

ERTH 309 - SEDIMENTOLOGY AND STRATIGRAPHY - SPRING 2021**4 Credit Hours. DP/DY/WI. Lecture: MWF 10:30-11:20. Lab: W 1:30 - 4:20. Prerequisite: EARTH 200.****Instructor: Dr. Craig Glenn**, POST 720A; Office 808-956-2200; Cell 394-5155;**Email:** glenn@soest.hawaii.edu (or cglenn@hawaii.edu)

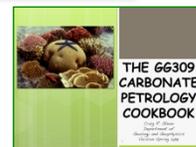
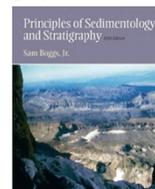
Office Hours: after class Monday/Friday, or by appointment, walk-ins welcome.

Teaching Assistant: TBA; Office Hours: TBA**WHY SEDIMENTOLOGY AND STRATIGRAPHY?****This course is devoted to understanding the environmental processes that form sediments and sedimentary rocks, and how we go about interpreting past environments and processes from the sedimentary record.**

Sedimentology encompasses the study of modern sediments and earth surface environments and the processes that result in the deposition of sediments that each environment leaves in its wake. Sedimentary rocks cover most of Earth's surface, record much of Earth's history, and contain all of Earth's fossil record. The premise that many of the fundamental processes affecting the earth today are much like those in the past is the key basis for determining how ancient sediments formed. From modern sediment compositions, textures, sedimentary structures, fossils and geochemistry we decipher Earth's past terrestrial and marine environments, climates, ecosystems, mountain building and plate tectonics. Thus, the study of sediments and sedimentary rocks also forms the primary basis for the historical sciences of paleoclimatology, paleogeography, paleoecology, and paleoceanography. Sedimentology is also closely linked to Stratigraphy, which is the study of the physical and temporal relationships between rock layers or strata.

MATERIALS YOU WILL USE:

- (1) **Textbook:** Sam Boggs, Jr., Principles of Sedimentology and Stratigraphy:
>>Either 4th Edition (2006) OR 5th Edition (2012) is OK. Buy or rent etc. online.
- (2) **Supplemental Readings:** As required and posted on Laulima (<https://laulima.hawaii.edu>).
- (3) **Lecture:** PowerPoint Slides and Handouts on Laulima.
- (4) **Labs:** Labs build upon and follow lectures. "Glenn's Lab Cookbooks" and other texts are provided.
- (5) **Useful Resources:**
The Elements of Style - William Strunk, Jr.: Paperback or Online: www.bartleby.com/141/
A Glossary of Geology Terms: <http://www.webref.org/geology/geology.htm>
Geology and Earth Science Definitions: <http://geology.com/geology-dictionary.shtml>
Dictionaries of Geology, Geochemistry, Water, Mining, etc.: <http://www.geotech.org/dictionaries.html>
Glossary of Geology (5th Ed/AGI): Hard Copy or Electronic Versions: <http://www.agiweb.org/pubs/glossary/>
- (6) **Required Supplies:** (1) *A 10X (or 20X) Hand Lens!*; (2) Set of Colored Pencils; (3) A Flash Drive.

**GRADING****ALL LABS ARE DUE BEFORE EACH NEW LAB SECTION BEGINS (LAB OVERLAPS ARE NOT ALLOWED)****Course Grade: 3 Midterms (+ Quizzes) 60%, Labs 20%, Term Paper 20%. In-Class Participation = EC (+5%)****MIDTERMS ARE SCALED BY NUMBER OF LECTURES AND LABS****ATTENDANCE IS TAKEN AND INCLUDED IN YOUR GRADE****WRITING (WI):**

This 4 Credit Course is **Writing Intensive (WI)**. The writing portion of the course consists of (1) your Term Paper, (2) a Barbers Point Field Exercise Report, and (3) all Lab Write-ups. **UHM WI Requirement:** Students must complete all writing assignments to pass this course; students who do not complete all writing assignments will fail. Final term paper must be a minimum of 4000 words, or about 16 pages double-spaced text. Oral presentations of term paper projects are part of your term paper grade.

University of Hawaii has strict rules against **plagiarism**. Blind copying of intellectual material (text) from resources such as books, journals, and the internet is plagiarism and is illegal. Instead, you should write things in your own words with a proper reference to your source. This type of academic dishonesty is in violation of the Student Conduct Code and it can result in your suspension or expulsion from the University of Hawaii. If you are unfamiliar with the definition of plagiarism and how to avoid

ERTH 309 - SEDIMENTOLOGY AND STRATIGRAPHY - SPRING, 2021

it, you should look at <https://www.hawaii.edu/eli/useful-information-for-students/academic-honesty/>; note in particular the advice at the bottom of this web page.

DEPARTMENT LEARNING OBJECTIVES:

The **Department of Earth Sciences** has five overall Student Learning Objectives (SLOs) related to the BA and BS degrees. This course's objectives encompass three levels of maturity in all five of these categories:

- 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, field methods, and the supporting disciplines (math, physics, chemistry, biology) 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.

DISABILITY ACCESS:

If you have a disability and related access needs the Department will make every effort to assist and support you. For confidential services students are encouraged to contact the Office for Students with Disabilities (known as “Kokua”) located on the ground floor (Room 013) of the Queen Lili'uokalani Center for Student Services: KOKUA Program; 2600 Campus Road; Honolulu, Hawaii 96822 Voice: 956-7511; Email: kokua@hawaii.edu; URL: www.hawaii.edu/kokua

TITLE IX:

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 t9uhm@hawaii.edu.