GG402 Hawaiian Geology: Course Description and Syllabus

This class is intended to be an up-to-date overview of geological processes that affect the State of Hawai‘i, including what is known about the individual islands and surrounding seafloor of the region.

Learning Objectives

The Department of Geology and Geophysics defines five learning objectives for the undergraduate degree program related to the relevance of geology and geophysics, the acquisition of technical knowledge, implementation of the scientific method, developing oral and written skills, and understanding the basic principles of science. This course objectives encompass two levels of maturity in all five categories, by developing understanding of the impact of geology and geophysics on society and human needs, particularly in Hawaii (SLO 1a); utilizing computer applications to support quantitative understanding of geologic data and processes (2b); and articulating scientific problems (3a). You will gain proficiency in applying supporting disciplines (math, physics, and chemistry) to geological problems (2a); conducting geological field work (2d); communicating effectively in writing (4b); and explaining complex geological and geophysical phenomena (5c).

Course Topics and Format

The first part of the course is devoted to processes influencing Hawai‘i, including erosion, land sliding, magmatic processes, volcanic eruptions, plate tectonics, groundwater flow, sea level change, and tsunami. The second part consists of case studies of specific regions, islands, and volcanoes.

The course will consist of a series of lecture presentations, group discussions, field trips, and a research project. The class is restricted to 20 students, in order to promote meaningful professor-student interaction on each student’s writing. In turn, you are expected to participate actively in the course, including attending all class meetings and taking part in discussions. This class uses writing to promote learning the course content and satisfies university hallmarks for writing intensive focus (W) through emphasis on a literature research project, prepared as a term paper. Possible term paper topics include one or more Hawaiian volcano, island, or some aspect of a geological process active in Hawai‘i. Our strong emphasis on the written term paper is supported by the requirement that students complete the project in increments with due dates throughout the second half of the semester. Submittal of an outline, scholarly reference list, and one complete draft of the paper for review will facilitate interaction with and feedback from the instructor as you prepare the final version. The final version will be presented orally, and you will receive oral feedback on both the oral presentation and final version of the term paper. In all, you will receive feedback on ~20 pages of written work.

Essential Info

Credits: 3
Semester: Fall 2018
Lecture time and place: MWF 12:30-1:20 pm POST 703
Instructor: Dr. Julia Hammer
office: POST 617B
phone: 956-5996
email: jhammer@hawaii.edu
office hours: by appointment
Course Prerequisites

This course has no pre-requisites. Students with a working knowledge of geology (GG 101 or equivalent), petrology (GG 302 or equivalent) and structure (GG 303 or equivalent), or the willingness to learn these subjects on-the-fly, will benefit most from this course.


Other Required Materials

Bring your hand lens, rock hammer (or small sledge hammer), and field notebook to all field trips. Look for a handheld lens that is 13-20 mm in diameter, providing 10x magnification. Order your lens from the web site Amateur Geologist (http://www.amateurgeologist.com/) or a similar vendor of geological supplies.

Assignments and Assessment

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Participation in class and field trips</td>
<td>20%</td>
</tr>
<tr>
<td>Field Trip report (500 words)</td>
<td>5%</td>
</tr>
<tr>
<td>Term paper: outline (300 words)</td>
<td>5%</td>
</tr>
<tr>
<td>Term paper: reference list (at least 10 sources)</td>
<td>10%</td>
</tr>
<tr>
<td>Term paper: 1st draft (2200 words)</td>
<td>25%</td>
</tr>
<tr>
<td>Term paper: final version (2200 words)</td>
<td>25%</td>
</tr>
<tr>
<td>Term paper: oral presentation of research project</td>
<td>10%</td>
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</tbody>
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Title IX information

The University of Hawai‘i is committed to providing a learning, working and living environment that promotes personal integrity, civility, and mutual respect and is free of all forms of sex discrimination and gender-based violence, including sexual assault, sexual harassment, gender-based harassment, domestic violence, dating violence, and stalking.

If you or someone you know is experiencing any of these, the University has staff and resources on your campus to support and assist you. Staff can also direct you to resources that are in the community. Here are some of your options:

• As members of the University faculty, your instructors are required to immediately report any incident of potential sex discrimination or gender-based violence to the campus Title IX Coordinator. Although the Title IX Coordinator and your instructors cannot guarantee confidentiality, you will still have options about how your case will be handled. Our goal is to make sure you are aware of the range of options available to you and have access to the resources and support you need.

• If you wish to remain ANONYMOUS, speak with someone CONFIDENTIALLY, or would like to receive information and support in a CONFIDENTIAL setting, use the confidential resources available here:

  http://www.manoa.hawaii.edu/titleix/resources.html#confidential

• If you wish to directly REPORT an incident of sex discrimination or gender-based violence including sexual assault, sexual harassment, gender-based harassment, domestic violence, dating violence or stalking as well as receive information and support, contact: Dee Uwono Title IX Coordinator (808) 956-2299 iuhm@hawaii.edu.