GEOL A101: AGE OF THE DINOSAURS

Item	Value
Curriculum Committee Approval Date	12/08/2021
Top Code	191400 - Geology
Units	4 Total Units
Hours	108 Total Hours (Lecture Hours 54; Lab Hours 54)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Grading Policy	Standard Letter (S), • Pass/No Pass (B)
Associate Arts Local General Education (GE)	• OC Physical/Biological Sci - AA (OB)
Associate Science Local General Education (GE)	• OCC Physical/Biological Sci-AS (OSB)

Course Description

The course focuses on the origin, evolution and extinction of dinosaurs with emphasis on paleobiology and paleoecology. Covers fundamentals of dinosaur anatomy and behavior, hot/cold-blooded debate, relationships to birds, diversity and exploits of dinosaur hunters. Extended field trip required. Intended for science and non-science majors. Transfer Credit: CSU; UC.

Course Level Student Learning Outcome(s)

1. Develop a well rounded understanding of the earth during the Mesozoic.
2. Develop an appreciation of the development of life as shown in the fossil record.
3. Define and describe the interrelationship of the physical and biological processes of the earth.
4. Demonstrate how the present features of the earth and present life are related to past processes.

Course Objectives

- 1. understand what science is, how science works, and how science progresses.
- 2. understand the basis of physical sciences in general and communicate scientific ideas via written and/or oral assignments.
- 3. demonstrate knowledge of, and have an appreciation for: o the internal and external processes on Earth today; o basic anatomy, evolution, systematics, and other biological processes; o ecology and ecosystems through time; o the Mesozoic world and its inhabitants.
- 4. apply basic principles to understand the ancient world and how it relates to the modern world.
- 5. integrate and apply information learned in lecture and exercises in the field.

Lecture Content

• Introduction to Dinosaurs, Why study dinosaurs.• Geologic Time • Setting the stage for dinosaur evolution • A plate tectonics primer and the Mesozoic world• Evolution, Phylogeny and Classification - What makes a Dino a Dino• Dinosaur Anatomy - Parts is parts . • Origin and evolution of the dinosaurs• Fossils and the fossil record• Predatory Dinosaurs — Therapods T. rex Exposed• Dinosaur Hunters - History of dinosaur studies• Sauropod Dinosaurs - The giants• Plants and their dinosaurs• Ornithopods - eg. Iguanadonts and Hadrosaurs• Thyreophora - eg. Stegosaurs and ankylosaurs• Marginocephla - eg. Ceratopians and Pachycephlasaurs• Dinosaur contemporaries of the land, air and sea• Tracks Trails - the story of trace fossils• Dinosaur Behavior - mommy, where do baby dinosaurs come from... • Hot Blooded Dinosaurs - Dinosaur Controversy • The Dino - Bird connection; A Thanksgiving Dinosaur...• Extinctions and the End of the Cretaceous • Dinosaurs in the Public Eye

Lab Content

See Course Content.

Method(s) of Instruction

- Lecture (02)
- Lab (04)

Instructional Techniques

- Lecture and application of ideas - Individual, paired and small group exercises - Field trips to various areas of geologic interest

Reading Assignments

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Writing Assignments

Examinations will include questions requiring written answers

Out-of-class Assignments

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Demonstration of Critical Thinking

Examinations will be utilized with both objective and subjective questioning/written format for mid-term and final examinations.

Required Writing, Problem Solving, Skills Demonstration

Examinations will include questions requiring written answers

Textbooks Resources

1. Required Lucas, S.. Dinosaurs, ed. New York: McGraw-Hill, 2007 Rationale: .