typically offered in either science or engineering departments. Given the impact that natural disasters have on human populations and infrastructure, more Social Science programs should consider offering such a course.

In 1998, a 1 unit course entitled, "Human Response to Natural Disasters" was developed and offered through the Psychology Department at Dominican University of California, a small, private, liberal arts institution in northern California. Due to its popularity, the course was subsequently developed into a full 3 unit course entitled "Natural Disasters: Individual and Societal Reactions to Risk" and is taught on a regular rotation as either a psychology elective or as part of a general education requirement. Approximately 250 students have completed the course to date.

Course Content

The covers several major topics:

- **Natural Disasters in History & Legend**
 - Atlantis Legend, Biblical Flood, Pompeii
- **Disaster Statistics, Patterns and Trends**
 - Geographically At-Risk Areas
 - Trends in Number of Casualties vs. Social and Economic Disruption
 - Disparities Between Third World vs. Developed Nations
- **Hazards Research**
 - Risk Perception Research
 - Social and Psychological Factors Related to Preparedness
 - Hazard Mitigation Strategies at both the Individual and Societal Levels
- **Survey of the Major Natural Disasters: Causes, Effects, At-Risk Areas and Mitigation**
 - Earthquakes
 - Volcanic Eruptions
 - Tsunami
 - Hurricanes
 - Tornadoes
 - Floods, Drought and Wildfires
- **Disasters Research**
 - Human Behavior During and in the Aftermath of Disasters
 - Psychological Reactions to Traumatic Events and PTSD
 - Treatment of Psychological Distress Resulting from Trauma
 - Recovery and Resilience at Both the Societal and Individual Level

Special Focus Topics

A series of in-depth "special focus" case studies are included in the course which highlight particular disasters due to their relevance to the student population, or their social or historical importance:

The 1906 San Francisco Earthquake, California's Earthquake History and Seismic Risks



The 79 AD Eruption of Vesuvius in and the Threat Posed to Present-Day Naples



The Eruption of Kilauea and the Destruction of Kalapana



The Indian Ocean Tsunami (2004)



Hurricane Katrina (2005)



Reading Materials & Videos

Due to the interdisciplinary nature of this course, students are assigned a variety of journal articles, magazine articles and book chapters to provide background on the topic. Students also read *A Dangerous Place* (Reisner, 1995) which chronicles California's historical struggles with overpopulation, water shortages and earthquake activity. Video segments are also an important aspect of the class, most importantly:

- **Tsunami, Day of Destruction**
- **Surviving Katrina**
- **Pompeii: The Last Day**

Class Assignments

In addition to a traditional Midterm and Final Exam on the course material, a number of other assignments make up the course requirements:

- **Reaction Papers**

Students reflect upon their reactions to the Reisner book (particularly given that they reside in California), and to the videos on the Indian Ocean Tsunami, and Hurricane Katrina
- **Research Paper or Disaster Training**

Students choose between writing a traditional research paper on a topic of their choice or participating in 15 hours of CERT Disaster Preparedness Training through the Marin County Office of Emergency Services. CERT training involves search and rescue techniques, medical triage, and fire suppression. Approximately 80% of students in the course opt for the disaster training.

Student Reactions

The course has attracted a diverse group of students from multiple disciplines, including health sciences, physical sciences, and the social sciences and receives consistently positive student evaluations. A recurring theme in students' comments is the need for more people to learn about this topic and the value of having been exposed to disaster preparedness training offered by local government.

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