

## ERTH101 Lab

## SYLLABUS

ERTH101L is where you learn how to learn Geology and Geophysics (i.e., learning by doing). You'll learn geological and geophysical content, how geologists and geophysicists know this content, get a bit of quantitative practice with real data, and get outdoors where real things happen.

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W 10:00-12:00

Week #, of	Lab	Reading to do <i>prior</i> to lab	SLOs*
1	#1: Introduction		1, 2, 3
2	#2: Maps ( <b>in the field</b> )	Chapter 6	2
3	#3: Minerals	Chapters 1, 2	2, 3, 5
4	#4: Igneous Rocks	Chapter 3	2, 3, 5
5	#5: Lava Flows & Rheology	Handout	2, 3, 5
6	#6: Sedimentary Rocks	Chapter 4	2, 3, 5
7	#7: Metamorphic Rocks (partly <b>in the field</b> )	Chapter 5	2, 3, 5
8	#8: Earthquakes ( <b>in the field</b> )	Chapter 16	1, 2, 3, 5
9	#9: Mānoa Landslide ( <b>in the field</b> )	Handout	1, 2, 3
10	#10: Geologic Time ( <b>in the field</b> , sort-of)	Chapter 13	2, 5
12	#11: Structural Geology	Chapters 14, 15	2, 5
13	#12: Groundwater	Chapter 9	1, 2, 3
14	#13: Streamflow ( <b>in the field</b> )	Chapter 8	1, 2, 3
<b>15</b>	<b>THANKSGIVING (no labs)</b>		
16	#14: Beach Profile ( <b>in the field</b> )	Chapter 11	1, 2, 3, 5
17	#15: Fossils	Chapters 10, 11	2, 5

**Required Text:** Lab Manual for GG101L (Prentice Hall custom edition for UH Mānoa).

**Required Equipment:** Pencil, eraser, calculator, brain, eagerness to learn, interest in how the Earth works, sunscreen and water for field trips.

ALL LABS AND HOMEWORK **MUST** BE DONE NEATLY - YOU WILL LOSE POINTS FOR MESSY WORK! HOMEWORK WILL COVER THE READING FOR THE CURRENT WEEK. THIS WILL INSURE THAT YOU DO THE READING **BEFORE** YOU COME TO LAB! MORE POLICIES ARE LISTED ON THE NEXT PAGE.

Grading:	#	points each	total	
Labs	15	20	300	90-100% = A
Saturday field trip	1	60	60	80-89% = B
Homework	14	5	70	70-79% = C
<b>TOTAL</b>			<b>430</b>	60-69% = D
				<60% = F

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 *Kōkua*) located on the ground floor (Room 013) of the Queen Lili'uokalani Center for Student Services.

### ERTH 101 Lab Policies

1. Unless you have a note from your Doctor or Coach, you will not be allowed to make up a missed lab. If you are allowed to make up a lab, this must occur within one week of the missed lab. If you know in advance that you will miss a lab, you are welcome to show up for a different section, but make sure to get an OK to do this from both your TA and the TA teaching the lab you'll be attending.

2. We have made an effort to have as many as possible be outdoors. This is where geology is learned the best. But it means that you shouldn't wear your best prom clothes on those days. Field days are indicated on the syllabus, and we'll try to remind you the prior week. For photos of some previous years' EARTH101L students having fun in the sun, go to: [http://www.soest.hawaii.edu/GG/FACULTY/ROWLAND/GG101L/GG101L\\_webpage01.htm](http://www.soest.hawaii.edu/GG/FACULTY/ROWLAND/GG101L/GG101L_webpage01.htm)

2. Homework must be turned in **at the beginning** of each lab period. No late homework will be accepted.
3. The labs are designed to be completed in the 3 hours allotted in the schedule, and many **will require the full 3 hours**. Labs must be turned in by the end of the lab period.
4. You are required to go on one of the O‘ahu field trips, and this field trip will be worth 3 labs. It is part of the coursework – it is not extra credit. We are hoping hoping hoping that UH will allow us to go on field trips, and if so we will provide a revised syllabus with the dates. If they cannot be live, they will be virtual. For photos from previous years’ field trips, go to:  
[http://www.soest.hawaii.edu/GG/FACULTY/ROWLAND/GG101L/Field\\_Trips/GG101L\\_Field\\_Trips\\_webpage01.htm](http://www.soest.hawaii.edu/GG/FACULTY/ROWLAND/GG101L/Field_Trips/GG101L_Field_Trips_webpage01.htm)
5. If we are able to run a Kīlauea or Kaua‘i field trip and you go on it, you can write 2 pages about something geological you learned, it can count as your one required field trip. These trips will give you a chance to see real Hawai‘i geology. The cost typically comes out to ~\$175 + airfare, and you will be responsible for making your own flight arrangements to and from Hilo or Līhu‘i. More details about these trips will be available soon. For photos from previous years’ trips, go to:  
[http://www.soest.hawaii.edu/GG/FACULTY/ROWLAND/GG103/Kilauea/Kilauea\\_web.htm](http://www.soest.hawaii.edu/GG/FACULTY/ROWLAND/GG103/Kilauea/Kilauea_web.htm)  
[http://www.soest.hawaii.edu/GG/FACULTY/ROWLAND/GG104/Kilauea/GG104\\_Kilauea\\_webpage01.htm](http://www.soest.hawaii.edu/GG/FACULTY/ROWLAND/GG104/Kilauea/GG104_Kilauea_webpage01.htm)

**Course Learning Objectives (CLOs):** EARTH 101L is where students will learn geological and geophysical material by actually doing geological and geophysical work. They will learn how to identify rocks, minerals, and fossils by actually examining rocks, minerals, and fossils. They will learn how to locate earthquakes by actually creating an earthquake (with a sledgehammer) and using simple seismometers to locate it. They will learn how to measure streamflow by actually measuring streamflow. This hands-on learning is a much more effective way to learn than passive listening to lectures.

#### **\*SLOs - Student Learning Objectives**

G&G undergraduate courses have to consider how they address a number of SLOs, which the G&G Department has decided are key attributes and/or abilities of any G&G student. They are (in no particular order):

1. 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.
2. Students can apply technical knowledge of relevant computer applications, laboratory methods, and field methods to solve real-world problems in geology and geophysics.
3. Students use the scientific method to define, critically analyze, and solve a problem in earth science.
4. Students can reconstruct, clearly and ethically, geological knowledge in both oral presentations and written reports.
5. 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.

**Institutional Learning Objectives (ILOs):** Students in EARTH 101L will *apply and broaden their knowledge* of the physical and natural world, with specific emphasis on geological processes, products, and features. They will make laboratory and field observations requiring *critical thinking* so that their descriptions and interpretations are geologically plausible, and they will *communicate* their results via written laboratory reports. They will *gain personal responsibility* by working safely and collaboratively in the lab and field.

CHEATING, PLAGIARISM (DOING SOMEONE’S LAB FOR THEM, FOR EXAMPLE), ETC. IS TOTALLY UN-COOL AND VIOLATES THE [UHM STUDENT CODE OF CONDUCT](#). IT WILL NOT BE TOLERATED, AND WILL RESULT IN AN *F* GRADE FOR THE COURSE AND A LETTER SENT TO YOUR ACADEMIC DEAN EXPLAINING THE REASON FOR THE F. YES, WE KNOW YOUR COUSIN’S FRIEND’S DAUGHTER’S BOYFRIEND TOOK THE COURSE 2

SEMESTERS AGO AND HAS OFFERED YOU HIS ANSWERS. BUT IF YOU TAKE HIM UP ON THE OFFER, YOU MIGHT AS WELL JUST DROP THE COURSE NOW. YOU WON'T LEARN ANYTHING BY COPYING SOMEBODY ELSE'S ANSWERS – BETTER TO MAKE SPACE FOR SOMEONE WHO ACTUALLY WANTS TO GAIN SOMETHING FROM THE COURSE.

**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) 956-299 [t9uhm@hawaii.edu](mailto:t9uhm@hawaii.edu)

### **Digital Textbook Info:**

This course will be participating in the bookstore's Interactive Digital Access Program (IDAP). Through this program, you will access your course material digitally, and it will be available to you by the first day of class.

A charge for the digital course material through IDAP (\$52) will be added to your MyUH account. You have the option to opt out of receiving your course material through IDAP. By opting out, you will lose access to the course material and the charge will be refunded on your MyUH account. If you do not opt out, the charge will stay on your MyUH account. Any unpaid charges on your MyUH account will turn into a hold. Holds on your account will prevent you from accessing various services within the University. You may opt out by visiting your unique Inclusive Access Student Portal, which can be found in your IDAP welcome email (Subject Line: "IMPORTANT: You have enrolled in an IDAP Course"). For more information regarding IDAP, please contact your campus bookstore.