Dynamic Earth GG101 - Fall 2018

- Class meeting room and time - POST 723, Lecture MWF 9:30 ~ 10:20 am
- Dr. Fletchers Office, POST 802A, fletcher@soest.hawaii.edu, cell 808-294-0386 (call my cell, text me, or email me anytime)
- Office hrs., I am very available for out of class help but it is best to email or text me to set a specific meeting; MWF 4-5 pm is usually open.
- Happy to set up a regular review session if you like…. All you have to do is ask. Also, if you want to meet one on one or as a group immediately following class we can do that for 30 mins or so.
- We will be using Wiley Engage this semester. Engage is an online platform that provides homework exercises and extra credit. Engage comes as part of your digital text. The bookstore will give you a code ($80+tax) to enroll on Engage.

<table>
<thead>
<tr>
<th>Week of</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug 20</td>
<td>Introduction, Origin of the Solar System (Chapters 1, 2)</td>
</tr>
<tr>
<td>Aug 27</td>
<td>Plate Tectonics (Chapter 3)</td>
</tr>
<tr>
<td>Sept 3</td>
<td>Minerals, Igneous Rock (Chapters 4, 5)</td>
</tr>
<tr>
<td>Sept 10</td>
<td>Volcanoes, Origin of Hawaiian Islands (Chapter 6)</td>
</tr>
<tr>
<td>Sept 17</td>
<td>Catch-up, review</td>
</tr>
<tr>
<td>Sept 24</td>
<td>Exam I - Monday Weathering, Sedimentary Rocks (Chapters 7, 8)</td>
</tr>
<tr>
<td>Oct 1</td>
<td>Metamorphic Rocks, Mountain Building (Chapters 9, 10)</td>
</tr>
<tr>
<td>Oct 8</td>
<td>Earthquakes, Geologic Time (Chapters 11, 12)</td>
</tr>
<tr>
<td>Oct 15</td>
<td>Earth History, Climate Change (Chapter 13, 14)</td>
</tr>
<tr>
<td>Oct 22</td>
<td>Climate Change, Glaciers, Paleoclimate (Chapter 15)</td>
</tr>
<tr>
<td>Oct 29</td>
<td>Catch-up, Review Exam II - Friday</td>
</tr>
<tr>
<td>Nov 5</td>
<td>Hydrology, Hawaii Water (Chapter 17, 18)</td>
</tr>
<tr>
<td>Nov 12</td>
<td>Hawaii Water cont.</td>
</tr>
<tr>
<td>Nov 19</td>
<td>Coastal Geology (Chapter 20)</td>
</tr>
<tr>
<td>Nov 26</td>
<td>Marine Geology (Chapter 21)</td>
</tr>
<tr>
<td>Dec 3</td>
<td>Catch-up, Review Exam III - Wednesday</td>
</tr>
</tbody>
</table>

Learning Objectives By the end of the semester:
1) You will recognize that you are a caretaker of planet Earth. This will inform your personal and professional decisions such as voting, investing, purchasing, service, life-style options, and other choices that you will make.
2) You will be able to discuss topics related to climate change, geologic hazards, natural resources, Earth history, evolution, environmental conservation, mountain building, and why there are oceans and continents.
3) You will be able to categorize the various types of plate boundaries and the processes that operate there.
4) You will be able to explain to someone: what is paleoclimate, why climate is changing today, how climate change is affecting Hawaii, and your thoughts about climate change adaptation and mitigation.
5) You will be able to describe the role of silica (SiO₂) in the whole Earth, in rocks and minerals, in volcanoes, in weathering, in the ocean, and in plate tectonics.

What to Expect
1) This is an introductory Earth and Environmental Science class.
2) Most class periods are lecture-based with short videos.
3) For most students, the difficulty of the class comes from a new vocabulary and new concepts that can be complicated.
4) I try to minimize jargon but the concepts are important to learn, you will need to learn a certain amount of new vocabulary.
5) We cover a lot of material and we move at a quick pace. You need to attend each class, participate in class, stay on top of the reading, do every homework.
6) Work hard, show up, respect your role as a learner, and you will be rewarded.
Required
1) Purchase the enhanced eText, or hardcopy, of *Physical Geology* by C. Fletcher, 3rd edition, plus Engage

Workload/Grading
1) Reading/Homework – 45%
2) Exams – 45%
3) Attendance/Participation 10%

Testing
1) We will have 3 exams.
2) The exams are cumulative so material covered will build over the semester.

Sexual Harassment
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 (including me) 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 (and see below).

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 ruhm@hawaii.edu; or contact me and I will take you to the Title IX office.

Confidential Reporting
University of Hawaii students, faculty and staff have an important resource to confidentially report violations of laws, rules, regulations and UH policies. A whistleblower hotline launched in June 2016 further advances the university's commitment to encourage and enable any member of UH or the general public to make good faith reports of misconduct.


UH Whistleblower Hotline: 1-855-874-2849
For more information go to UH News at http://go.hawaii.edu/coj

Department Learning Objectives
The Department of Geology and Geophysics has established the following undergraduate student learning objectives.
- Students can explain the relevance of geology and geophysics to human needs, including those appropriate to Hawaii, and be able to discuss issues related to geology and its impact on society and planet Earth.
- Students can apply technical knowledge of relevant computer applications, laboratory methods, and field methods to solve real-world problems in geology and geophysics.
- Students use the scientific method to define, critically analyze, and solve a problem in earth science.
- Students can reconstruct, clearly and ethically, geological knowledge in both oral presentations and written reports.
- Students can evaluate, interpret, and summarize the basic principles of geology and geophysics, including the fundamental tenets of the sub-disciplines, and their context in relationship to other core sciences, to explain complex phenomena in geology and geophysics.