General Information

Professor Information

Instructor: Rodolfo Rego, M.S.
E-Mail: rrego@fiu.edu
Office: AHC5 384 (MMC)
Phone: (305) 348-1478

Office Hours: Wednesday 1:00 PM - 3:00 PM or by Appointment.
Methods:
- Zoom
- Office Visit
- Phone call

Note: This course requires you to check daily your student portal on Canvas Login since all of the assignments and lectures will be posted there.

Course Description and Purpose

This lecture course provides a basic survey of Geology and Environmental Science including Earth materials, surface and internal processes, earth history, resources, and environmental issues (e.g., pollution, climate change, etc.).

Students should leave this course with a solid appreciation for how the principles of Geology are used to solve environmental problems.

Course Objectives

After completing this course, students should be able to apply their knowledge of Environmental Geology to:

- apply scientific principles and theories to problem solving;
- test scientific hypothesis by applying the scientific method;
- evaluate scientific statements; and
- interpret new information within the context of existing knowledge.
Important Information

Policies

Please review the FIU's Policies and Netiquette webpage. The policies webpage contains essential information regarding guidelines relevant to all courses at FIU, as well as additional information about acceptable netiquette for online courses.

As a member of the FIU community you are expected to be knowledgeable about the behavioral expectations set forth in the FIU Student Code of Conduct.

Technical Requirements and Skills

One of the greatest barriers to taking an online course is a lack of basic computer literacy. By computer literacy we mean being able to manage and organize computer files efficiently, and learning to use your computer’s operating system and software quickly and easily. Keep in mind that this is not a computer literacy course; but students enrolled in online courses are expected to have moderate proficiency using a computer. Please go to the "What's Required" webpage to find out more information on this subject.

Privacy Policy Statements for partners and Vendors

- Canvas
- Microsoft
- Adobe
- Google
- HonorLock (PDF)
- Turnitin
- OpenStax
- Zoom

Please visit our Technical Requirements webpage for additional information.
Accessibility and Accommodation

The Disability Resource Center collaborates with students, faculty, staff, and community members to create diverse learning environments that are usable, equitable, inclusive and sustainable. The DRC provides FIU students with disabilities the necessary support to successfully complete their education and participate in activities available to all students. If you have a diagnosed disability and plan to utilize academic accommodations, please contact the Center at (305) 348-3532 or visit them at the Graham Center GC 190.

For additional assistance please contact FIU’s Disability Resource Center.

Web Accessibility Statements for Partners and Vendors

- Canvas
- Microsoft
- Adobe
- Google
- HonorLock
- OpenStax
- Turnitin
- Zoom

Please visit our ADA Compliance webpage for additional information about accessibility involving the tools used in this course.

Academic Misconduct Statement

Florida International University is a community dedicated to generating and imparting knowledge through excellent teaching and research, the rigorous and respectful exchange of ideas and community service. All students should respect the right of others to have an equitable opportunity to learn and honestly to demonstrate the quality of their learning. Therefore, all students are expected to adhere to a standard of academic conduct, which demonstrates respect for themselves, their fellow students, and the educational mission of the University. All students are deemed by the University to understand that if they are found responsible for academic misconduct, they will be subject to the Academic Misconduct procedures and sanctions, as outlined in the Student Handbook.

Academic Misconduct includes: **Cheating** – The unauthorized use of books, notes, aids, electronic sources; or assistance from another person with respect to examinations, course assignments, field service reports, class recitations; or the unauthorized possession of examination papers or course materials, whether originally authorized or not. **Plagiarism** – The use and appropriation of another's work without any indication of the source and the representation of such work as the student’s own. Any student who fails to give credit for ideas, expressions or materials taken from another source, including internet sources, is responsible for plagiarism.

Learn more about the academic integrity policies and procedures as well as student resources that can help you prepare for a successful semester.
If you are looking for help for yourself or a fellow classmate, Panthers Care encourages you to express any concerns you may come across as it relates to any personal behavior concerns or worries you have, for the classmate's well-being or yours; you are encouraged to share your concerns with FIU's Panthers Care website.

Counseling and Psychological Services (CAPS) offers free and confidential help for anxiety, depression, stress, and other concerns that life brings. Professional counselors are available for same-day appointments. Don't wait to call (305) 348-2277 to set up a time to talk or visit the online self-help portal.

**Course Prerequisites**

There are no prerequisites for this course.

**Proctored Exam Policy**

Please note that the information contained in this section applies only if your course requires a proctored exam.

Through a careful examination of this syllabus, it is the student's responsibility to determine whether this online course requires proctored exams. Please visit our Student Proctored Exam Instructions, webpage for important information concerning proctored exams, proctoring centers, and important forms.
### Title: Introduction to Environmental Geology

**Authors:** KELLER  
**Publisher:** Pearson Higher Ed, Nov-2011  
**Publish Date:** Nov-2011  
**ISBN 10:** 9780321830432  
**ISBN 13:** 0321830431  
**Notes:** Notes

**Cost Effective Option:** [https://www.pearson.com/store/p/introduction-to-environmental-geology/P100001404820/9780321830432](https://www.pearson.com/store/p/introduction-to-environmental-geology/P100001404820/9780321830432). This is the eBook of the printed book and may not include any media, website access codes, or print supplements that may come packaged with the bound book. This text focuses on helping non-science majors develop an understanding of how geology and humanity interact. Ed Keller—the author who first defined the environmental geology curriculum—focuses on five fundamental concepts of environmental geology: Human Population Growth, Sustainability, Earth as a System, Hazardous Earth Processes, and Scientific Knowledge and Values. These concepts are introduced at the outset of the text, integrated throughout the text, and revisited at the end of each chapter. The Fifth Edition emphasizes currency, which is essential to this dynamic subject, and strengthens Keller’s hallmark “Fundamental Concepts of Environmental Geology,” unifying the text’s diverse topics while applying the concepts to real-world examples.
Expectations of This Course

This is an online course, which means most (if not all) of the course work will be conducted online. Expectations for performance in an online course are the same for a traditional course. In fact, online courses require a degree of self-motivation, self-discipline, and technology skills which can make these courses more demanding for some students.

Students are expected to:

- **review the getting started page** located in the course modules;
- **introduce yourself to the class** during the first week by posting a self-introduction in the appropriate discussion;
- **take the practice quiz** to ensure that your computer is compatible with the learning management system, Canvas;
- **interact** online with instructor and peers;
- **review** and follow the course calendar and weekly outlines;
- **log in** to the course 4 **times** per week;
- **Check Announcements** regularly
- **respond** to discussions by the due date specified. **No late work will be accepted**;
- **respond** to emails within 2 **days**;
- **submit** assignments by the corresponding deadline

The instructor will:

- log in to the course 5 times per week;
- respond to discussion postings within 2 **days of the deadline**;
- respond to emails within 48 **hours**;
- grade assignments within 10 **days** of the assignment deadline.

Course Detail

Course Communication

Communication in this course will take place via the Canvas Inbox. Check out the Canvas Conversations Tutorial or Canvas Guide to learn how to communicate with your instructor and peers using Announcements, Discussions, and the Inbox.

It is recommended that students check their inbox routinely to ensure up-to-date communication and adjust the notification settings accordingly.

**Announcements** will be posted throughout the semester discussing various topics relating the course. Announcements can also contain important reminders about due dates and/or discussion certain elements of topics covered during the course. It is extremely important that you check and read the announcements on a regular basis.
Assignments

Certificate Assignments

All students are required to complete 5 online FIU Health and Safety training modules covering geology and environmental science related material. The links to the various websites and instructions are provided in the appropriate module.

Project

All instructions and details about the project are provided in the appropriate module. The project may require travel to certain locations within your area and the use of Google Earth.

To verify the originality of your work, certain assignments will use a Turnitin dropbox in Canvas. These and all assignments must be your original individual effort, and any sources used must be cited. No credit will be given if the assignment lacks sources or there is evidence of a lack of originality. Review the detailed Turnitin Instructions on how to submit your assignments and how to review the Grademark comments (feedback) from your professor.

Quizzes and Exams

In order to mitigate any issues with your computer and online assessments, it is very important that you take the "Practice Quiz" from each computer you will be using to take your graded quizzes and exams. It is your responsibility to make sure your computer meets the minimum hardware requirements.

All assessments will auto-submit when (1) the timer runs out OR (2) the closing date/time is reached, whichever happens first. For example, if a quiz has a closing time of 5:00 pm but the student begins the exam at 4:55 pm, the student will only have 5 minutes to complete the quiz.

Assessments in this course are not compatible with mobile devices and should not be taken through a mobile phone or a tablet. If you need further assistance please contact FIU Online Support Services.

There will be four quizzes over the course of the term. Typically, each quiz will focus on the chapters for that given period. However, given the nature of science, many concepts are interconnected with each other and therefore all content may be found within a quiz. Quizzes will be multiple choices format.

There are two exams for this course. The last exam will be given at the scheduled exam time during final exam week and will be semi-comprehensive. Exams will be multiple choices format. No make-ups will be allowed for exams without a written excuse from a doctor, parent, or legal guardian. For more information contact me.

If you encounter a problem when conducting an assessment (e.g., exam, quiz, discussion, etc.) and/or have problems uploading documents to the assignment dropbox, then you must contact FIU online for assistance. They will contact me with additional instructions at which point a determination will be made regarding the next course of action. There is no exception to this policy.
Zoom Video Conference

Zoom is a video conference tool that you can use to interact with your professor and fellow students by sharing screens, chatting, broadcasting live video/audio, and taking part in other interactive online activities. We will be utilizing this tool to conduct online office hours.

Meetings will be available on Wednesdays from 1pm - 3pm

Zoom Test Meeting Room
Use this link to access the Zoom Test Meeting Room. This meeting room is available to test out the software before joining an actual session.

Reference the provided links to access Zoom student tutorials to learn about the tool, how to access your meeting room, and share your screen.

- Download Zoom.
- Login to Zoom through Desktop Application
- Enable and Test Audio & Webcam.
- Schedule a meeting or Join a Zoom meeting.
- Invite others to join meeting.
- Chat (Professors) - Students look at attendees section for instructions
- Share My Screen.
- Record a Local Zoom meeting.
- Host Control in Meetings.
- Getting Started with iOS.
- Getting Started with Android.

Late Assignment Policy

Canvas will automatically deduct points from late submissions. All assignments submitted after the assignment due date are subject to the following deductions.

<table>
<thead>
<tr>
<th># of Days Late</th>
<th>Deduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5% per day</td>
</tr>
<tr>
<td>&gt; 7</td>
<td>Cannot be submitted</td>
</tr>
</tbody>
</table>

You must contact your instructor before attempting late assignments.
# Course Requirements

<table>
<thead>
<tr>
<th>Course Requirements</th>
<th>Number of Items</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduce Yourself Video Blog</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>4</td>
<td>28%</td>
</tr>
<tr>
<td>Certificate Assignments</td>
<td>6</td>
<td>24%</td>
</tr>
<tr>
<td>MidTerm - Online</td>
<td>1</td>
<td>15%</td>
</tr>
<tr>
<td>Final - Online</td>
<td>1</td>
<td>15%</td>
</tr>
<tr>
<td>Project</td>
<td>1</td>
<td>15%</td>
</tr>
<tr>
<td>Extra Credit</td>
<td>1</td>
<td>up 5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>10</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

## Grading Scheme

<table>
<thead>
<tr>
<th>Letter</th>
<th>Range (%)</th>
<th>Letter</th>
<th>Range (%)</th>
<th>Letter</th>
<th>Range (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>95 or above</td>
<td>B</td>
<td>83 - 86</td>
<td>C</td>
<td>70 - 76</td>
</tr>
<tr>
<td>A-</td>
<td>90 - 94</td>
<td>B-</td>
<td>80 - 82</td>
<td>D</td>
<td>60 - 69</td>
</tr>
<tr>
<td>B+</td>
<td>87-89</td>
<td>C+</td>
<td>77 - 79</td>
<td>F</td>
<td>59 or less</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Course Detail
### Introduce Yourself
- **Introduce Yourself**
  - Due: Jan 13 2020 at 11:59 pm | 3 pts

### Certificate Assignments
- **Certificate Assignment #1 Dropbox**
  - Due: Jan 20 2020 at 11:59 pm | 10 pts
- **Certificate Assignment #2 Dropbox**
  - Due: Feb 03 2020 at 11:59 pm | 10 pts
- **Certificate Assignment #3 Dropbox**
  - Due: Feb 17 2020 at 11:59 pm | 10 pts
- **Certificate Assignment #4 Dropbox**
  - Due: Mar 09 2020 at 11:59 pm | 10 pts
- **Certificate Assignment #5 Dropbox**
  - Due: Mar 23 2020 at 11:59 pm | 10 pts
- **Certificate Assignment #6 Dropbox**
  - Due: Mar 30 2020 at 11:59 pm | 10 pts

### Unit Quizzes
- **Quiz 1 (Chapters 1-4)**
  - Due: Jan 27 2020 at 11:59 pm | 100 pts
- **Quiz 2 (Chapters 5, 6, & 7)**
  - Due: Feb 10 2020 at 11:59 pm | 100 pts
- **Quiz 3 (Chapters 10, 11, 13, & 14)**
  - Due: Mar 16 2020 at 11:59 pm | 100 pts
- **Quiz 4 (Chapters 15, 16, & 17)**
  - Due: Apr 06 2020 at 11:59 pm | 100 pts

### Midterm Exam
- **Midterm (Chapters 1 - 9)**
  - Due: Feb 24 2020 at 11:59 pm | 100 pts
<table>
<thead>
<tr>
<th>Section</th>
<th>Percentage of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Exam</td>
<td>15%</td>
</tr>
<tr>
<td>Final Exam (Chapters 10, 11 &amp; 13-19)</td>
<td>15%</td>
</tr>
<tr>
<td>Due Apr 25 2020 at 11:59 pm</td>
<td>100 pts</td>
</tr>
<tr>
<td>Project</td>
<td>15%</td>
</tr>
<tr>
<td>Environmental Geology Project Dropbox</td>
<td>15%</td>
</tr>
<tr>
<td>Due Apr 13 2020 at 11:59 pm</td>
<td>10 pts</td>
</tr>
<tr>
<td>Extra Credit</td>
<td>5%</td>
</tr>
<tr>
<td>Extra Credit Dropbox</td>
<td>5%</td>
</tr>
<tr>
<td>Due Apr 20 2020 at 11:59 pm</td>
<td>5 pts</td>
</tr>
<tr>
<td>Midsemester Grade</td>
<td>0%</td>
</tr>
<tr>
<td>Midsemester Grade</td>
<td>0%</td>
</tr>
<tr>
<td>100 pts</td>
<td></td>
</tr>
</tbody>
</table>
# Week 1 - Module 0 | Introduction to the Course

<table>
<thead>
<tr>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Week 1: Introduction to the Course</strong></td>
</tr>
<tr>
<td><strong>Week 1 Learning Objectives (Chapter 1)</strong></td>
</tr>
<tr>
<td><strong>Week 1 Readings and Presentations (Chapter 1)</strong></td>
</tr>
<tr>
<td><strong>Chapter 1 - Philosophy and Fundamental Concepts.ppt</strong></td>
</tr>
<tr>
<td><strong>Webpage: Plagiarism Prevention (FIU Libraries)</strong></td>
</tr>
<tr>
<td><strong>Video: What is Science? (Earth Rocks!)</strong></td>
</tr>
<tr>
<td><strong>Video: The Scientific Method (Khan Academy)</strong></td>
</tr>
<tr>
<td><strong>Video: Geology (Bozeman Science)</strong></td>
</tr>
<tr>
<td><strong>Academic Honesty Policy</strong></td>
</tr>
<tr>
<td>1 pts</td>
</tr>
</tbody>
</table>
Week 2 | Foundations of Environmental Geology

- **Learning Objectives (Chapters 2 & 3)**
- **Readings and Presentations (Chapters 2 & 3)**
- **Chapter 2 - Internal Structure of Earth and Plate Tectonics.ppt**
- **Chapter 3 - Minerals and Rocks.ppt**
- **Webpage: Minerals (Geology.com)**
- **Webpage: Igneous Rocks (Geology.com)**
- **Webpage: Sedimentary Rocks (Geology.com)**
- **Webpage: Metamorphic Rocks (Geology.com)**
- **Video: Why Does The Earth Have Layers? (It's Okay To Be Smart)**
- **Video: Plate Tectonics Basics (Earth Rocks!)**
- **Video: Identifying Minerals (Earth Rocks!)**
- **Video: Rocks & Minerals: Identifying Types of Rocks (eHow)**
- **Certificate Assignment #1**
- **Certificate Assignment #1 Dropbox**
Week 3: Ecology and Geology

Learning Objectives (Chapter 4)

Readings and Presentations (Chapter 4)

Chapter 4 - Ecology and Geology.ppt

Webpage: Difference Between Geology and Ecology (DifferenceBetween.net)

Webpage: Difference Between Geology and Ecology (Difference Between)

Video: Ecosystems and biomes | Ecology (Khan Academy)

Video: Why is biodiversity so important? - Kim Preshoff (Ted-Ed)

Video: What is ecological restoration? (MortonArboretum)

Quiz 1 (Chapters 1-4)

Jan 27 | 100 pts

Week 4 | Earth Processes and Natural Hazards

Learning Objectives (Chapter 5)

Chapter 5 - Introduction to Natural Hazards (Read Entire Chapter)

Video: Big Idea 8: Natural Hazards Affect Humans (AGI Education)

Learning Objectives (Chapter 6)

Chapter 6 - Earthquakes (Read Entire Chapter)

Video: Classification of Faults (Geoscience Videos)

Video: Earthquake Hazards I: Ground Failure (Geoscience Videos)

Website: Earthquake Articles, Information, News and Facts (Geology.com)

Website: Earthquake Hazard Program (USGS)
### Week 5 | Earth Processes and Natural Hazards

- **Learning Objectives (Chapter 7)**
- **Chapter 7 - Tsunami (Read Entire Chapter)**
- **Webpage: Tsunami Facts and Information (National Geographic)**
- **Webpage: Tsunami (NOAA)**
- **Video: Tsunami 101 (National Geographic)**
- **Webpage: The Tsunami of 1929 (Heritage Newfoundland and Labrador)**
- **Video: Rare Video: Japan Tsunami (National Geographic)**
- **Video: Magnitude 8.2 earthquake strikes Alaska, tsunami watch issued for US West Coast (ABC Action News)**
- **Website: Tsunami.gov (USGS)**

**Quiz 2 (Chapters 5, 6, & 7)
Feb 10 | 100 pts**

### Week 6 | Earth Processes and Natural Hazards

- **Learning Objectives (Chapter 8)**
- **Chapter 8 - Volcanic Activity (Read Entire Chapter)**
- **Video: Volcanoes 101 (National Geographic)**
- **Video: Drones Sacrificed for Spectacular Volcano Video (National Geographic)**
- **Video: Magnitude 8.2 earthquake strikes Alaska, tsunami watch issued for US West Coast (ABC Action News)**
- **Website: Tsunami.gov (USGS)**

**Quiz 2 (Chapters 5, 6, & 7)
Feb 10 | 100 pts**
### Learning Objectives (Chapter 9)

- Chapter 9 - Rivers and Flooding (Read Entire Chapter)
- Website: Streamflow - The Water Cycle (USGS)
- Video: Floods 101 (National Geographic)
- Website: Earth's water: Rivers and streams (USGS)
- Website: Sediment and Suspended Sediment (USGS)
- Website: Lengths of the major rivers (USGS)
- Website: USGS Current Water Data for the Nation (USGS)

### Certificate Assignment #3 Dropbox
- Feb 17 | 10 pts

### Week 7 | MidTerm Exam

- Midterm (Chapters 1 - 9)
  - Feb 24 | 100 pts

### Week 8 | Environmental Geology Project (Superfund Sites)

- What is Superfund?
- Superfund History
- Environmental Geology Project-Superfund Site
- Environmental Geology Project Dropbox
  - Apr 13 | 10 pts
Week 9 | Earth Processes and Natural Hazards

- Week 9 Learning Objectives (Chapters 10 & 11)
- Chapter 10 - Slope Processes, Landslides, and Subsidence
- Chapter 11 - Coastal Processes (Read Entire Chapter)
- Website: What is shoreline erosion? (AGI)
- Video: The 4 coastal processes of erosion with timeforgeography.co.uk (Time for Geography)
- Webpage: Coastal Processes and Beaches (Nature)
- Website: Coastal Hazards Preparing for the Threats that Face our Coastal Communities (NOAA)
- Website: Coastal Change Hazards Portal (USGS)
- Web page: The Water Cycle (USGS)
- Certificate Assignment #4
- Certificate Assignment #4 Dropbox

Week 10 | Resources and Pollution

- Week 10 Learning Objectives (Chapters 13 & 14)
- Chapter 13 - Water Resources (Read Entire Chapter)
- Video: The Water Cycle (National Science Foundation)
- Video: What is an Aquifer? (GeoScience Videos)
- Chapter 14 - Water Pollution (Read Entire Chapter)
- Video: Water Resources (Bozeman Science)
- Web page: Water pollution (Britannica.com)
Week 11 | Resources and Pollution

- **Week 11 Learning Objectives (Chapter 15)**
- **Chapter 15 - Mineral Resources and the Environment (Read Entire Chapter)**
- **Video: Minerals and Ores & the extraction of Minerals | The Chemistry Journey (The Fuse School)**
- **USGS-Minerals in our Environment**
- **USGS-Mineral Resources-Out of the Ground-into our daily lives**
- **National Mining Association - Fact Sheet Minerals and Uses**
- **Video: Mineral Resources EXPLAINED! Resources and Reserves 1 of 2) (InformedTrades)**
- **Video: Mineral Reserves Ore Reserves) EXPLAINED! (Resources and Reserves 2 of 2) (InformedTrades)**
- **National Mining Association - 2017 Minerals Americas Strength**
- **USGS-Recycled Cell Phones—A Treasure Trove of Valuable Metals**
- **Web page: National Minerals Information Center (USGS)**
- **Web page: State Minerals Statistics and Information (USGS)**
- **Video: Coal Mining’s Environmental Impact | From The Ashes (National Geographic)**
- **National Mining Association - Fact Sheet Federal Environmental Laws**
- **Certificate Assignment #5**
### Week 12 | Resources and Pollution

**Week 12 Learning Objectives (Chapter 16)**

- **Chapter 16 - Energy Resources** (Read Entire Chapter)
- **Web Page: Peak Oil (Wikipedia)**
- **Web Page: Energy Explained - Oil Prices and Outlook (U.S. Energy Information Administration)**
Week 13 | Resources and Pollution

- Week 13 Learning Objectives (Chapter 17)
- Chapter 17 - Soils and Environment (Read Entire Chapter)
- Video: Soil and Soil Dynamics (Bozeman Science)
- Web page: Soil Profile (NRCS USDA)
- Video: How To Differentiate and Identify Soil Horizons In The Field (NRCS USDA)
- Web page: Soil Texture Calculator (NRCS USDA)
- Video: The Science of Soil Health: Going Deeper (NRCS USDA)
- Video: Water Movement in Soil (NRCS USDA)
- Web page: Soil Erosion and Degradation (WWF)
- Web page: What Is Soil Pollution? (Environmental Pollution Centers)

Quiz 4 (Chapters 15, 16, & 17)

Week 14 | Environmental Management, Global Perspective, and Society

- Week 14 Learning Objectives (Chapter 18)
## Week 16 | Final Exam

**Final Exam (Chapters 10, 11 & 13-19)**
Apr 25 | 100 pts

## Extra Credit

- **Extra Credit Assignment**
  Apr 25 | 100 pts
- **Extra Credit Dropbox**
  Apr 20 | 5 pts