GG 406 Natural Hazards: Geoethics and the Layman  
M/W - 11:30 – 12:45 POST 723  
Syllabus, Spring Semester 2015
(Note, topics are subject to change without warning should hazard events occur during the semester)
(Note, there is no text for this course, but reading from the web and articles posted on Laulima will be assigned.)

Week 1 – Ethical Approaches to decision-making
  M Jan. 12 - Definition of Natural Disaster and an introduction to thinking ethically  
  Reading assignment:  
  <http://www.scu.edu/ethics/practicing/decision/thinking.html>
  W Jan 14 - Frameworks for Moral Decision Making. (Cont.)

Week 2 – Forecasting Volcanism
  M Jan 19  Martin Luther King Jr. Day HOLIDAY no class
  Tu Jan 20 last day to drop courses (without W grade)

Week 3 – The Volcanologist and the public
  M Jan 26- The volcanologist and the public: who do you talk to and what do you say? (Nevada del Ruiz)
  W Jan 28 Class panel discussions re the aspects of the ethical decision-making as it applies to forecasting natural hazards from volcanic eruption events

Week 4 – Hawaiian volcanism
  M Feb 2 Eruptions in Hawaii,  
  Chapter on Hawaii Island in “Volcanoes in the Sea” regarding the nature of Hawaiian eruptions and in particular the more explosive eruptions that have blanketed the Big Island in thick ash deposits from time to time. (Macdonald et al., 1983)
  W Feb 4 - Hawaii Volcano National Park, Civil Defense and Native Hawaiian Issues (and also possibly Halemaumau at Kilauea). Discussion (Guest speakers to respond to student questions)

Week 5 – Earthquakes in Hawaii
  M Feb 9 - Kiholo Bay earthquake (effects on Hawaii Island and around the State)
  W Feb 11 - how to mitigate against earthquake damage and changes in earthquake building codes. (guest speaker to respond to student questions)

Week 6 - Politics and earthquake hazards L’Aquila 2009
M Feb 16 President’s Day HOLIDAY no class

W Feb 18 - Discuss the various Italian scientific teams and the political pressures to which the scientists are subject and how these may intersect with ethical decisions these scientists have to make.

Week 7 Earthquake forecasting and risk-assessment/mitigation/response
M Feb 23 – History of activity, precursory phenomena, preparedness re potential earthquakes in this area.
Assignment: Viewing of AGU discussion of L’Aquila earthquake and trial of scientists and civil official. (Oct 26 2012 verdict 6 year sentences)
http://www.youtube.com/watch?v=xNK5nmDFgy8
W Feb 25 - Discussion of ethics of political control over response in the aftermath of large magnitude seismic events and building permits/practices in earthquake-prone regions
Discussion (Guest speaker(s) to respond to student questions)

Week 8 – Civil authorities and Stakeholders
W Mar 2 – Lessons from Charleston Earthquake 1886, San Francisco 1906, (differing points of view)
http://www.sfmuseum.org/1906.2/charleston.html
W Mar 4 - Guest Speaker (architectural codes and civil engineering)
Choice of term paper topic due

Week 9 – Tsunamis
M Mar 9 - Sumatra 2004 (Guest speaker re recent changes in tsunami warning protocols)
W Mar 11 – Hawaiian tsunami experiences and public education efforts
Guest Speaker & discussion

Week 10 - Tsunamis
M Mar 15 – Guest presentation: Activities of the Pacific Tsunami Warning Center
W Mar 17 – Local Hawaii tsunami threats, and erroneous predictions of potential hazard

Week 11 – Spring Break Mar 23-27

Week 12 – Coastal Zone Management in Hawaii
M Mar 30 – Guest speaker re shoreline effects in Hawaii and adaptation to sea level rise
W Apr 1 – coastal effects, local science vs. politics storm hazards (Sandy)

Week 13 - Global warming and climate change debate
M Apr 6- Climate-gate
W Apr 8 – Senator Inhofe and national science vs politics

Week 14 – Student presentations of term paper topics
M Apr 13 - Term Paper Due
   – Student presentations (8 5-min presentations 2 minute student critiques)
W Apr 15 –Student presentations (8 5-min presentations 2 minute student critiques)

Week 15 – Atmospheric and wildland hazards
   M Apr 20 – Issues regarding climate change and wildfires, the public and government partners (decision-making regarding forest management).
   W Apr 22 – floods and issues related to land management

Week 16 – Interactions with the media
   M Apr 27 – Guest speaker from the media and/or journalism
   W Apr 29 – international/cultural differences in response to natural hazards

Week 17 - Evaluations
   M May 4 – disaster preparedness/response issues local and international
   W May 6 - review for exam and evaluation of the course

Final Exam scheduled for Friday, May 15, 12:00 – 2:00 PM in POST 723

Student learning objectives (all written work will be graded on the basis of these criteria): The student will be able to
- 1. clearly identify the inherent ethical choices and implications involved in the various stakeholder(s) role(s) during given contemporary natural hazard situations.
- 2. describe the effects of perspective, context, personal views as pertains to natural hazards.
- 3. specify the decision-makers and stakeholders involved in hazard situations.
- 4. integrate clear descriptions of relevant ethical ambiguities/dilemmas into the overall analysis of a given hazard situation.
- 5. draw upon frameworks and principles of ethics to develop pertinent arguments and/or positions.
- 6. develop and present alternate arguments/positions.
- 7. discuss and/or debate ethical issues with sensitivity to others’ perspectives and the context while also defending own position with logic and fact.
- 8. make a reasoned judgment that takes into account an array of arguments and perspectives.
- 9. shows evidence of a logical, systematic decision-making process.

Grading will be based on:
- Class participation and attendance - 50% of the grade
- Homework - 30% of the grade
- Term paper - 10% of the grade
- Final exam – 10% of the grade
- Extra Credit opportunities will occur during the semester (up to 5% of the grade)

Students with disabilities may contact KOKUA (http://www.hawaii.edu/kokua/) for assistance. The KOKUA office provides a variety of types of advice and assistance. All possible accommodations for student needs associated with any type of disability will be provided during this course.