Welcome to Dynamic Earth Laboratory. In this online-native section of ERTH 101L-007 (MAN.87306.SP22), you will learn about the Earth and practice approaching problems the way geoscientists do.

**Essential Information**

Semester: Spring 2022  
Credits: 1  
Format: asynchronous, fully online  
Instructor: Prof. Julia Hammer (jhammer@hawaii.edu)  
Teaching Assistant: TBD

**Requirements**

- **text**: Laboratory Manual in Physical Geology 12th Ed, available through the UH bookstore using IDAP\(^1\). You may purchase just the e-text Laboratory Manual. The hardcopy text is strongly recommended but not required.  
- **MasteringGeology** account from Pearson. Please use the same name associated with your UH account when you create your Pearson account.  
- computer with strong internet and download privileges  
- expertise with capturing and uploading digital photos/files  
- office supplies: pencil, eraser, metric ruler, scissors, drafting compass, colored pencils, etc.

**Organization and Grading**

In response to COVID-19 precautions, there is no required in-person activity this semester. (Usually, we have a required field trip.) The content of the course is taught in video tutorials and assessed with two graded items that are due each week: (1) homework that you access through the textbook’s MasteringGeology online system, and (2) Labs drawn from the Laboratory Manual in Physical Geology 12e by Cronin and Tasa, which you complete using Laulima’s Tests&Quizzes tool. In addition, there is a final exam for this course. Here’s the breakdown of the graded items:

1. **Online homework** assignments within the MasteringGeology system. These assignments typically include watching videos and participating interactively. They are designed to help you complete the Laboratory Exercises, and students typically complete them in under 30 minutes. The online assignments are worth 20% of the course grade.
2. **Reading** assignments in the MasteringGeology system. These readings support the Labs and they represent 5% of the course grade.
3. The **labs** are composed of Activities selected from the required text: Laboratory Manual in Physical Geology (12th Ed; Pearson), which you can access with the Pearson account with e-text or (preferable) using the hardcopy version of the text. These assignments are worth 60% of the course grade and are submitted using the Tests&Quizzes tools in our Laulima site.

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\(^1\) The digital course material under IDAP will be accessed through Laulima. If you are new to Laulima, google the Laulima Support for Students help page. During the semester, if technology questions arise, call the Information Technology Services (ITS) at (808) 956-8853 or Toll Free (800)-558-2669.
Important: If you use the e-text and don’t have the hardcopy, you’ll need to be able to edit screen shots with drawing tools. For example, you’ll need to plot points on a set of given x,y coordinates and sketch geologic contour lines on a given topographic map. Image annotation is not covered in this course.

4. The course has a final exam available online during finals week administered on the Pearson MasteringGeology system. The final exam accounts for 13% of the course grade. You will have two hours to complete the closed-book, closed-notes exam.

5. A combined syllabus quiz/ ethics pledge/ questionnaire is worth 2% of the course grade. This is also located in Tests&Quizzes on the Laulima site.

Time commitment. Expect to spend 3 h per week on this course. The time commitment is similar to other UHM physical science labs.

Homework and Lab Due Dates

<table>
<thead>
<tr>
<th>lab</th>
<th>Week starting</th>
<th>HW due 11:59 pm (Pearson)</th>
<th>Lab due 11:59 pm (Laulima)</th>
<th>Reading = text Chapter</th>
<th>Lab = Chapter Activity #</th>
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<tbody>
<tr>
<td>1</td>
<td>1/10</td>
<td>Friday, January 21</td>
<td>Wednesday, January 26</td>
<td>1</td>
<td>4, 6</td>
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<td>2</td>
<td>1/17</td>
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<td>Wednesday, January 26</td>
<td>2</td>
<td>4, 7</td>
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<tr>
<td>3</td>
<td>1/24</td>
<td>Tuesday, January 25</td>
<td>Thursday, January 27</td>
<td>3</td>
<td>2, 6</td>
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<td>Wednesday, February 02</td>
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<td>3, 4</td>
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<tr>
<td>5</td>
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<td>Wednesday, February 09</td>
<td>5</td>
<td>2, 3</td>
</tr>
<tr>
<td>6</td>
<td>2/14</td>
<td>Monday, February 14</td>
<td>Wednesday, February 16</td>
<td>6</td>
<td>4, 7</td>
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<td>7</td>
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<td>Wednesday, February 23</td>
<td>7</td>
<td>2, 5</td>
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<tr>
<td>8</td>
<td>2/28</td>
<td>Monday, February 28</td>
<td>Wednesday, March 02</td>
<td>8</td>
<td>1, 4</td>
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<tr>
<td>9</td>
<td>3/7</td>
<td>Monday, March 07</td>
<td>Wednesday, March 09</td>
<td>9</td>
<td>1, 5</td>
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<td>10</td>
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<tr>
<td>11</td>
<td>3/28</td>
<td>Monday, March 28</td>
<td>Wednesday, March 30</td>
<td>11</td>
<td>1, 3</td>
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<tr>
<td>12</td>
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<td>Monday, April 04</td>
<td>Wednesday, April 06</td>
<td>12</td>
<td>2, 7</td>
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<td>13</td>
<td>4/11</td>
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<td>Wednesday, April 13</td>
<td>13</td>
<td>2, 4</td>
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<td>14</td>
<td>4/18</td>
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<td>Wednesday, April 20</td>
<td>14, 15</td>
<td>1, 1</td>
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<td>15</td>
<td>4/25</td>
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<td>Wednesday, April 27</td>
<td>16</td>
<td>1, 4</td>
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<tr>
<td>16</td>
<td>5/2</td>
<td>Monday, May 02</td>
<td>Wednesday, May 04</td>
<td>17</td>
<td>1, 4</td>
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</tbody>
</table>

Examination Period May 9-13: you may take the exam via Pearson at any point during exams week.
## Sequence of Chapters and Activities

<table>
<thead>
<tr>
<th>Chapter</th>
<th>The Lab is composed of these Activities from the text</th>
</tr>
</thead>
</table>
| 1: Filling Your Geoscience Toolbox | ACTIVITY 1.4 Scaling, Density, and Earth's Deep Interior  
ACTIVITY 1.6 Unit Conversions, Scientific Notation, and Rates |
| 2: Plate Tectonics | ACTIVITY 2.4 Hotspots and Plate Motions  
ACTIVITY 2.7 Atlantic Seafloor Spreading |
| 3: Mineral Properties, Identification, and Uses | ACTIVITY 3.2 Mineral Shape  
ACTIVITY 3.6 The Mineral Dependency Crisis |
| 4: Rock-Forming Processes and the Rock Cycle | ACTIVITY 4.3 What are Rocks Made Of?  
ACTIVITY 4.4 Rock-Forming Minerals |
| 5: Igneous Rocks and Processes | ACTIVITY 5.2 Investigating Mineral Grain Size in Igneous Rock  
ACTIVITY 5.3 Glassy and Vesicular Textures of Igneous Rock |
| 6: Sedimentary Processes, Rocks, and Environments | ACTIVITY 6.4 Sediment from Source to Sink  
ACTIVITY 6.7 Grand Canyon Outcrop Analysis and Interpretation |
| 7: Metamorphic Rocks, Processes, and Resources | ACTIVITY 7.2 Minerals in Metamorphic Rock  
ACTIVITY 7.5 Metamorphic Grades and Facies |
| 8: Dating of Rocks, Fossils, and Geologic Events | ACTIVITY 8.1 Geologic Inquiry for Relative Dating  
ACTIVITY 8.4 Numerical Dating of Rocks and Fossils |
| 9: Topographic Maps | ACTIVITY 9.1 Map and Google Earth Inquiry  
ACTIVITY 9.5 Relief and Gradient (Slope) |
| 10: Geologic Structures, Maps, and Block Diagrams | ACTIVITY 10.2 Geologic Structures Inquiry  
ACTIVITY 10.4 Appalachian Mountains Geologic Map |
| 11: Earthquake Hazards and Human Risks | ACTIVITY 11.1 Earthquake Hazards Inquiry  
ACTIVITY 11.3 Locate the Epicenter of an Earthquake |
| 12: Stream Processes, Geomorphology, and Hazards | ACTIVITY 12.2 Introduction to Stream Processes  
ACTIVITY 12.7 Flood Hazard Mapping, Assessment, and Risk |
| 13: Groundwater Processes, Resources, and Risks | ACTIVITY 13.2 Where is the Nasty Stuff Going?  
ACTIVITY 13.4 Karst Processes and Topography |
| 14: Glaciers and 15: Deserts | ACTIVITY 14.1 The Cryosphere and Sea Ice  
ACTIVITY 15.1 Dryland Inquiry |
| 15: Coastal Processes, Landforms, Hazards, and Risks | ACTIVITY 16.1 Coastline Inquiry  
ACTIVITY 16.4 The Threat of Rising Seas |
| 16: Earth’s Dynamic Climate | ACTIVITY 17.1 How Does Rising Temperature Affect Sea Level  
ACTIVITY 17.4 Carbon Dioxide in the Atmosphere |
Grade scale.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Score</th>
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</thead>
<tbody>
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<td>A+</td>
<td>≥96.7%</td>
</tr>
<tr>
<td>A</td>
<td>93.3%</td>
</tr>
<tr>
<td>A-</td>
<td>90.0%</td>
</tr>
<tr>
<td>B+</td>
<td>86.7%</td>
</tr>
<tr>
<td>B</td>
<td>83.3%</td>
</tr>
<tr>
<td>B-</td>
<td>80.0%</td>
</tr>
<tr>
<td>C+</td>
<td>76.7%</td>
</tr>
<tr>
<td>C</td>
<td>73.3%</td>
</tr>
<tr>
<td>C-</td>
<td>70.0%</td>
</tr>
<tr>
<td>D+</td>
<td>66.7%</td>
</tr>
<tr>
<td>D</td>
<td>63.3%</td>
</tr>
<tr>
<td>D-</td>
<td>60.0%</td>
</tr>
<tr>
<td>F</td>
<td>&lt;60.0%</td>
</tr>
</tbody>
</table>

**Homework.** Access homework assignments from within the Pearson MasteringGeology system. These assignments will appear on your Pearson account calendar once you create an account. Homework assignments are due every Monday at 11:59 pm (i.e., midnight), with exceptions shown in the table below.

**Labs.** The Labs are in the required text. Each lab is composed of two Activities, at the back of the chapter. Use the course Laulima site, Tests&Quizzes tool to submit the lab assignments. Note that some of the questions posed in Laulima differ from the workbook. Video tutorials are provided on a Google Team Drive to help you complete the labs. If you have registered for the course but have not received an email inviting you to the Team Drive, please email Julia Hammer. Labs are due every Wednesday at 11:59 pm (~midnight). Note that some questions require hand-grading. You will not have instant notification of the lab scores.

**Important:** You do not have to complete every activity in the chapter for each Lab. Check the tables below for the activities assigned this semester, to make sure you don’t do extra work.

**Participation**

Students are expected to complete the assigned homework (through the Pearson MasteringGeology site), read the assigned pages in Laboratory Manual in Physical Geology, and submit the indicated Activities as weekly Labs via Laulima Tests&Quizzes on time. Students should ask content questions by emailing instructors during the hours and days (not minutes) before assignments are due.

**Learning Environment and Communication**

**Online native.** This lab is administered in a fully distance-learning, asynchronous learning environment. We have no synchronous or in-person component, such as a weekly recitation section or zoom meeting. The video tutorials (accessed from the Google Team Drive) are meant to guide you through each step of the assigned lab activities, working through about half of all the questions. If you have content questions after reading the assigned text, doing the coaching-homework in the Pearson system, and watching the tutorials, please do not hesitate to contact the TA or instructor.

**Email.** Check your UH email account regularly. When sending email, include in the subject line: ERTH101L-007.

**Tips**  • Use appropriate greetings, such as “Dear Prof. Hammer”, and sign off with your full name at the end of your email.  • If you are referring to a previous email, include and quote the reference properly.  • Allow time to respond. Write in whole sentences with proper punctuation, grammar and spelling.

**Technology issues.** Since this is an online course it relies heavily on the internet and having a good internet connection. Occasionally there are internal problems with Laulima. Usually these problems are temporary, and your assignments will not be affected. Be mindful of external problems with your internet service, the browser, or your connection. Get started early so you can submit assignments before the deadline. I
**Pearson issues.** If you have a problem with the Pearson system, take these steps:

1) reload the page within your browser
2) log out/in again from the Pearson account
3) clear the cache and cookies (google how to do this for your browser)
4) grant the indicated pearson sites exceptions for any popup blockers. Follow the on-screen instructions from the Pearson website for how to allow exceptions for your browser
5) try using a different browser
6) If these don't work, please contact Pearson.
   a) https://support.pearson.com/getsupport/s/contactsupport
   b) support.pearson.com

**Learning Objectives**

The Department of Earth Sciences defines five student learning objectives (SLOs) for the undergraduate degree program related to the relevance of geology and geophysics.

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

This course will introduce and begin to develop skills in SLOs 1, 2, 3, and 5. For example, regarding SLOs 1 and 2, you will learn why volcanoes erupt; how and why the volcanoes of Hawaii differ from those on the continents; and understand the differing hazards they pose. In pursuing hypotheses (SLO 3), for example, you’ll determine the identity of an unknown mineral using a sequence of tests and apply a process of elimination, and then be asked to put the sample in geologic context. Regarding SLO 5, you will apply basic algebraic expressions relating density, volume, and mass; you’ll use chemical formulae for mineral names and apply a quantitative treatment of data wherever possible, including calculation of averages, graphing of results, and estimation of measurement errors.

**Policies**

**Cheating and plagiarism.** Academic integrity is a basic principal that requires all students to take credit for the ideas and efforts that are their own. Cheating, plagiarism, and other forms of academic dishonesty are defined as the submission of materials in assignment, exams, or other academic work that is based on sources prohibited by the faculty member. This includes doing someone’s lab for them or allowing someone to do your lab for you or copying from the instructor’s manual. **Copy-pasting from a friend or allowing someone to copy-paste your work are clear violations.** And they are easy to detect. Academic dishonesty is defined further in the UHM “Student Code of Conduct.” In addition to any adverse academic action, which may result from the academically dishonest behavior, the University specifically reserves the right to address and sanction the conduct involved through student judicial review procedures and the Academic Dispute Resolution Procedure specified in the University catalogue.

**Kōkua.** 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. If you need disability-related accommodations, please notify the KOKUA Program (808) 956-7511 or email: kokua@hawai.edu.

Executive Summary:

• You are required to buy the course textbook and create a Pearson MasteringGeology account for our course (see last page of the syllabus). We are participating in the bookstore’s IDAP program, which means you should purchase the required text within Laulima for the best pricing.
• When you create your Pearson account, use the same first name, last name, and useranme as in the UH system.
• Complete the Syllabus Quiz/ Ethics Pledge/ Questionnaire in Laulima Tests&Quizzes tool.
• Access lab tutorials using our Google Team Drive. Request access from Hammer if you join the course after the first day of the semester. Watch the tutorials associated with the Activities assigned this semester (Table above).
• Complete homework and reading assignments using the Pearson MasteringGeology System.
• Lab assignments are located in the Laboratory Manual in Physical Geology 12th Ed; submit your work using the Laulima Tests&Quizzes tool.
• Use Laulima Gradebook to view lab grades (available 1-2 weeks after labs are due because some questions need to be hand-graded by the TA) and PostEm tools to view course grade snapshots (updated periodically throughout the semester) after the fourth week.
• Remember, students are held to the usual standard of respectful and ethical behavior. You’ll be asked to confirm your adherence to the UHM Student Code of Conduct each time you submit a lab.

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 t9uhm@hawaii.edu.

IDAP

This course will be participating in the Bookstore’s Interactive Digital Access Program (IDAP). Through this program, you can access your e-text digitally. A charge for the digital course material through IDAP 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 the campus bookstore.
Access a MyLab or Mastering Course in Laulima (Sakai) via Partner Integration

Launch Pearson Content

Enter your Laulima course and locate the Vitalsource app. The name and location of the app may vary based on the set up of the course. In the example below, select Vitalsource for UH.

Under My Courses Home, your Pearson materials tied to this course will appear.
• If you are currently *Opted In* for course material access, the “I am opted-in to this resource” checkbox is selected. To access your course materials, select the **Launch Courseware** button.

Select the **Open MyLab & Mastering** button to launch your Pearson course.
Link User Accounts, if needed

If prompted, select **I Accept** to agree to Pearson's End User License Agreement.

Link your Laulima user account to either an existing Pearson account by entering your Pearson Username and Password or to a new user Pearson account by selecting the Create button.

After linking your accounts, select **Go to My Courses**.
You're done!

Check your email for a registration confirmation.
Print this page as your receipt.

Your Course

Taught by RedShelf Educator CG
Course ends Dec 31, 2018

Go to My Courses

Account Information

Username: redshelfstudent1
Email: noemail@noemail.com
Account ID: 93587815

Order Details

Order Date: July 30, 2018
Order ID: 222293790

Support

Go to 24/7 Technical Support.