Geology 1104, Historical Geology

Spring 2015

Instructor: Christopher Pate

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Office Hours: 1-3 pm Monday; 2-4 Tuesday; 5-8 Wednesday or by appointment.

Course Description: A study of the record of life forms (fauna and flora) that evolved throughout the geologic time 4.5 billion years ago up to the occurrence of man. It also covers the physical changes of the earth through 4.5 billion years of advancing and retreating seas, of deposition, and of erosion of rocks, fashioned into mountain ranges-the entire chronological history of how processes of physical geology have operate

Course Schedule:

Week	Lab Topic
Week 1	Introduction and Review of Plate Tectonics
Week 2	Rocks and Mineral Review
Week 3	Time Scale
Week 4	Relative Age and Unconformities
Week 5	Depositional Environments 1
Week 6	Depositional Environments 2
SPRING BREAK!	
Week 7	Facies and Correlation
Week 8	Lab Exam (covers first 6 weeks)
Week 9	Fossil Record and Preservation
Week 10	Paleozoic Fossils 1
Week 11	Paleozoic Fossils 2
Week 12	Mesozoic and Cenozoic
Week 13	Final Exam

Methods of Instruction: The Lab will consist of hands-on work involving fossils and stratigraphic principles. Individual work as well as teamwork exercises will be used to facilitate a better understanding of the material covered in the lab.

Class Attendance Policy: Attendance is mandatory for all labs. Roll will be taken each week through the use of a graded quiz. If you are going to miss a lecture exam for a legitimate reason, let the instructor know **AHEAD** of time.

Grading:

Quizzes: 10 quizzes worth 1% each for a total of 10%

Exams: A mid-term and a Final Exam worth 15% each for a total of 30 %

Lab Assignments: Worth 70% of the total grade

Texts: None, Lab handouts will be provided by the instructor at the beginning of each lab.

Disability: "It is Sul Ross State University policy to provide reasonable accommodation to students with disabilities. If you would like to request such accommodations because of a physical, mental, or learning disability, please contact the Disabilities Services Coordinator in FERG 112, 432. 837.8203. Please inform me ASAP if accommodation is needed."

Core Objectives addressed:

1) Communication Skills – Students will effectively communicate the results of scientific investigations; using oral, written, and visual communication, either in group discussions, on written exams, and in labs.

2) Critical Thinking Skills – Upon completion of this course, students will apply critical reasoning and problem solving skills to: 1. Identify, describe, and apply the basic stratigraphic principles for evaluating relative time relationships. 2. Explain the changes in life and the continents through time and relate the associated features. 3. Explain the relationship between depositional environments and related facies. 4. Apply the basic classification schemes for discrimination of sedimentary rocks.

3) Empirical and Quantitative Skills – Students will use basic math skills to solve problems regarding metric conversions, as well as problems related to plate tectonic spreading rates, measurements of rock and fossils specimens, and producing proportionally correct diagrams of .

4) Teamwork Skills – Students will work effectively with others to support a shared goal during lab sessions on activities, such as map reading and interpretation, facies interpretations, stratigraphic correlation, other problem solving, experimental procedures, and meet clearly defined deadlines in a timely fashion.