GENERAL INFORMATION

PROFESSOR INFORMATION

Instructor: Dr. Tatiana Gaona  
Phone: (305) 348-3614  
Office: AHC-5, office 382 (MMC)  
Office Hours: Canvas Chat: Wednesdays 3-5pm, e-mail for additional questions.  
E-mail: tgaona@fiu.edu  
Website: https://earthenvironment.fiu.edu/

Note: 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) fulfills 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 should be able to apply their knowledge of Earth science 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 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.
1. YouTube
2. Canvas
3. Google Earth Pro
4. 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.

Notice: If you have a disability and need assistance with class, please contact FIU's Disability Resource Center (GC 190, 305-348-3532). It is the responsibility of each student to work with the Center and instructor to make arrangements as needed for your accommodation.

ACADEMIC MISCONDUCT STATEMENT

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.

COURSE PREREQUISITES

This course has a co-requisite(s). Review the Course Catalog webpage for prerequisites information.

This course serves as the lab for the companion lecture course and must be taken with it 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.

PROCTORED EXAM POLICY

This course does not require an on-campus or proctored exam.
**Earth Science (The Earth, The Atmosphere, The Space)**  
Author: Stephen Marshak and Robert Rauber  
ISBN-10: N/A  
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 an online course, which means most (if not all) of the coursework 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 "How to Get Started" information located on the course content.  
- Take the practice quiz to ensure that your computer is compatible with Canvas.  
- Interact online with instructor/s and peers.  
- Review and follow the course calendar.  
- Log in to the course at least four (4) times per week.  
- Complete the weekly assignments (reading, watching videos, review questions).  
- Respond to messages within no more than two (2) days.  
- Submit assignments by the corresponding deadline.

The instructor will:

- Log in to the course at least five (5) times per week.  
- Respond to discussion boards, blogs and postings within two (2) weeks.  
- Respond to messages within 2 days (48 hours).  
- Grade assignments within ten (10) days of the assignment deadline.

**COURSE DETAIL**

**ASSIGNMENTS AND 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 module.

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.

**Course Late Assignment Policy:**

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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</thead>
<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>
</tr>
<tr>
<td>10 - 14</td>
<td>25%</td>
</tr>
<tr>
<td>&gt;14</td>
<td>Cannot be submitted</td>
</tr>
</tbody>
</table>

**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>
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<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>
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<tr>
<td>Timeliness</td>
<td>Individual message and at least two responses posted before the deadline.</td>
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<td></td>
<td>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 Monday.</td>
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</table>

**QUIZZES AND EXAMS**

There will be five (5) 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 is one exam for this course. The final exam is cumulative and will be given at the scheduled exam time during final exams week. The exam 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 Dr. Gaona.

In addition, you have twenty (20) chapter reading quizzes over the course of the term. These quizzes are optional and are part of your extra-credit.

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.

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.

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.

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. I will respond to all correspondences within 2 days. You 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.

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 office hours and questions about the course and assignments. Zoom meetings will be held on the following dates/time:

Meetings will be available on Wednesdays from 3 pm - 5 pm.

Please, refer to your Canvas page for more information about Zoom.

**GRADING**

<table>
<thead>
<tr>
<th>Course Requirements</th>
<th>Number of Items</th>
<th>Weight</th>
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</thead>
<tbody>
<tr>
<td>Quizzes</td>
<td>5</td>
<td>35%</td>
</tr>
<tr>
<td>Cumulative Final Exam</td>
<td>1</td>
<td>15%</td>
</tr>
<tr>
<td>GEOTOUR Discussions</td>
<td>6</td>
<td>36%</td>
</tr>
<tr>
<td>Earth Science Project</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td><strong>Extra Credit (Reading Quizzes, Introduce Yourself Video)</strong></td>
<td><strong>21-23</strong></td>
<td><strong>7%</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>34-36</strong></td>
<td><strong>107%</strong></td>
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<thead>
<tr>
<th>Letter</th>
<th>Range (%)</th>
<th>Letter</th>
<th>Range (%)</th>
<th>Letter</th>
<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>
</tr>
<tr>
<td>A-</td>
<td>90 - 94</td>
<td>B-</td>
<td>80 - 82</td>
<td>D</td>
<td>60 - 69</td>
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</tbody>
</table>
# COURSE CALENDAR

## MODULE WEEKLY SCHEDULE

**Course Introduction & Part I. Our Dynamic Planet**

<table>
<thead>
<tr>
<th>Week 1: January 7th - January 14th</th>
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<tbody>
<tr>
<td><strong>Course Intro</strong></td>
</tr>
<tr>
<td><strong>Tasks:</strong></td>
</tr>
<tr>
<td>• Reading Getting Started</td>
</tr>
<tr>
<td>• Introduction Video</td>
</tr>
<tr>
<td>• Module Content (videos and web pages)</td>
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</table>

**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:**
1. Practice Quiz
2. Introduce Yourself to the Class (extra-credit)
3. Prelude and Chapter 1 Reading Quiz - Optional

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

<table>
<thead>
<tr>
<th>Week 2: January 14th - January 21th</th>
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<tbody>
<tr>
<td><strong>Assignment:</strong></td>
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<tr>
<td>1. Chapter 2 Reading Quiz - Optional</td>
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</table>

**Textbook Reading:**
- Chapter 2 (The Way the Earth Works: Plate Tectonics)
Part I: Our Dynamic Planet, Introducing Minerals and the Nature of Rocks (Chapter 3)

Week 3: January 21th - January 28th (*Martin Luther King Day Holiday 1/21*)

Assignments:
1. GeoTour Discussion #1
2. Chapter 3 Reading Quiz - Optional

Textbook Reading:
- Chapter 3 (Introducing Minerals and the Nature of Rocks)

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

PPT Slide Presentations:
- Chapter 3 PowerPoint.

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

Week 4: January 28th - February 4th

Assignment:
1. Quiz #1 (Prelude, Chapters 1 & 2)
2. Chapter 4 Reading Quiz - Optional

Textbook Reading:
- Chapter 4 (Up to the Inferno: Volcanism and Igneous Rocks)

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

PPT Slide Presentations:
- Chapter 4 PowerPoint.

Part I: Our Dynamic Planet, A Surface Veneer: Sediments and Sedimentary Rocks (Chapter 5)
<table>
<thead>
<tr>
<th>Week 5: February 4th - February 11th</th>
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<tbody>
<tr>
<td><strong>Assignments:</strong></td>
</tr>
<tr>
<td>1. GeoTour Discussion #2</td>
</tr>
<tr>
<td>2. Chapter 5 Reading Quiz - Optional</td>
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<tr>
<td><strong>Textbook Reading:</strong></td>
</tr>
<tr>
<td>- Chapter 5 (A Surface Veneer: Sediments and Sedimentary 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 5 PowerPoint.</td>
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Part I: Our Dynamic Planet, A Process of Change: Metamorphism and the Rock Cycle (Chapter 6)

<table>
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<tr>
<th>Week 6: February 11th - February 18th</th>
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<tbody>
<tr>
<td><strong>Assignment:</strong></td>
</tr>
<tr>
<td>1. Chapter 6 Reading Quiz - Optional</td>
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<tr>
<td><strong>Textbook Reading:</strong></td>
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<tr>
<td>- Chapter 6 (A Process of Change: Metamorphism and the Rock Cycle )</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 6 PowerPoint.</td>
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Part I: Our Dynamic Planet, Chapters 7 and 8.

<table>
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<tr>
<th>Week 7: February 18th - February 25th</th>
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<tbody>
<tr>
<td><strong>Assignments:</strong></td>
</tr>
<tr>
<td>1. Quiz #2 (Chapters 3-6).</td>
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<tr>
<td>2. Chapters 7 and 8 Reading Quiz - Optional</td>
</tr>
<tr>
<td><strong>Textbook Reading:</strong></td>
</tr>
<tr>
<td>- Chapter 7 (Crags, Cracks, and Crumples - Mountain Building and Geologic Structures)</td>
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<tr>
<td>- Chapter 8 (A Violent Pulse: Earthquakes)</td>
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</tbody>
</table>
### Week 8: February 25th - March 4th

**Assignments:**

1. GeoTour Discussion #3.
2. Chapters 9 and 10 Reading Quiz - Optional

**Textbook Reading:**

- Chapter 9 (Deep Time: How old is Old?)
- Chapter 10 (A Biography of Earth)

**Unit Video(s):**

- Watch all the video content in the learning module.

**PPT Slide Presentations:**

- Chapter 9 PowerPoint.
- Chapter 10 PowerPoint.

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### Week 9: March 4th - March 11

**Assignments:**

1. Quiz #3 (Chapters 7-10)
2. Chapters 11 Reading Quiz - Optional

**Textbook Reading:**

- Chapter 11 (Energy and Earth's Resources)

**Unit Video(s):**

- Watch all the video content in the learning module.

**PPT Slide Presentations:**

- Chapter 11 PowerPoint.
### Part II. Ever-Changing Landscapes, Agents of Change (Chapter 12) and Fresh Water (Chapter 13)

**Week 10: March 11th - March 18th**

**Assignments:**

1. Chapters 12 and 13 Reading Quiz - Optional

**Textbook Reading:**

- Chapter 12 (Agents of Change: The Hydrological Change and Mass Wasting)
- 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.

### Part II. Ever-Changing Landscapes, Land of Extremes: Deserts and Glaciers (Chapter 14)

**Week 11: March 18th - March 25th**

**Assignments:**

1. GeoTour Discussion #4
2. Chapter 14 Reading Quiz - Optional

**Textbook Reading:**

- Chapter 14 (Land of Extremes: Deserts and Glaciers)

**Unit Video(s):**

- Watch all the video content in the learning module.

**PPT Slide Presentations:**

- Chapter 14 PowerPoint.

### Part III. Restless Seas, The Waters of the Sea (Chapter 15), Ocean Basins and Coasts (Chapter 16)

**Week 12: March 25th - April 1th**

**Assignments:**

1. GeoTour Discussion #5
2. Chapters 15 and 16 Reading Quiz - Optional

**Textbook Reading:**
Part IV. A Blanket of Gas: Earth’s Atmosphere, Chapters 18 and 19.

Week 14: April 8th - April 15th

Assignments:

1. GeoTour Discussion #6
2. Chapters 18 and 19 Reading Quiz - Optional
3. Earth Science Project due

Textbook Reading:

• Chapter 18 (Winds of the World: Earth's Major Weather Systems)
• Chapter 19 (Thunderstorms, Tornadoes, and Local Weather Systems)

Unit Video(s):

• Watch all the video content in the learning module.

PPT Slide Presentations:

• Chapter 18 and 19 PowerPoint files.
Part IV. A Blanket of Gas: Earth's Atmosphere, Climate and Climate Change (Chapter 20).

<table>
<thead>
<tr>
<th>Week 15: April 15th to 21th</th>
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<tbody>
<tr>
<td><strong>Assignments:</strong></td>
</tr>
<tr>
<td>1. Quiz #5 (Chapters 15-19)</td>
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<tr>
<td>2. Chapters 20 Reading Quiz - Optional</td>
</tr>
<tr>
<td><strong>Textbook Reading:</strong></td>
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<tr>
<td>1. Chapter 20 (Climate and Climate Change)</td>
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<tr>
<td><strong>Unit Video(s):</strong></td>
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<tr>
<td>1. 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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**Finals Week**

<table>
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<tr>
<th>Week 16: April 22th - 27th (Ends on Saturday)</th>
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<tr>
<td><strong>Assignments:</strong></td>
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<tr>
<td>1. Final Exam (Cumulative).</td>
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