

Bemidji State University

GEOL 3500: Topics in Paleontology

A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: *.*

Lab Hours/Week: *.*

OJT Hours/Week: *.*

Prerequisites: None

Corequisites: None

MnTC Goals: None

Introduction to major groups of organisms that are commonly preserved as fossils. Focus of class may vary between offerings; including invertebrate and vertebrate paleontology, introductory micropaleontology, palynology and pollen analysis. May be repeated as topics change. Lecture and laboratory. Prerequisite: GEOL 1120. (May not be offered every year.)

B. COURSE EFFECTIVE DATES: 08/26/1997 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Introduction, the nature and application of the fossil record.
2. The species concept in paleontology
Population biology in paleontology
Dinosaur bones
3. Ecologic and paleoecologic concepts
What did dinosaurs eat?
4. Organic evolution
Determining the hierarchy of life
5. What's in the name?
Taxonomy and systematic
6. Dinosaur ancestors and origins
What makes a dinosaur a dinosaur?
7. Dinosaur ichnology
8. Ornithischia I, Stegasaur and ankylosaurs
9. Ornithischia II, Marginocephalians & ornithopods
10. Saurischia I, Sauropods
11. Saurischia II, Theropods
12. From T. rex to Tweety; Dinosaurs and the Birds
13. Dinosaur metabolism
14. Extinctions and the Cretaceous-Tertiary boundary event

D. LEARNING OUTCOMES (General)

1. learn to identify specific problems in paleontology
2. solve paleontologic problems through formulation and evaluation of hypotheses by collecting and evaluating data in light of geologic and paleontologic principles
3. design a strategy for solving paleontologic problems
4. effectively present paleontologic information in oral or written format
5. demonstrate an understanding of specific knowledge pertaining to paleontology

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted