12:007

THE AGE OF DINOSAURS

FALL 2012

INSTRUCTOR

Christopher Brochu
Office: 221 Trowbridge Hall (TH), 353-1808
chris-brochu@uiowa.edu
office hours: Tuesday, Wednesday, and Thursday, 12:00-1:00, or by appointment.

LECTURES

Mon. Wed. Fri. 1:30 – 2:20, C20 Pomerantz Center

LABS/TEACHING ASSISTANTS:

- Matthew Burkey (matthew-burkey@uiowa.edu)
- Rachel Guest (rachel-guest@uiowa.edu)
- Neo McAdams (neo-buengermcadams@uiowa.edu)
- Jessica Miller-Camp (jessica-camp@uiowa.edu)
- Matt Tibbits (matthew-tibbits@uiowa.edu)

Lab sessions meet in **136 Trowbridge Hall**

Labs begin during the *first week of class* (week of August 20)

COURSE WEBSITE:

icon.uiowa.edu
This will provide announcements and PDF files with some images used in lecture.

REQUIRED COURSE MATERIAL:

- *Course Packet* available from Iowa Book (corner of Iowa and Clinton).

RECOMMENDED COURSE MATERIAL:

- Colored pencils or pens. An inexpensive set is sufficient.
- A vertebrate body. (You already have one.)

COURSE POLICIES AND GRADES

1. *12:007 The Age of Dinosaurs* satisfies **4 units of the Natural Sciences with Lab General Education requirement** for students in the College of Liberal Arts and Sciences.

2. **GOALS and OBJECTIVES**: The central focus of this course is the scientific method – what it is, how it works, and how it impacts everyone. Because scientific discoveries about dinosaurs are frequently featured in the news, we can examine the ways in which scientific information is conveyed to the public. To do this, we will look at the origin and evolutionary history of dinosaurs. Topics will include the diversity of dinosaurian groups; their geographic distributions and paleoecology; the origins of flight among dinosaurs; their environmental context, including other animals and plants that lived alongside dinosaurs; and the so-called extinction of dinosaurs and radiation of modern forms.

3. Your final **GRADE** will be based on your total score from exams, quizzes, lecture projects, and labs. Grades are assigned using a standard curve that reflects the accomplishment of the class as a whole. The mean of the curve represents a 'C.'

Exam 1	100	October 1
Exam 2	100	October 29
Quizzes	40	(20 pts each; 3 given, lowest dropped)
Lab	110	(12 assignments; lowest dropped)
Final Exam	100	
Total	**450**	

If you wish to appeal a grade received on an exam, quiz, or lab, **your appeal *must* be made within 7 days from the time it is handed back**.

4. There are two **MIDTERM EXAMS** (October 1, October 29) and a **FINAL EXAM** (date and time to be announced). ***Makeup exams will only be given in extreme circumstances with documentation***. Exams will cover material from lectures, labs, and reading assignments, and they will be returned in lab.

You are responsible for expressing yourself clearly. We can only grade what you *said*, not what you *meant*. **Spelling counts for technical terms**.

5. Three **QUIZZES** will be given in lecture. They will last ten minutes and cover recent lecture and lab material, including both lab and lecture information. ***These will be announced in the preceding lecture*** - for example, if I give a quiz on a Friday, I will announce it on the previous Wednesday. They will NOT be announced on ICON. ***Makeup quizzes are not given for any reason***. See me ASAP if you miss more than one quiz for a legitimate reason. Your lowest quiz score will be dropped.

6. LABS meet in **136 TH**. You must attend the lab for which you are registered. If you miss lab, contact your T.A. as soon as possible. Each lab session will include a short assignment due the following week.

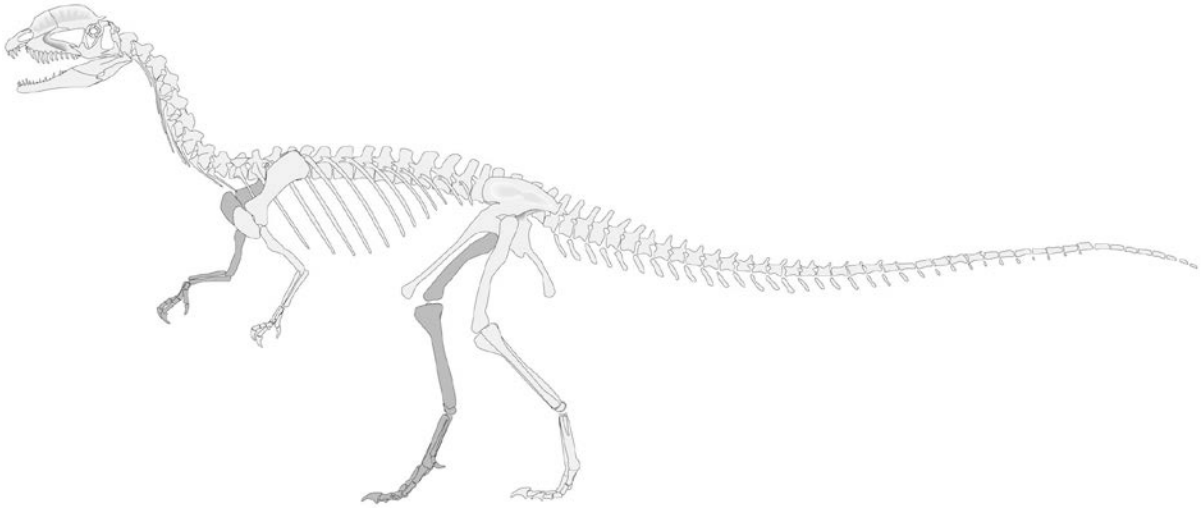
7. ATTENDANCE is your responsibility. Lecture and lab are the *only* places where information will be provided. We provide pictures used in lecture, but these will mean very little by themselves. ***You cannot do well without attending class***.

8. RECORDING of lectures is OK. ***DO NOT photograph*** them without asking me first.

9. Please be mindful of **basic classroom etiquette**. It is rude and distracting (both to me and your fellow students) to send text messages, surf the web, or talk during class time.

10. I am happy to make appropriate accommodations for students with disabilities. Please contact Student Disability Services and then see me after class or in office hours.

11. Academic dishonesty is not tolerated. It cheapens the value of your education and insults your fellow students (not to mention your instructor, who is ultimately responsible for your grade). Anything you turn in, including labs, must represent your own work. ***You do not want to be caught cheating in my class***. Have a nice day.



Department of Geoscience Syllabus Information:

Department Office: 121 Trowbridge Hall Telephone: 319-335-1818
Department Chair (DEO): Prof. M.K. Reagan DEO Office: 121C TH
DEO Telephone: 319-335-1820 DEO Email: geology-deo@uiowa.edu

Administrative Home

The College of Liberal Arts and Sciences is the administrative home of this course and governs matters such as the add/drop deadlines, the second-grade-only option, and other related issues. Different colleges may have different policies. Questions may be addressed to 120 Schaeffer Hall, or see the CLAS Academic Policies Handbook at http://clas.uiowa.edu/students/handbook.

Electronic Communication

University policy specifies that students are responsible for all official correspondences sent to their University of Iowa e-mail address (@uiowa.edu). Faculty and students should use this account for correspondences. (*Operations Manua*l, III.15.2. k.11.)

Accommodations for Disabilities

A student seeking academic accommodations should first register with Student Disability Services and then meet privately with the course instructor to make particular arrangements. See www.uiowa.edu/~sds/ for more information.

Academic Honesty

All CLAS students have, in essence, agreed to the College's Code of Academic Honesty: "I pledge to do my own academic work and to excel to the best of my abilities, upholding the IOWA Challenge. I promise not to lie about my academic work, to cheat, or to steal the words or ideas of others; nor will I help fellow students to violate the Code of Academic Honesty." Any student committing academic misconduct is reported to the College and placed on disciplinary probation or may be suspended or expelled (CLAS Academic Policies Handbook).

CLAS Final Examination Policies

The final examination schedule for each class is announced around the fifth week of the semester by the Registrar. Final exams are offered only during the official final examination period. No exams of any kind are allowed during the last week of classes. All students should plan on being at the UI through the final examination period. Once the Registrar has announced the dates and times of each final exam, the complete schedule will be published on the Registrar's web site.

Making a Suggestion or a Complaint

Students with a suggestion or complaint should first visit the instructor, then the course supervisor, and then the departmental DEO. Complaints must be made within six months of the incident (CLAS Student Academic Handbook.)

Understanding Sexual Harassment

Sexual harassment subverts the mission of the University and threatens the well-being of students, faculty, and staff. All members of the UI community have a responsibility to uphold this mission and to contribute to a safe environment that enhances learning. Incidents of sexual harassment should be reported immediately. See the UI Comprehensive Guide on Sexual Harassment for assistance, definitions, and the full University policy.

Reacting Safely to Severe Weather

In severe weather, class members should seek appropriate shelter immediately, leaving the classroom if necessary. The class will continue if possible when the event is over. For more information on Hawk Alert and the siren warning system, visit the Public Safety web site.

Rights and responsibilities in the classroom

The College's statement on student rights and responsibilities can be found at: http://www.clas.uiowa.edu/students/handbook/x/.

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SYLLABUS

WEEK 1 *Lab: Geological Time (course packet pp. 1, 41-47)*

Aug. 20 Introduction to course. Meet the dinosaurs!

Aug. 22 Introduction to scientific inquiry

Aug. 24 Reality Check I – Science Can Save You

WEEK 2 *Lab: Skeletal Anatomy (course packet pp. 51-58)*

Aug. 27 Early History of Dinosaur Science

Aug. 29 Evolution of Dinosaurs in the Public Image

Aug. 31 The Fossil Record (course packet pp. 48-50)

WEEK 3 *No Lab This Week*

Sept. 3 No class (Labor Day)

Sept. 5 Evolutionary Processes

Sept. 7 Evolutionary Patterns and Phylogenetic Systematics

WEEK 4 *Lab: Phylogenetic Systematics: Basic Concepts and Parsimony (course packet pp. 59-69)*

Sept. 10 Reality Check II – Why You Need to Know This Stuff

Sept. 12 Thumbnail History of Vertebrates (course packet pp. 2,3)

Sept. 14 Ancestry of Dinosaurs (course packet pp. 3, 5, 6)

WEEK 5 *Lab: Polarity and Homoplasy (course packet pp. 70-74).*

Sept. 17 Herbivory and Ornithischian Dinosaurs (course packet pp. 7,8)

Sept. 19 Armored Dinosaurs (Thyreophorans; course packet p. 9)

Sept. 21 Buttheads (Pachycephalosaurs; course packet p. 10)

WEEK 6 *Lab: Assembing the Big Picture I*

Sept. 24 Horned Dinosaurs (Ceratopsians; course packet p. 11)

Sept. 2 6 Duckbills and Hitchhikers (course packet p. 12)

Sept. 28 Saurischian and Sauropodomorph Origins (course packet pp. 13,14)

WEEK 7 *Lab: Herbivory and Plants During the Age of Dinosaurs*

(course packet pp. 88-93)

Oct. 1 **EXAM 1**

Oct. 3 They Might Be Giants: Sauropods (course packet pp. 14,15)

Oct. 5 Rise of the Theropods (course packet pp. 13, 16)

WEEK 8 *Lab: Phylogenetic Prediction (course packet pp. 75-87)*

Oct. 8 Stiff-Tailed Dinosaurs (course packet pp. 17–19)

Oct. 10 Tyrannosaurs (course packet p. 20)

Oct. 12 Origin of Maniraptora (course packet pp. 17, 21, 22)

WEEK 9 *Lab: Skeletons of Living Dinosaurs*

Oct. 15 What Maniraptorans Did Before They Could Fly (packet pp. 22-24)

Oct. 17 TBA

Oct. 19 TBA

WEEK 10 *Lab: Assembling the Big Picture II*

Oct. 22 What, Exactly, is a Bird? (course packet pp. 22, 26,27)

Oct. 24 Mesozoic History of Flying Dinosaurs (course packet pp. 22, 26,27)

Oct. 26 Cenozoic History of Flying Dinosaurs (course packet, pp. 25, 29-32)

WEEK 11 *Lab: Flight (course packet pp. 94-97)*

Oct. 29 **EXAM 2**

Oct. 30 Blood, Lungs, and Holes In Bones (course packet pp. 33,34)

Nov. 2 Things That Are Not Dinosaurs – Crocodylians and Relatives (p. 39)

WEEK 12 *Lab: Synapsids (course packet pp. 35-37)*

Nov. 5 Things That Are Not Dinosaurs: Pterosaurs (packet p. 38)

Nov. 7 Things That Are Not Dinosaurs: Marine Reptiles (packet p. 40)

Nov. 9 Things That Are Not Dinosaurs: Early Synapsids (packet pp. 35-36)

WEEK 13 *Lab: Biogeography (course packet pp. 98-105)*

Nov. 12 Things That Are Not Dinosaurs: Mammals and Their Ancestors (p. 37)

Nov. 14 How The World Changed: from the Paleozoic through the Triassic

Nov. 16 How The World Changed: the Age of Dinosaurs

WEEK 14		*No Lab This Week*
	Nov. 19	No class (Thanksgiving Break)
	Nov. 21	No class (Thanksgiving Break)
	Nov. 23	No class (Thanksgiving Break)
WEEK 15		*Lab: TBA*
	Nov. 26	Reality Check III: Patterns, Events, and How The World Changes
	Nov. 28	Extinctions and Their Causes
	Nov. 30	Bangs and Whimpers; or, OK – So They Found the Smoking Gun. But What If the Victim Died of Multiple Stab Wounds?
WEEK 16		*Lab: TBA*
	Dec. 3	The Age of Mammals
	Dec. 5	Reality Check IV: Past Is (Sometimes) Prologue
	Dec. 7	Valediction

Final Exam: Time: TBA

Place: TBA, but most likely C20 Pomerantz Center (the usual lecture room)