Dynamic Earth GG101 (Section 001) - Fall 2019

- 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, text, or email me anytime)
- Office hrs., I am very available for out of class help, email or text to set-up a meeting; MWF 4-6 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 are using Wiley Engage this semester. Engage is an online platform with reading, homework, exercises, and extra learning tools. 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 26</td>
<td>Introduction, Origin of the Solar System (Chapters 1, 2)</td>
</tr>
<tr>
<td>Sept 2</td>
<td>Mon. No Class, Plate Tectonics (Chapter 3)</td>
</tr>
<tr>
<td>Sept 9</td>
<td>Tectonics, Minerals (Chapters 3, 4)</td>
</tr>
<tr>
<td>Sept 16</td>
<td>Igneous Rox, Volcanoes (Chapters 5, 6)</td>
</tr>
<tr>
<td>Sept 23</td>
<td>Origin of Hawaiian Islands (Chapter 6), Review for Exam, Exam I – Friday 9/27/19 (Chaps 1-6)</td>
</tr>
<tr>
<td>Sept 30</td>
<td>Weathering, Sedimentary Rocks (Chapters 7, 8)</td>
</tr>
<tr>
<td>Oct 7</td>
<td>Metamorphic Rocks, Mountain Building (Chapters 9, 10)</td>
</tr>
<tr>
<td>Oct 14</td>
<td>Mountain Building, Earthquakes (Chapters 10, 11)</td>
</tr>
<tr>
<td>Oct 21</td>
<td>Review for Exam, Exam II – Wednesday 10/23/19 (Chaps 1-11) SOEST OPEN HOUSE</td>
</tr>
<tr>
<td>Oct 28</td>
<td>Geologic Time, Earth History (Chapters 12, 13)</td>
</tr>
<tr>
<td>Nov 4</td>
<td>Earth History (Chapter 13), Paleoclimate and Climate Change (Chap. 14, 15)</td>
</tr>
<tr>
<td>Nov 11</td>
<td>Paleoclimate and Climate Change (Chap. 14, 15)</td>
</tr>
<tr>
<td>Nov 18</td>
<td>Climate Change, Hydrology (Chap. 17, 18)</td>
</tr>
<tr>
<td>Nov 25</td>
<td>Hydrology, Coastal Geology (Chapters 18, 20)</td>
</tr>
<tr>
<td>Dec 2</td>
<td>Coastal and Marine Geology (Chapter 21)</td>
</tr>
<tr>
<td>Dec 9</td>
<td>Review, Exam III – Wednesday 12/11/19 (Chapters 1-15, 17-18, and 20-12)</td>
</tr>
</tbody>
</table>

Text
C. Fletcher, 2018, Physical Geology: The Science of Earth, rent or purchase at UH Bookstore.
Wiley Engage, Fletcher 3rd Edition, sign up for instructor C. Fletcher, Course: GG101 Section 001

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) Class attendance is important. I will have in-class exercises that are part of your grade.
2) This is an introductory Earth and Environmental Science class.
3) Most class periods are lecture-based with short videos.
4) For most students, the difficulty of the class comes from a new vocabulary and new concepts that can be complicated.
5) I minimize jargon but the concepts are important to learn, you will need to learn a certain amount of new vocabulary.
6) We cover a lot of material and move at a quick pace.
7) You need to attend each class, participate in class, stay on top of the reading, do every homework.
8) Work hard, show up, respect your role as a learner, and you will be rewarded.

Workload/Grading
1) Reading/Homework – 25%
2) Exams – 65%
3) Attendance/Participation 10%

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

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 t9uhm@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