GENERAL INFORMATION

Professor Information
Instructor: Dr. Tatiana Gaona

Phone: (305) 348-3614
Office: AHC-5, office 382 (MMC)
Class meetings on MoWeFr from 10-10:50 am, PC-426
Office Hours: By appointment, We 3-5pm
E-mail: tgaona@fiu.edu

This course requires you check daily your student portal on Canvas since all of your assignments and lectures will be posted there (https://canvas.fiu.edu/).

Course Description and Purpose
This lecture course provides a basic survey of Earth Science including Earth materials, surface and internal processes, earth history, oceanography and atmospheric science. This course with its lab (ESC1000 Lab) fulfill the Natural Science tier 1 UCC requirement.

Students should leave this course with a solid appreciation of the Earth sciences and their impact on such societal issues such as natural hazards and mineral and energy resources.

Course Objectives
After completing this course, students will be able to:

• apply scientific principles and theories to problem solving;
• test scientific hypothesis by applying the scientific method;
• evaluate scientific statements and graphics.
• 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 our Intro to Earth Sciences 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 this course 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.

1. YouTube
2. Canvas
3. Google Earth Pro

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.

**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.

**Panthers Care & Counseling and Psychological Services (CAPS)**
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**
This lecture course must be taken with its lab companion to fulfill the “Physical Sciences” category of natural sciences requirement for the University Core Curriculum. The objectives of the lab are similar to those of the lecture course but in the lab, students are offered laboratory-based experiences with many of the topics covered in the lecture.
**Textbook**

*Earth Science (The Earth, The Atmosphere, The Space)*

Author: Stephen Marshak and Robert Rauber


You may purchase your textbook online at the [FIU Bookstore](https://books.wwnorton.com/books/webad.aspx?id=4294992825).

* The VitalSource e-Text is the most effective option.

**Expectations of this Course**

This is a face to face course, which means that attendance is expected.

Students are expected to:

- Attend and participate in every class.
- Review the "How to Get Started" information located on the course content.
- Review and follow the course calendar.
- Take the practice quiz to ensure that your computer is compatible with Canvas.
- Bring a working laptop to answer your quizzes and exams.
- Interact in class and online with instructor/s and peers.
- Read the assigned chapters from the textbook/e-book, as well as watching the videos posted on Canvas before class.
- Be prepared for pop quizzes.
- Complete the weekly assignments (reading, chapter quizzes, watching videos, GeoTours).
- Submit assignments by the corresponding deadline.
- Contact your instructor via Canvas if aspects of the lecture are not fully understood.
- Show courtesy and respect for the instructor and fellow classmates.

The instructor will:

- Respond to discussion boards, blogs and postings within two (2) weeks.
- Grade assignments within ten (10) days of the assignment deadline.
- Prepare lessons that address challenging topics.
- Be available for office hours for at least one hour every week (Wednesday from 10 am to noon)
- Respond to emails within two days (Monday-Friday).

**NOTE - Early Alert**

*In an effort to help you succeed in your academic courses, FIU utilizes an Early Alert system. Instructors are now able to notify students’ academic advisors if there are concerns about class performance. If an alert is submitted, your academic advisor will send you a message via your Student Dashboard (accessed via your MYFIU page) to discuss ways to improve your performance. Please respond to any communication you receive from your academic advisor about an early alert. Our goal with this program is to help you to be successful by identifying any issues as early on as possible and working to address them.*
**COURSE DETAIL**

**Geotour Discussions**

Geotours are active-learning opportunities that take you on virtual field trips to see outstanding examples of geology at locations around the world.

Discussions and participation are required, just as if you were in a face to face class. The grade will be dependent on thoughtful participation during the discussion forums. Responses such as "I agree" or "yeah... what he said" will result in zero points of credit. Read the rubric below for more information:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Exemplary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development of ideas</td>
<td>Well-developed ideas; introduce new ideas, and stimulates discussion.</td>
</tr>
<tr>
<td>Evidence of Critical Thinking</td>
<td>Clear evidence of critical thinking - application, analysis, synthesis, and evaluation. Postings are characterized by clarity of argument, depth of insight into theoretical issues, originality of treatment, and relevance. Sometimes include unusual insights. Arguments are well supported.</td>
</tr>
<tr>
<td>Quantity of Postings</td>
<td>Interact at least twice with other students and/or instructors.</td>
</tr>
<tr>
<td>Timeliness</td>
<td>Individual message and at least two responses posted before the deadline. First submission and prompt questions are due by Thursday of the assigned week. All responses (e.g. peer review) must be completed by the following Sunday.</td>
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**Course Late Assignment Policy:**

No late assignments or extra-credit will be accepted after the last day of classes and during finals week. 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 Dr. Gaona and attach a screenshot as evidence of the technical problem. All assignments submitted after the assignment due date are subject to the following deductions.

<table>
<thead>
<tr>
<th>Number of Days Late</th>
<th>Deduction</th>
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<tbody>
<tr>
<td>1 – 2</td>
<td>10%</td>
</tr>
<tr>
<td>3 – 6</td>
<td>15%</td>
</tr>
<tr>
<td>7 – 10</td>
<td>20%</td>
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</tbody>
</table>
Exams and Chapter Reading Quizzes

There will be four (4) mandatory exams over the course of the term. Typically, each test 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.

Exam #4 corresponds to your comprehensive final exam and will be given during finals week. The tests will be multiple choice format. No make-ups will be allowed for exams without a written excuse from a doctor, parent or legal guardian. For more information, contact Dr. Gaona.

The exams will be taken during class time using a laptop computer. Students are responsible for bringing a working laptop on quiz/exam day. 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.

In addition, you have twenty (20) chapter reading quizzes over the course of the term. These quizzes are mandatory and can be taken multiple times.

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.

Extra-Credit: Earth Science Project (Google Earth Tour)

You have to complete an Earth Science Project (Google Earth Tour). The Earth Science Project requires Google Earth.

Step 1: Select two topics from the course that are of particular interest to you (e.g. volcanoes, rivers, coastlines, glaciers). You must choose topics related to the course.

Step 2: Find two locations around the world that display the topics/features you selected in Google Earth. You must need to conduct some preliminary research on the Internet to discover the locations prior to the searching in Google Earth. For example: If you picked volcanoes, then find a location in the US or around the world where you can see volcanoes.

Step 3: Conduct some research to determine the specific about the topics. For example: if you picked coastlines, then, discuss the location and specifics about the processes that shaped the coastline in that area (weathering, erosion, currents, etc.) If you selected volcanoes, then discuss the type of volcano, lava composition as well as the plate boundary setting.

Step 4: Complete a narrated Google Earth tour discussing the locations.

*Additional instructions will be provided in the appropriate Canvas module.

Course Communication

Students are free to ask course-related questions at the end of each lecture period and during the scheduled weekly office hours. Additional communication in this course will take place via the Canvas Inbox. I will respond to all correspondences within 5 days.
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. Students are expected to conduct your communications with courtesy and respect.

It is recommended that students check their inbox and class announcements routinely to obtain up-to-date information on the course, unexpected issues, and reminders.

## Grading

<table>
<thead>
<tr>
<th>Course Requirements</th>
<th>Number of Items</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Reading Quizzes</td>
<td>21</td>
<td>25%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>3</td>
<td>36%</td>
</tr>
<tr>
<td>Cumulative Final Exam</td>
<td>1</td>
<td>15%</td>
</tr>
<tr>
<td>GeoTour Discussions</td>
<td>6</td>
<td>24%</td>
</tr>
<tr>
<td>Earth Science Project (extra-credit)</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>Class Surveys (extra-credit)</td>
<td>2</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
<td><strong>105%</strong></td>
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<table>
<thead>
<tr>
<th>Letter</th>
<th>Range (%)</th>
<th>Letter</th>
<th>Range (%)</th>
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<th>Range (%)</th>
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<tbody>
<tr>
<td>A</td>
<td>95 or above</td>
<td>B</td>
<td>83 – 86</td>
<td>C</td>
<td>70 - 76</td>
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<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>
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## COURSE CALENDAR

### Module Weekly Schedule

Course Introduction & Part I. Our Dynamic Planet
### Week 1: January 6th - January 12th

**Course Intro**

**Tasks:**

- Reading Getting Started
- Introduction Video
- Module Content (videos and web pages)

#### Prelude and Chapter 1

**Textbook Reading:**

- Prelude (Welcome to Earth Science)
- Chapter 1 (From the Big Bang to the Blue Marble)

**Unit Video(s):**

- Watch all the video content in the learning module.

**PPT Slide Presentations:**

- Prelude PowerPoint.
- Chapter 1 PowerPoint.

**Assignment:**

- Practice Quiz
- Prelude and Chapter 1 Reading Quiz

Part I: Our Dynamic Planet, The Way the Earth Works: Plate Tectonics (Chapter 2)

### Week 2: January 13th - January 19th (Last Day to Add/Drop 1/13)

**Assignment:**

- Chapter 2 Reading Quiz

**Textbook Reading:**

- Chapter 2 (The Way the Earth Works: Plate Tectonics)

**Unit Video(s):**

- Watch all the video content in the learning module.

**PPT Slide Presentations:**

- Chapter 2 PowerPoint.

Part I: Our Dynamic Planet, Introducing Minerals and the Nature of Rocks (Chapter 3)
<table>
<thead>
<tr>
<th>Week 3: January 20th - January 26th (Martin Luther King Day Holiday 1/20, No Class)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assignments:</strong></td>
</tr>
<tr>
<td>• GeoTour Discussion #1</td>
</tr>
<tr>
<td>• Chapter 3 Reading Quiz</td>
</tr>
<tr>
<td><strong>Textbook Reading:</strong></td>
</tr>
<tr>
<td>• Chapter 3 (Introducing Minerals and the Nature of Rocks)</td>
</tr>
<tr>
<td><strong>Unit Video(s):</strong></td>
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<tr>
<td>• Watch all the video content in the learning module.</td>
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<tr>
<td><strong>PPT Slide Presentations:</strong></td>
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<tr>
<td>• Chapter 3 PowerPoint.</td>
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</tbody>
</table>

Part I: Our Dynamic Planet, Up to the Inferno: Volcanism and Igneous Rocks (Chapter 4)

<table>
<thead>
<tr>
<th>Week 4: January 27th - February 2nd</th>
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<tbody>
<tr>
<td><strong>Assignment:</strong></td>
</tr>
<tr>
<td>• Chapter 4 Reading Quiz – Optional</td>
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<tr>
<td><strong>Textbook Reading:</strong></td>
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<tr>
<td>• Chapter 4 (Up to the Inferno: Volcanism and Igneous Rocks)</td>
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<tr>
<td><strong>Unit Video(s):</strong></td>
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<tr>
<td>• Watch all the video content in the learning module.</td>
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<tr>
<td><strong>PPT Slide Presentations:</strong></td>
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<tr>
<td>• Chapter 4 PowerPoint.</td>
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<thead>
<tr>
<th>Week 5: February 3rd - February 9th</th>
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<tbody>
<tr>
<td><strong>Assignments:</strong></td>
</tr>
<tr>
<td>• GeoTour Discussion #2</td>
</tr>
<tr>
<td>• Chapter 5 Reading Quiz</td>
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<tr>
<td>• Chapter 6 Reading Quiz</td>
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</tbody>
</table>
### Week 5: February 3rd - February 9th

**Textbook Reading:**
- Chapter 5 (A Surface Veneer: Sediments and Sedimentary Rocks)
- Chapter 6 (A Process of Change: Metamorphism and the Rock Cycle)

**Unit Video(s):**
- Watch all the video content in the learning module.

**PPT Slide Presentations:**
- Chapter 5 PowerPoint.
- Chapter 6 PowerPoint.

Part I: Our Dynamic Planet, Crags, Cracks, and Crumples - Mountain Building and Geologic Structures (Chapter 7)

### Week 6: February 10th - February 16th

**Assignment:**
- Exam #1 (Chapters 1-6) ➔ Friday, February 14th
- Chapters 7 Reading Quiz

**Textbook Reading**
- Chapter 7 (Crags, Cracks, and Crumples - Mountain Building and Geologic Structures)

**Unit Video(s):**
- Watch all the video content in the learning module.

**PPT Slide Presentations:**
- Chapter 7 PowerPoint.

Part I: Our Dynamic Planet, Deep Time (Chapter 9)

### Week 7: February 17th - February 23rd

**Assignments:**
- Chapters 8 Reading Quiz

**Textbook Reading:**
- Chapter 8 (A Violent Pulse: Earthquakes)
- Chapter 9 (Deep Time: How old is Old?)
### Week 7: February 17th - February 23rd

**Unit Video(s):**
- Watch all the video content in the learning module.

**PPT Slide Presentations:**
- Chapter 8 PowerPoint.
- Chapter 9 PowerPoint

Spring Break

### Week 8: February 24th – March 1st (Spring Break: No Classes)

**Assignments:**
- GeoTour Discussion #3.
- Chapter 9 Reading Quiz
- Earth Science Project (Extra-credit) – Instructions posted

Part II. Ever-Changing Landscapes, Agents of Change (Chapter 12) and Fresh Water (Chapter 13)

### Week 9: March 2nd - March 8th

- Chapters 12 and 13 Reading Quiz

**Textbook Reading:**
- Chapter 12 (Agents of Change: The Hydrological Change and Mass Wasting) → Quick glance on the chapter
- Chapter 13 (Fresh Water, Streams, Lakes, and Groundwater)

**Unit Video(s):**
- Watch all the video content in the learning module.

**PPT Slide Presentations:**
- Chapter 12 PowerPoint.
- Chapter 13 PowerPoint.


### Week 10: March 9th - March 15th

**Assignments:**
- GeoTour Discussion #4
- Chapter 14 & 15 Reading Quiz
### Week 10: March 9th - March 15th

**Textbook Reading:**
- Chapter 14 (Land of Extremes: Deserts and Glacier) → Quick glance on the chapter
- Chapter 15 (The Waters of the Sea)

**Unit Video(s):**
- Watch all the video content in the learning module.

**PPT Slide Presentations:**
- Chapter 14 PowerPoint.
- Chapter 15 PowerPoint.

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### Part III. Restless Seas, Ocean Basins and Coasts (Chapter 16)

### Week 11: March 16th - March 22nd

**Assignments:**
- GeoTour Discussion #5
- Chapter 16 Reading Quiz

**Textbook Reading:**
- Chapter 16 (Ocean Basins and Coasts)

**Unit Video(s):**
- Watch all the video content in the learning module.

**PPT Slide Presentations:**
- Chapter 16 PowerPoint.

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### Part IV. A Blanket of Gas: Earth's Atmosphere. The Air We Breath (Chapter 17)

### Week 12: March 23th – March 29th

**Assignments:**
- Chapter 17 Reading Quiz
- Quiz #2 (Chapter 7-9, 12-14), Friday, March 27th, 2020

**Textbook Reading:**
<table>
<thead>
<tr>
<th>Week 12: March 23rd – March 29th</th>
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<tbody>
<tr>
<td>- Chapter 17 (The Air We Breathe: Introducing Earth's Atmosphere)</td>
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</table>

**Unit Video(s):**
- Watch all the video content in the learning module.

**PPT Slide Presentations:**
- Chapter 17 PowerPoint files.


<table>
<thead>
<tr>
<th>Week 13: March 30th - April 5th</th>
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<tbody>
<tr>
<td><strong>Assignments:</strong></td>
</tr>
<tr>
<td>- GeoTour Discussion #6</td>
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<tr>
<td>- Chapters 18 Reading Quiz</td>
</tr>
<tr>
<td>- Earth Science Project due</td>
</tr>
</tbody>
</table>

**Textbook Reading:**
- Chapter 18 (Winds of the World: Earth's Major Weather Systems)

**Unit Video(s):**
- Watch all the video content in the learning module.

**PPT Slide Presentations:**
- Chapter 18 PowerPoint file.


<table>
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<tr>
<th>Week 14: April 6th - April 12th</th>
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<tr>
<td><strong>Assignments:</strong></td>
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<tr>
<td>- Chapters 19 Reading Quiz</td>
</tr>
<tr>
<td>- Earth Science Project (Extra-Credit), due on April 12th</td>
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</tbody>
</table>

**Textbook Reading:**
- Chapter 19 (Thunderstorms, Tornadoes, and Local Weather Systems)

**Unit Video(s):**
- Watch all the video content in the learning module.
Week 14: April 6th - April 12th

PPT Slide Presentations:
• Chapter 19 PowerPoint files.

Part IV. A Blanket of Gas: Earth's Atmosphere, Climate and Climate Change (Chapter 20).

Week 15: April 13th to 19th

Assignments:
• Chapters 20 Reading Quiz
• Exam #3 (Chapters 15-20) on Friday, April 17th, 2020

Textbook Reading:
• Chapter 20 (Climate and Climate Change)

Unit Video(s):
• Watch all the video content in the learning module.

PPT Slide Presentations:
• Chapter 20 PowerPoint file.

Finals Week

Week 16: April 20th - 25th (Ends on Saturday)

Assignments:
Exam #4: Final Exam (Cumulative).