

COURSE SYLLABUS

Course Title:	Natural Disasters	Date submitted:	May 2019 (AAC: 19-25)
Department:	Mathematics and Science		
Curriculum:	Science		
Course Descriptors: Make certain that the course descriptors are consistent with college and Board of Trustees policies, and the current course numbering system.	Course Code: (eg. ACC 101) EAS*106	Prerequisites:	
	Course Type: L	None	
	A: Clinical B: Lab D: Distance Learning I: Individual/Independent L: Lecture N: Internship M: Seminar P: Practicum U: Studio X: Combined Lecture/Lab Y: Combined Lecture/Clinical/Lab Z: Combined Lecture/Studio		
	Elective Type: G/LAS/S	Corequisites:	
	AH: Art History E: English FA: Fine Arts FL: Foreign Language G: General HI: History HU: Humanities LAS: Liberal Arts & Sciences M: Math S: Science SS: Social Science	None	
	Credit Hours: 3		
	Developmental: (yes/no) No		
	Lecture: 3		
	Clinical: 0		
	Contact Hours:	Lab: 0	Other Requirements:
Studio: 0	None		
Other: 0			
TOTAL: 3			
Class Maximum: 35	Other Requirements:		
Semesters Offered: F/Sp/Su	None		
Catalog Course Description:	This course provides an introduction to the causes, occurrence and consequences of natural disasters. Students will analyze the physical causes as well as the distribution and frequency of disasters such as earthquakes, volcanoes, hurricanes, floods, mass wasting, severe weather, tsunamis, wildfires, and extraterrestrial impacts. Case studies will include local and regional examples of historical and recent disasters. The course will focus on naturally occurring disasters, but will also consider the role of human activities in both contributing to and mitigating natural disasters.		
Topical Outline: List course content in outline format.	<ol style="list-style-type: none"> 1. Natural Disasters and the Human Population 2. Energy Flows in Earth History and Natural Disasters 3. Plate Tectonics and Earthquakes 4. Earthquake Geology and Seismology 5. Tsunami 6. Some Earthquakes in Western North America 7. Earthquakes in Continental U.S. and Canada plus Hawaii 		

	<ol style="list-style-type: none"> 8. Volcanic Eruptions: Plate Tectonics and Magmas 9. Volcano Case Histories: Killer Events 10. Mass Movements 11. Weather Principles and Tornadoes 12. Climate Change 13. Hurricanes and the Coastline 14. Floods 15. Fire 16. The Great Dyings 17. Impacts with Space Objects
<p>Outcomes: Describe measurable skills or knowledge that students should be able to demonstrate as evidence that they have mastered the course content.</p>	<p>Upon successful completion of this course, the student will be able to do the following:</p> <p>COURSE:</p> <ol style="list-style-type: none"> 1. describe geological, hydrological, and atmospheric processes interacting within the Earth system 2. identify sources of energy within the Earth system and describe the transfer of energy involved in natural disasters 3. identify the physical causes and consequences of natural disasters such as earthquakes, volcanoes, severe weather, flooding, and extraterrestrial impacts 4. describe controls on the spatial distribution, frequency, and magnitude of natural disasters 5. analyze and critically evaluate maps, graphs, and data from actual disasters 6. identify factors in hazard assessment and prediction 7. describe the ecological and social consequences of natural disasters 8. evaluate the role of humans in causing and mitigating natural disasters 9. identify and correct common misconceptions about natural disasters <p>PROGRAM: <i>(Numbering reflects Program Outcomes as they appear in the college catalog)</i> N/A</p> <p>GENERAL EDUCATION: <i>(Numbering reflects General Education Outcomes as they appear in the college catalog)</i></p> <p>8. Scientific Knowledge - Students will gain a broad base of scientific knowledge and methodologies in the natural sciences. This will enable them to develop scientific literacy, the knowledge and understanding of scientific concepts and processes essential for personal decision making and understanding scientific issues.</p> <p>Demonstrates: Consistently recalls and correctly applies discipline-specific terms, relevant theories, laws, and concepts to analyze and explain scientific information.</p> <p>Does Not Demonstrate: Inconsistently recalls or incorrectly applies discipline-specific terms, relevant theories, laws, and concepts to analyze or explain scientific information.</p>
<p>Evaluation: List how the above outcomes will be assessed.</p>	<p>Assessment will be based on the following criteria:</p> <ol style="list-style-type: none"> 1. Written examinations 2. Written final exam 3. Quizzes 4. Homework 5. In-class assignments

Instructional Resources: List library (e.g. books, journals, on-line resources), technological (e.g. Smartboard, software), and other resources (e.g. equipment, supplies, facilities) required and desired to teach this course.	Required: Instructor computer and projector Access to internet and Vista Smartboard or blackboard access Desired:
Textbook(s)	Natural Disasters, Patrick L. Abbott McGraw Hill, current edition