

**INVERTEBRATE PALEONTOLOGY**  
**Geol. 3420-001 CRN 27688    Geol. 5315-04 CRN 25168**

**Lecture: T/TR 12:00 – 12:50 pm; Geological Sciences, Rm. 201**  
**Lab: T 1:00 – 2:50pm Geological Sciences, Rm 404**

**Instructor: Dr. Giles    Office: Geological Sciences, Rm. 201A**  
**Phone: 747-7075    email: kagiles@utep.edu**  
**Office Hours: Mon-Wed. 9:00-11:00am; or by appointment**  
**TA: Evey Gannaway    email:cegannaway@miners.utep.edu**

**Text: *Not Required***

**Bringing Fossils to Life, Second Edition, (1998) by D. Prothero, McGraw-Hill**  
**ISBN 0-07-366170-8    Readings are from this book which will be available in the**  
**lecture room.**

**Invertebrate Paleontology and Evolution, Fourth Edition, (1998) E. Clarkson**  
**ISBN13:978-0632052387    ISBN10:0632052384**

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**Assignments and Grading**

Grades will be based on scores from the following:

Weekly Lab (13 @ 20 pts. each)	260 points
Weekly Lab Quiz (10 @10 pts. each)	100 points
Lab Exam I (3/4)	100 points
Lab Exam II (4/15)	100 points
Lab Exam III (5/6)	100 points
Field Trip Reports (2 @ 20 pts. each)	40 points

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Total: 700 points

\*Labs must be turned in during the lab period the week following the scheduled lab as listed in the syllabus. **No labs accepted late!**

\*Make up quizzes and exams for excused absences must be completed within a week of the scheduled quiz or exam date.

**Field Trips**

**Required Trips**

All students are required to attend the 2 scheduled one-day fieldtrips and must write a fieldtrip report on those two field trips.

February 23 *Paleozoic Fauna Fieldtrip –Scenic Drive, Franklin Mountains*

Required fieldtrip and report

March 30 *Paleozoic (Lake Valley) & Mesozoic (Cooke's Range) Faunas Fieldtrip*

Required fieldtrip and report

**Extra credit**

**Written Report - 20 points**

Topic to be chosen in consultation with Dr. Giles.

Report due in class May 6.

## LECTURE AND LABORATORY SCHEDULE

**1/17** Introduction and overview of class;  
Fossil occurrence and review depositional environments  
**Readings:** Ch. 1, p.4-7; Ch. 8 119-129.

**1/19** Fossilization, Preservation, Taphonomy  
**Readings:** Ch. 1, p. 8-18.  
**Lab 1:** Fossil preservation

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**1/24** Invertebrate Taxonomy, Cladism  
**Readings:** Ch. 4, p. 47-57.

**1/26** Kingdom Protista (Protozoa)  
**Readings:** Ch. 11, p. 188-206.  
**Lab 2:** Protista  
**Quiz 1:** *Fossil preservation; Fossil preservation lab due*

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**1/31** Protozoan to Metazoan Evolution; Ediacaran Fauna  
**Readings:** Handouts

**2/2** Acoelomates - Porifera  
**Readings:** Ch. 12, p. 215-222.  
**Lab 3:** Porifera & Ediacaran fauna  
**Quiz 2:** *Protista; Protista lab due*

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**2/7** Acoelomates – Cnidaria; Coral & sponge reefs through time  
**Readings:** Ch. 12, p. 222-229.

**2/9** Acoelomates – Cnidaria  
**Readings:** Ch. 12, p. 222-229  
**Lab 4:** Cnidaria  
**Quiz 3:** *Porifera; Porifera lab due*

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**2/21** **Lab Review**  
**Quiz 5:** *Bryozoa*  
*Paleozoic Fieldtrip I Summary Due*

**2/23** \***Lab Exam I: Fossil preservation, Protista through Bryozoa**

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**2/28** **Lab 6 Cont.:** Brachiopoda  
**Readings:** Ch. 13, p. 230-244.

**3/2** Mollusca-Introduction, Aplacophora, Monoplacophora, Polyplacophora, Rostroconchia, Scaphopoda, Bivalvia, Gastropoda  
**Readings:** Ch. 15, p. 280-306  
**Lab 7:** Mollusca 1 – Bivalvia & Gastropoda  
**Quiz 6:** *Brachiopoda*

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3/7 Mollusca-Cephalopoda  
**Readings:** Ch. 15, p. 307-317

3/9 Mollusca-Bivalvia, Gastropoda, Cephalopoda  
**Readings:** Ch. 15, p. 307-317  
**Lab 8:** Mollusca 2 – Cephalopoda; *Brachiopoda lab due*

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3/14 **Spring Break - no class**  
3/16 **Spring Break - no class**

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3/21 Annelida and Arthropoda  
**Readings:** Ch. 14, p. 252-255, 265-279

3/23 Arthropoda-Trilobites  
**Readings:** Ch. 14, p. 255-265  
**Lab 9:** Arthropoda  
**Quiz 7:** *Bivalvia, Gastropoda, Cephalopoda; Mollusca labs due*

3/25 **\*Fieldtrip Paleozoic (Lake Valley) and Mesozoic (Cokes Range) faunas**

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3/28 Arthropoda-Trilobites  
**Readings:** Ch. 14, p. 255-265  
**Lab 9:** Arthropoda  
**Quiz 7:** *Bivalvia, Gastropoda, Cephalopoda; Mollusca labs due*

3/30 Echinodermata  
**Readings:** Ch. 16, p. 318-341

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4/4 **No class:** *AAPG in Houston; Use time to study for Lab exam*  
4/6 **No class:** *AAPG in Houston; Use time to study for Lab exam*

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4/11 Echinodermata  
**Readings:** Ch. 16, p. 318-341  
**Lab 10:** Echinodermata  
**Quiz 8:** *Arthropoda; Arthropoda lab due*

4/13 **\*Lab Exam II: Brachiopoda through Arthropoda**

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- 4/18** Graptolites and Conodonts  
**Readings:** Ch. 17, p. 346-348, 353-355  
**Lab 11:** Graptolites and Conodonts  
**Quiz 9:** *Echinoderm; Echinoderm Lab due*
- 4/20** Trace Fossils  
**Readings:** Ch. 18, p. 418-433  
**Lab 12:** Trace Fossils and Paleoeologic setting  
**Quiz 10:** *Echinodermata; Graptolite & Conodont lab due*
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- 4/25** Evolution and Speciation  
  
**Readings:** Chapt. 3, p. 39-45.
- 4/27** Extinction  
**Readings:** Ch. 6, p. 81-95. Ch. 10, p. 168-185.  
**Lab 13:** Biostratigraphy  
*Trace Fossil lab due*
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- 5/2** Mass Extinctions  
**Readings:**  
*Biostratigraphy lab due*
- 5/4** \***Lab Exam III: Echinodermata through Trace Fossils**