

# GEOL 104 Dinosaurs: A Natural History

Fall Semester 2009

PLS 1130 10:00-10:50 am MWF

Instructor: Dr. Thomas R. Holtz, Jr.  
Room: Centreville 1216 Office Hours: T 8:30-11 am, or by appointment  
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**NOTE: It is your responsibility as a student to completely read through and understand this syllabus. If you have questions about it, please contact Dr. Holtz. You will be held responsible for following all requirements of this syllabus.**

Course Organization: 3 meetings per week (Monday, Wednesday, Friday).

Grade: Test 1: 20%	Smithsonian Assignment I:	15%
Test 2: 20%	Smithsonian Assignment II:	5%
Final: 20%	Weekly Online Quizzes:	15%
	Video Review Assignment:	5%

No separate extra credit assignments are planned for this course. However, tests and some quizzes and assignments have extra credit questions.

**NOTE:** Late Smithsonian or Video Review Assignments will be docked 25% of the total grade if not turned in on time, but turned in (at my mailbox in the Geology Building or at my office) prior to the next class day, or docked 50% if handed in the next class day. After that point, the grade for that assignment will be a 0. Online Quizzes cannot be completed for a grade after their regularly assigned due date (typically Wednesdays at 10 am) passes.

Grade Scale:  $\geq 90$ , A; 80-89, B; 70-79, C; 60-69, D;  $< 60$ , F. “+” and “-” grades are given to the top and bottom two-point range, respectively, within each grade.

Dinosaurs: A Natural History is a CORE course. CORE Distributive Studies courses are designed to ensure that you will take a look at several different academic disciplines and the way they create and analyze knowledge about the world. A faculty and student committee approved this CORE Distributive Studies course because it will introduce you to the ideas and issues that are central to a major intellectual discipline and because it promises to involve you actively in the learning process. Please take advantage of the opportunities this course offers you.

Required Text: David E. Fastovsky and David B. Weishampel. 2009. *Dinosaurs: A Concise Natural History*. Cambridge Univ. Press, 379 pp. ISBN 978-0-521-71902-5

Websites: <http://www.geol.umd.edu/~tholtz/G104/>  
This Website contains a copy of the course policies, the syllabus, lecture notes, copies of some of the handouts, dinosaur-related web links, and other features. Please feel free to utilize this resource, and email Dr. Holtz with any suggestions on improving this resource.

<http://elms.umd.edu/> Course ID: 200908\_GEOL104\_tholtz  
The ELMS Blackboard site will include required weekly online quizzes; announcements concerning the class; class discussion list; copies of the handouts; and so forth. If you have not already done so, make sure that you get access to ELMS.

Policies: Academic integrity: The University of Maryland has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards for academic integrity at Maryland for all undergraduate and graduate students. As a student you are responsible for upholding these standards for this course. It is very important for you to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism. For more

information on the Code of Academic Integrity or the Student Honor Council, please visit <http://www.studenthonorcouncil.umd.edu/whatis.html>

The University of Maryland is one of a small number of universities with a student-administered Honors Code and an Honors Pledge, available on the web at <http://www.jpo.umd.edu/aca/honorpledge.html>. The code prohibits students from cheating on exams, plagiarizing papers, submitting the same paper for credit in two courses without authorization, buying papers, submitting fraudulent documents, and forging signatures. The University Senate encourages instructors to ask students to write the following signed statement on each examination or assignment: "I pledge on my honor that I have not given or received any unauthorized assistance on this examination (or assignment)."

Academic Accommodations: If you have a documented disability, you should contact Disability Support Services 0126 Shoemaker Hall. Each semester students with documented disabilities should apply to DSS for accommodation request forms which you can provide to your professors as proof of your eligibility for accommodations. The rules for eligibility and the types of accommodations a student may request can be reviewed on the DSS web site at [http://www.counseling.umd.edu/DSS/receiving\\_serv.html](http://www.counseling.umd.edu/DSS/receiving_serv.html).

Religious Observances: The University System of Maryland policy provides that students should not be penalized because of observances of their religious beliefs, students shall be given an opportunity, whenever feasible, to make up within a reasonable time any academic assignment that is missed due to individual participation in religious observances. It is the responsibility of the student to inform the instructor of any intended absences for religious observances in advance. **Notice should be provided as soon as possible but no later than the end of the schedule adjustment period (September 14).** Faculty should further remind students that prior notification is especially important in connection with final exams, since failure to reschedule a final exam before the conclusion of the final examination period may result in loss of credits during the semester. The problem is especially likely to arise when final exams are scheduled on Saturdays.

Other: All work on tests, quizzes, etc. must be your own. Although group study can be very useful, make sure that all your work you turn in is your own.

Absences from exams will not be excused except for those causes approved by University policy (see <http://www.umd.edu/catalog/index.cfm/show/content.section/c/27/ss/1584/s/1540> of the *UMCP Undergraduate Catalog 2008/2009*). Only those students excused for these causes will be eligible for a make-up exam.

Throughout the course there will be a series of online quizzes using the ELMS system. Please make certain that you stay current with these. They will **typically** be made available Thursday afternoon and be due at the beginning of class the following Wednesday (with some exceptions), and will cover material from class from the previous quiz onward.

Attendance in class is expected. Much of the information presented is not available in the textbook. If you cannot make a certain lecture, try and find another student who might lend your their notes. (In fact, establishing a study group early in the course has proven useful for many students in the past).

Keep up with the required readings! Although the format of the lectures and the chapters do not always match, the readings are important as well. Some of the material to be tested is covered in more detail in the readings than in class.

Readings should be done **prior** to the classtime they are listed.

**NOTE:** As part of the nature of the course, there will be a lot of memorization (less than a foreign language class, but more than that found in more mathematically-oriented introductory science classes). This will include lots of anatomical, geological, and paleontological terms, as well as evolutionary and temporal relationships. If you have difficulty memorizing, this may not be the class for you. Also, if there are words or concepts with which you are not familiar, feel free to ask Dr. Holtz (in class, after class, over email, etc.) for an explanation or clarification.

**Course Evaluations:** CourseEvalUM will be open for students to complete their evaluations for Fall 2009 courses between Tuesday, December 1, and Sunday, December 13. Students can go directly to the website ([www.courseevalum.umd.edu](http://www.courseevalum.umd.edu)) to complete their evaluations, beginning December 1. You will be alerted about these dates and provided more information closer to that time, and students will be alerted via their official University e-mail account.

Students who complete evaluations for all of their courses in the previous semester (excluding summer), can access the posted results via Testudo's CourseEvalUM Reporting link for any course on campus that has at least a 70% response rate. You can find more information, including periodic updates, at the IRPA course evaluation website:

[https://www.irpa.umd.edu/Assessment/CourseEval/fac\\_faq.shtml](https://www.irpa.umd.edu/Assessment/CourseEval/fac_faq.shtml)

The expectation is that all students will complete these. This is YOUR chance to anonymously evaluate this class: please use this opportunity!

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### **MAIN SYLLABUS**

- Aug. 31 Introduction to the Course; What are Dinosaurs?  
Reading: Chap. 1
- Sept. 2 What is Science? The Meaning of Fossils  
Reading: Chap. 1
- Sept. 4 The History of Prehistory: the Great Exposition through Great Expeditions  
Reading: Chap. 14
- Sept. 9 Basics of Geology: Every Rock is a Record of the Environment in Which It Formed  
Readings: Chaps. 1, 2  
**Quiz 1 due**
- Sep. 11 Fossils and Fossilization  
Readings: Chap. 2  
**Video Assignment handed out**
- Sept. 14 Deep Time I: Ruins of an Older World  
Readings: Chap. 2
- Sept. 16 Deep Time II: Plate Tectonics and the Earth Engine  
Readings: Chap. 2  
**Quiz 2 due**
- Sept. 18 Our Bodies, Our Selves: Introduction to Vertebrate Osteology  
Reading: Chap. 3

Sept. 21, 23, 25            No lectures: work on the video assignment this week. During the week of September 21-25, you will be required to view a set of videos on Dial Access on the Nonprint Media room of Hornbake Library. You will be required to turn in your answers to the take-home video assignments on Wednesday September 30.

Sept. 28    Taxonomy and Species  
Reading: Chaps. 3

Sept. 30    Evolution I: Descent with Modification  
Reading: Chaps. 3  
**Video Assignment Due**  
**Quiz 3 due**

Oct. 2        Evolution II: On the Origin of Species by Means of Natural Selection  
Reading: Chaps. 3-4  
**Smithsonian Assignment I is handed out**

Oct. 5        Evolution III: Patterns and Processes  
Reading: Chaps. 3

Oct. 7        Systematics I: The Tree of Life  
Reading: Chaps. 3

Oct. 9        Systematics II: Tree-Based Thinking  
Reading: Chap. 3  
**Quiz 4 due**

Oct. 12      **TEST I**

Oct. 14      The Colonization of Land  
Reading: Chap. 4

Oct. 16      Life on Land Before the Dinosaurs  
Reading: Chap. 4

Oct. 19      The Rise of the Dinosaurs  
Reading: Part II Intro (pp. 75-83) and Part III Intro (pp. 155-159)  
**Quiz 5 due**

Oct. 21      Thyreophora: Defense! Defense! Defense!  
Reading: Chaps. 5

Oct. 23      Ornithopoda: Beaks, bills & crests  
Reading: Chap. 7

Oct. 26      Marginocephalia: That's using your head!  
Readings: Chaps. 6

Oct. 28      Sauropodomorpha I: Dawn of the Thunder  
Reading: Chap. 8  
**Quiz 6 due**  
**Smithsonian Assignment I is DUE!**

Oct. 30      Sauropodomorpha II, Neosauropoda: Size Matters! & Theropoda I: Basal Theropods  
Reading: Chaps. 8, 9

- Nov. 2 Theropoda II: Dinosaurs Red in Tooth and Claw  
Reading: Chap. 9
- Nov. 4 Theropoda III, Coelurosauria: Tyrant Kings and Lesser Royals  
Reading: Chap. 9  
**Quiz 7 due**
- Nov. 6 Theropoda IV, Maniraptora: The Feathered Dinosaurs  
Reading: Chap. 10  
**Smithsonian Assignment II is handed out**
- Nov. 9 Theropoda V: Rise of Birds & Dinosaurs Take Flight!  
Reading: Chap. 11
- Nov. 11 Dinosaur History: An Overview  
Reading: Chap. 13  
**Quiz 8 due**
- Nov. 13 **TEST II**
- Nov. 16 Dinosaur Olympics: Locomotion and Dinosaurs in the World of Physics
- Nov. 18 *Tyrannosaurus* Sex: Dinosaur Social Behavior
- Nov. 20 Bringing Up Baby: Dinosaur Families and Growth  
Reading: Chap. 12  
**Quiz 9 due**
- Nov. 23 The Hot-Blooded Dinosaurs  
Reading: Chap. 12
- Nov. 25 Heart Beats & Deep Breaths  
Reading: Chap. 12
- Nov. 26-27 **Thanksgiving Recess: enjoy your roasted maniraptoran**
- Nov. 30 Eat or be Eaten: Dinosaur Paleoecology  
Reading: Chap. 12  
**Quiz 10 due**
- Dec. 2 Dinosaur Physiology roundup  
Reading: Chap. 12
- Dec. 4 The Cretaceous-Paleogene Extinction I: All Good Things...  
Reading: Chap. 15  
**Smithsonian Assignment II is DUE!**
- Dec. 7 The Cretaceous-Paleogene Extinction II: One REALLY Bad Day!  
Reading: Chap. 15  
**Quiz 11 due**
- Dec. 9 The Cretaceous-Paleogene Extinction III: Not With a Bang, But a Whimper  
Reading: Chap. 15
- Dec. 11 The Cretaceous-Paleogene Extinction IV: The Big Picture; The Future of Dinosaur Science

Reading: Chap. 15  
**Quiz 12 due**

Dec. 19 (**SATURDAY!!**) **FINAL EXAM**, PLS 1130, 8:00-10:00 am