Historical Geology 1404
Course Information Sheet

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Required Course Materials:
Lecture*: The Earth Through Time, 10th Edition / Harold L. Levin*

Lab: Notebook of Lecture Notes and Lab Materials

Purpose Statement

This course is an introduction to the history of the planet earth. Historical Geology presents the events of the last 4.6 billion years, based on rock, fossil, magnetic, isotopic, and other interpretative evidence. The Geologic Timescale is used as an outline of the blocks of time studied in the course. Each theory will be supported with evidence and students will gain a more complete understanding of how the earth has altered over time. The effects on life forms are reflected in the fossils found in each of these time periods.

Prerequisites

It is required to take GEOL 1403 prior to GEOL 1404, only with the instructor's permission can a student be admitted without the prerequisite. A background in high school chemistry or biology is helpful.

Course Description

Introductory course in geologic history; the composition and structure of the earth, its landforms, and the agencies active in their production are presented. This course is intended for all students interested in the study of the earth. Global examples of all theories and processes will be presented for interpretation and understanding.

1. Classes meet twice a week for lecture and for lab
2. GEOL 1404 earns 4 credit hours
3. Students will develop proficiency in the appropriate Intellectual Competencies as follows

   - **Reading:** The ability to analyze and interpret a variety of printed materials, books, documents, and articles – above the 12th grade level.
   - **Writing:** The ability to produce clear, correct, and coherent prose adapted to purpose, occasion, and audience – above the 12th grade level.
   - **Listening:** The ability to analyze and interpret various forms of spoken communication, possess sufficient literacy skills of writing, reading – above 12th grade level.
   - **Critical Thinking:** The ability to INDIVIDUALLY think and analyze at a critical level.
   - **Computer Literacy:** The ability to understand our technological society, use computer-based technology in communications, solving problems, acquiring information.

Learning Outcomes

Lecture:

1. Demonstrate an understanding of the scientific method.
2. Describe the formation of the universe, solar system, and earth.
3. Explain and define the continental drift hypothesis and plate tectonic theory.
4. Differentiate between the three major rock types.
5. Properly classify different types of sedimentary rocks and structures.
6. Identify the major techniques used by geologists to assess paleoenvironments.
7. Understand and utilize relative and absolute dating principles to sequence events found in the rock record.
8. Recognize the sequence of and interrelationships between major events in the history of the earth, its surface, and its life forms.
9. Explain the basic processes of fossilization methods.
10. Understand geologic time, explain the geologic time scale and its scientific basis.

Laboratory:

1. Demonstrate knowledge of laboratory safety.
2. Gather, organize, calculate, and interpret data.
3. Relate physical observations and measurements to theoretical principles.
4. Conduct basic laboratory assignments with proper laboratory techniques.
5. Effectively communicate scientific ideas with supporting evidence.
6. Identify fossils based on their characteristics and morphology.
7. Correctly interpret geological cross-sections, stratigraphic charts, and geologic maps.
8. Interpret facies descriptions and determine depositional environments.

Course Layout

From Lecture:

- The Chronology of the Planet
- The International Stratigraphic Chart and the Geological Timescale
- Plate Tectonics Over Time
- Evolution of Life On Earth
- The Fossil Record
- The Paleomagnetic Record
- The Rock Record
- The Climatological Record
- Mass Extinctions

Course Requirements

1. The student should do each of the following:
   - Read the assigned chapters in the textbook
   - **Attend all lectures and laboratory classes.**
   - Take notes in class.
   - Review notes daily.
   - Complete assessments by the deadline (various formats).
   - **Participate in class discussions.**
   - Complete assigned outside reading material and homework.
   - View audiovisual materials on selected topics.
   - Use the computer software in the lab and/or classroom as it is assigned

Outcomes Inventory

Assessment questions will be inserted into assignments throughout the course to determine the mastery of course learning objectives; given at the discretion of the instructor.

SPC Syllabus Statement

https://www.southplainscollege.edu/syllabusstatements/

Calendar / Schedule

The instructor will ensure that the course content is covered in a manner that fulfils the course objectives. Due dates for assignments, quizzes and exams will be provided within a calendar format. All dates will be **tentative and subject to change**. For instance, if Blackboard or the school servers go down, those due dates would change.

Attendance Policy

ATTENDANCE: School policy on attendance is covered in the current catalog. Roll is kept for **both lecture and lab**. If you are absent **four consecutive class-days**, you may be dropped or if you accumulate five total absences (in lecture or lab) you will likely be dropped. **A drop in the above manner usually results in a grade of F**.

Instructor Initiated Drop

- **Attendance Policy (above)**
- **Excessive Class Interruption: I truly enjoy teaching in a positive environment. I am jovial and helpful in class. I like being open and friendly, but the structure of the class is very important, so I can become very serious about keeping the rules. Please, realize, I will not hesitate to drop a student if I see evidence that they are preventing a positive learning environment. It is rare, but it can happen, and it comes down to my determination. I WILL ONLY GIVE ONE WARNING.** In class phone use is prohibited, so please take this rule seriously. It gets out of hand quickly. I may ask the student to leave for the day or drop them from the course if it becomes excessive.

- Disruptive, rude, or crude behavior is prohibited. Ask if you aren't sure if something is appropriate.

- Aggressive tones and argumentative behavior will be given only one warning. Students deserve a positive atmosphere. Discussion of different opinions and positions is fine, in a polite manner.

- **If a directive to stop a behavior has been given and the behavior continues, a student may be dropped at the discretion of the instructor.**

• **Academic Integrity**

- Dishonesty of any kind on examinations or on written assignments, illegal possession of examinations, the use of unauthorized notes during an examination, obtaining information during an examination from the text- book or from the examination paper of another student, assisting others to cheat, alteration of grade records, illegal entry or unauthorized presence in an office are examples of cheating. Complete honesty is required of the student in the presentation of all phases of course work. This applies to quizzes of whatever length, as well as to final examinations, to daily reports and to term papers. ***(Student Code – SPC Student Guide, Pg: 12)***
- Students are expected to produce their own individual work on all assignments. In group assignments, it is perfectly fine to discuss different possible answers and solutions, but the work you submit should be your thoughts and solutions. Do not copy from digital sources or student sources. Mr. Greene firmly believes **INTEGRITY** is vital in the professional world. Please, keep this in mind.

Grades for Class

Lab Quiz 1
Lab Quiz 2
Lab Quiz 3
Lecture Exam #1
Lecture Exam #2
Lecture Exam #3
Presentation 1
Presentation 2
Lab Assignment Average
Project Average

Final Exam

Please, know that grades are equally weighted and subject to change.