

GEOLOGY 5320, Advanced Paleontology

Spring 2019, SRSU, Alpine

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Office hours: 9:30-11:30 a.m. MWF; 11:00 - 11:30 Tu,Th., or by appointment.

Course Outline by week.

1. nature of the fossil and stratigraphic record
- 2 principles of paleoecology
- 3 marine environments and variables
4. taphonomy
- 5, taxonomic uniformitarianism (review of major fossil groups)
6. fossil preservation
7. functional morphology
- 8 communities
9. populations
10. predation
11. fossils as sedimentary particles
- 12 Evolution and extinctions
13. the early history of life
- 14 and 15. project presentations. Exam.

Methods of Instruction: The course consists of three hours of lecture. Although there is no lab, specimens will be examined during lecture as well as outside of class.

Class attendance policy: Attendance is expected in lectures. If you are going to miss a lecture exam for a legitimate reason, let the instructor know AHEAD of time.

Grading and examinations: Learning outcome assessment will be 75% from lecture exams and 15% from a written project, and oral presentation, and 10% from homework assignments. Grades are itemized on Blackboard.

First lecture exam: Thursday, 21 Feb, 25%.

Second lecture exam, 25%, (only material since the first exam)

Final lecture exam: 25%, comprehensive.

One day-long field exercise, February??

Incomplete (I) grades are given where passing work has been done and only a minor part of the requirements are incomplete. Grades are based on a standard curve (100-90=A; 89.99-80=B; 79.99-70=C; 69.99-60=D).

Texts: Paleoecology by Dodd and Stanton (copies will be provided)

Reference Materials: Other books to be used for reference will be provided. Handouts will occasionally be provided in lecture, and be also be available on line in case you miss the lecture. Previous exams are available on BlackBoard.

Applicable SLO. The student will be able to apply diverse bodies of geologic information in the area of advanced sedimentary geology. The student will identify, compare/contrast, synthesize and apply bodies of information of Advanced Paleontology.

Expected Learning Outcomes – Upon completion of this course, students will apply critical reasoning and problem solving skills to be able to:

- Understand the diagnostic characters of the major fossil taxa.
- Use the diagnostic characters to identify representatives of the major fossil groups.
- Understand the variables of the marine environment (temperature, depth, etc.)
- Understand the effects of the variables of the marine environment on modern major taxa.
- Interpret ancient environmental settings from the paleoecological evidence of fossil taxa.
- Understand the significance of environmental change on evolution.
- Apply the information to examples in the field.

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 Counseling and Disabilities Center in Ferguson Hall, Rm. 112, 837-8203. <http://www.sulross.edu/section/2408/counseling-accessibility-services>.”

Please inform ASAP if accommodation is needed.