

GEOLOGY 135: PREHISTORIC LIFE

Fall 2009

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COURSE OVERVIEW:

The world's rocks contain a nearly four-billion-year history of life on Earth. Some of the plants and animals (and other organisms as well) that have occupied this planet are as strange as any seen in science fiction films. This course will review how we know what we know about the life of the past and the processes by which species have evolved and gone extinct. We'll travel through time to visit vanished worlds and learn about the remarkable creatures that inhabited them. Along the way, we'll examine such questions as how did life originate; what is the value of sex; what was dinosaur family life like; would we be here today if the dinosaurs hadn't gone extinct?

This course fulfills the Basic Studies LIFE SCIENCE requirement at UNCW.

COURSE LEARNING OBJECTIVES:

By the end of the semester you should understand:

- what science is and how scientists work
- what fossils are and how they become preserved
- how paleontologists use fossils to reconstruct the history of life
- what evolution is, the evidence for it, and how it occurs
- the major changes that have occurred in life through time

TEXT: Cowen, Richard. 2005. History of Life, 4th ed. Blackwell Publishing.

COURSE REQUIREMENTS AND GRADING POLICY:

Attendance: Regular attendance is expected. Exams will be based on material covered in class. Therefore, you will maximize your learning (and your grade) if you attend class regularly and read the assignments prior to the class session for which they are assigned. Attendance is especially important during the early part of the course, for which your book provides minimal coverage. You will also want to attend regularly so that you don't miss pop quizzes, in-class exercises, and extra-credit opportunities.

Grading: Two non-cumulative examinations worth 25% of total grade each (BRING A SCANTRON)

Final examination worth 30% of total grade (BRING A SCANTRON)

Pop quizzes, exercises, and writing assignments: 20% of total grade

Extra credit opportunities will be announced throughout the semester.

Makeup policy: Pop quizzes and in-class exercises cannot be made up, but I will drop your lowest score (there will probably be five or six quizzes and several in-class exercises). Exams can only be made up with a doctor's or comparable valid excuse and the makeup exam will be an essay exam administered on the day of the final exam.

Tutoring: Learning Services provides content tutoring for all Basic Studies courses. Learning Services also provides Study Skills support for students seeking to strengthen their general academic skills. All Learning Services tutoring is by appointment only. The University Learning Center is located on the first floor of Westside Hall (WE 1056). Phone: 962-7857; Website: www.uncw.edu/ulc; Hours for Fall 2009: Mon–Thur 8am–9pm; Fri 8am–5pm; Sun 3pm–9pm.

Note: The UNCW Academic Honesty Policy will be adhered to in this course (see UNCW Code of Student Life).

FACULTY OFFICE HOURS:

On campus (DeLoach Hall 117) TR 8:00-9:30, 11:00-12:30, T 12:30 – 4:30; by appointment on MWF (I try to be at CMS on those days if possible).

COURSE OUTLINE AND REQUIRED READINGS:

Aug.	20	Introduction
	25	Preservation of Fossils and the Fossil Record (p. 16-18)
	27	FOSSIL PRESERVATION LABORATORY
Sept.	1	Geologic Time (p. 18-19)
	3	Evolution (p. 33-34)
	8	Evolution, cont. (position statement at http://geosociety.org/positions/position1.htm)
	10	Origin of Life (Chap. 1)
	15	Precambrian life (Chap. 2, 3); EVOLUTION WRITING ASSIGNMENT DUE
	17	Evolution of animals and the Cambrian explosion (Chap. 4, 5)
	22	EXAMINATION I
	24	Invertebrate history (p. 64-73)
	29	Early vertebrates (Chap. 7)
Oct.	1	Paleozoic plants (p. 95-102)
	6	FALL BREAK
	8	Paleozoic land vertebrates (p. 102-112; Chap. 9)
	13	Therapsids and their kin (Chap. 10)
	15	Triassic Park: anticipating the dinosaurs (Chap. 11; p. 181-185)
	20	EXAMINATION II
	22	Jurassic Park: IN-CLASS WRITING ASSIGNMENT
	27	The secret lives of dinosaurs (Chap. 12)
	29	Dinosaurs, cont.
Nov.	3	Dinosaurs and their descendants: Birds and the origin of flight (Chap. 13)
	5	Marine reptiles (p. 196-203)
	10	Mesozoic plants: gymnosperms and angiosperms (p. 203-211)
	12	Mesozoic mammals (Chap. 15)
	17	Asteroids, volcanoes and other catastrophes: what killed the dinosaurs? (Chap. 16)
	19	Cenozoic mammals take over the dinosaurs' world (Chap. 17)
	24	Human evolution (Chap. 19-20)
	26	THANKSGIVING
Dec.	1	Ice Age Extinctions: are we to blame? (Chap. 21)
	10	FINAL EXAMINATION (11:30 a.m.)