



A discovery near Terlingua, TX – photo by H. Montgomery

Age of Dinosaurs, NATS 2332

PROFESSOR'S CONTACT INFORMATION

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Other Information Please get in touch whenever you have questions

COURSE INFORMATION

Pre-requisites, Co-requisites

None

Course Description

- *Age of Dinosaurs* is an introductory survey of the anatomy, physiology, life-styles, population, and evolution of dinosaurs and swimming and flying reptiles, as well as Mesozoic climates and basic Earth history of the “Age of Dinosaurs.”
- Each class is an encounter with remarkable life forms, most of which are extinct. Each course topic emerges from a discovery made by Montgomery and colleagues in the Chihuahuan Desert of west Texas. These discoveries become the foundation of the topics for class work and study. You will work with the actual fossils. Your first job is to determine just what has been discovered and how it fits into the jigsaw of Mesozoic life history. As the process repeats and as we near the end of the course, a dynamic and detailed paleontological and paleoecological reconstruction will emerge.
- All students will engage in probing discussions, activities, and presentations. We will encounter numerous controversial topics such as homeothermy, the origin of birds, and the KT extinction.
- Students will complete weekly assignments about their discoveries. Final presentations will consist of detailed, research-based interpretations using fossil data to reconstruct the Age of Dinosaurs in west Texas. This course is conducted entirely within a Problem Based Learning format. As such, there are no formal lectures. The production of highly creative projects is encouraged.

Methodology

- This class is grounded in a Project Based Learning (PBL) format, and will be learner centered and

focused on group activities. PBL learning is “deep” rather than “broad.” If you are interested in reading more about PBL, visit the Buck Institute (<http://www.bie.org/>).

- Occasional lectures will be brief, and will be reinforced with demonstrations, hands-on activities, bits of video, etc. (Lecture classes are dead, or should be. Note the research: http://pd.npr.org/anon.npr-mp3/npr/atc/2012/01/20120101_atc_02.mp3)
- You will frequently need to conduct research. Bring your laptop to class.
- Each student has a responsibility to attend class and to be prepared.

Textbooks

- There are no assigned textbooks. References are of your choice based on your needs for each assignment. I have a library that you might want to utilize.
- Other resources (books, links to museums and universities, videos, etc.) will be noted in class, and will provide further information about the topics. According to your interest, you may (or may not) choose to pursue these.

Project Based Learning (PBL)

Introduction to PBL

Scientists are Project Based Learners. PBL closely mimics the way scientists do science. Intuitively, you probably understand this idea rather well. A major difference between what you (probably) did in science class and what we will do here is that I will mostly not offer step-by-step instructions. This makes your work in this course more open-ended, more authentic.

Concept

Your professor is only one source of information.

Success with the projects requires a great deal of research and synthesis.

Weekly assessments are conducted by your peers and your professor utilizing rubrics.

Products (presentation, submitted project, peer evaluations)

Each group will be responsible for both the presentations in class and the final presentations that are turned in on eLearning. One presentation will be turned in by each group (all group members should be clearly identified on the first page).

The format for the presentation is a decision made by each group, and may be PowerPoint (sort of *passé*), interactive discussion, demonstration with models, etc. In some cases, even “startling” may be effective. Please discuss your ideas with your professor.

Each member of each team must contribute. Each member of each team complete the standard peer evaluation if problems appear in a group.

Each group will have a timed window of no more than five minutes in which to make a presentation of your findings.

Turn in this presentation by Friday midnight each week. Simply upload what you presented to eLearning. Submit your evaluations for each group presentation. See rubric in “Rubric Folder”

Step-by-step procedure

1. *Driving questions*: This is where you begin. In general, your question each week will amount to what is this, and what does it mean. You will rapidly progress into issues of integrating previous and present work.
2. *Target tasks*: Effectively explore as many facets as time allows.
3. *List knows and need to knows*: This is as simple as it sounds.
4. *Organize tasks and activities*: Map out a plan for the production of a credible presentation on Thursday.
5. *Gather research and resources*: Be sure to consult peer-reviewed research or, at least, reliable resources. Conduct the necessary research based on your lists. Resources are included in the assignment part of the syllabus. All presentations must cite the references utilized.
6. *Prepare and present*: Ready your research for presentation and your submission for uploading on

eLearning. All quotations, images, etc. must be properly cited.

7. *Evaluate*: Using the provided rubric, evaluate each member of your group and each group presentation.

LEARNING OUTCOMES

1. Students will be familiar evolutionary history of select Mesozoic vertebrates.
2. Students will have a basic understanding of Mesozoic geology and paleoecology.
3. Students will evaluate one or more of our dinosaur sites in west Texas utilizing criteria presented in the class and in primary sources.
4. Students will apply their learning and understanding to real world research projects.

GRADES (credit out of 100 total possible points)

1. Weekly presentations in 5 minutes: 75 points (5 points each)
2. Participation: 15
3. Final project: 10

CALENDAR & ASSIGNMENTS

(Topics, Reading Assignments, Due Dates, Etc.) Class topics, readings, pertinent links and assignments for each week are below. You may need to look up terminology. There are several good sources for this task. You might also want to augment your notes with online sites and post the URLs on the discussion board. Remember to stick with reputable sites such as those produced by museums, universities, and the like.

Week of	Project	Suggested readings	Due midnight Friday
Aug 27	Introduction to the course Introduction to fossil 1 Presentation on Thursday	View video about our early work in Big Bend National Park	Presentation 1
Sep 3	Introduction to fossil 2 Discussion, Q & A, mini-lectures about your questions Presentation on Thursday	Read Montgomery's 2012 <i>Palaios</i> paper	Presentation 2
Sep 10	Introduction to fossil 3 Discussion, Q & A, mini-lectures about your questions Presentation on Thursday	See Montgomery's lecture about sauropods on eLearning	Presentation 3
Sep 17	Introduction to fossil 4 Discussion, Q & A, mini-lectures about your questions Presentation on Thursday	See Montgomery's lecture about taphonomy on eLearning	Presentation 4
Sep 24	Introduction to fossil 5 Discussion, Q & A, mini-lectures about your questions Presentation on Thursday	See Montgomery's lecture about pterosaurs on eLearning	Presentation 5
Oct 1	Introduction to fossil 6 Discussion, Q & A, mini-lectures about your questions Presentation on Thursday	See Montgomery's lecture about theropods on eLearning	Presentation 6

Oct 8	Introduction to fossil 7 Discussion, Q & A, mini-lectures about your questions Presentation on Thursday	References will be suggested before class	Presentation 7
Oct 15	Introduction to fossil 8 Discussion, Q & A, mini-lectures about your questions Presentation on Thursday	References will be suggested before class	Presentation 8
Oct 22	Introduction to fossil 9 Discussion, Q & A, mini-lectures about your questions Presentation on Thursday	References will be suggested before class	Presentation 9
Oct 29	Introduction to fossil 10 Discussion, Q & A, mini-lectures about your questions Presentation on Thursday	Read papers by R. McNeill Alexander, John Horner, etc.	Presentation 10
Nov 5	Introduction to fossil 11 Discussion, Q & A, mini-lectures about your questions Presentation on Thursday	References will be suggested before class	Presentation 11
Nov 12	Introduction to fossil 12 Discussion, Q & A, mini-lectures about your questions Presentation on Thursday	References will be suggested before class	Presentation 12
Nov 19	Introduction to fossil 13 Discussion, Q & A, mini-lectures about your questions Presentation on Thursday	References will be suggested before class	Presentation 13
Nov 26	No classes		
Dec 3	Introduction to fossil 14 Discussion, Q & A, mini-lectures about your questions Presentation on Thursday	Read Montgomery 2012 microvertebrate manuscript	Presentation 14
Dec 10	Introduction to fossil 15 Discussion, Q & A, mini-lectures about your questions Presentation on Thursday	References will be suggested before class	Presentation 15
Dec 17	Final date for all work is Dec 19		Presentation 16 integrating all discoveries from the semester

Make-up Assignments

None without prior approval of instructor

Extra Credit

None

Late Work Accepted only with appropriate written excuse

Special Assignments

None

Classroom Citizenship

Respect should be shown at all times.

Student Conduct and Discipline The University of Texas System and The University of Texas at Dallas have rules and regulations for the orderly and efficient conduct of their business. It is the responsibility of each student and each student organization to be knowledgeable about the rules and regulations that govern student conduct and activities. General information on student conduct and discipline is contained in the UTD publication, A to Z. Guide, which is provided to all registered students each academic year. The University of Texas at Dallas administers student discipline within the procedures of recognized and established due process. Procedures are defined and described in the Rules and Regulations, Board of Regents, The University of Texas System, Part 1, Chapter VI, Section 3, and in Title V, Rules on Student Services and Activities of the university's Handbook of Operating Procedures. Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations (SU 1.602, 972/883-6391). A student at the university neither loses the rights nor escapes the responsibilities of citizenship. He or she is expected to obey federal, state, and local laws as well as the Regents' Rules, university regulations, and administrative rules. Students are subject to discipline for violating the standards of conduct whether such conduct takes place on or off campus, or whether civil or criminal penalties are also imposed for such conduct.

Academic Integrity The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrate a high standard of individual honor in his or her scholastic work. Scholastic dishonesty includes, but is not limited to, statements, acts, or omissions related to applications for enrollment or the award of a degree, and/or the submission as one's own work or material that is not one's own. As a general rule, scholastic dishonesty involves one of the following acts: cheating, plagiarism, collusion, and/or falsifying academic records. Students suspected of academic dishonesty are subject to disciplinary proceedings. Plagiarism, especially from the Web, from portions of papers for other classes, and from any other source is unacceptable and will be dealt with under the university's policy on plagiarism (see general catalog for details). This course will use the resources of turnitin.com, which searches the web for possible plagiarism and is over 90% effective.

Email Use The University of Texas at Dallas recognizes the value and efficiency of communication between faculty/staff and students through electronic mail. At the same time, email raises some issues concerning security and the identity of each individual in an email exchange. The university encourages all official student email correspondence be sent only to a student's U.T. Dallas email address, and that faculty and staff consider email from students official only if it originates from a UTD student account. This allows the university to maintain a high degree of confidence in the identity of all individuals corresponding and the security of the transmitted information. UTD furnishes each student with a free email account that is to be used in all communication with university personnel. The Department of Information Resources at U.T. Dallas provides a method for students to have their U.T. Dallas mail forwarded to other accounts.

Withdrawal from Class The administration of this institution has set deadlines for withdrawal of any college-level courses. These dates and times are published in that semester's course catalog. Administration procedures must be followed. It is the student's responsibility to handle withdrawal requirements from any class. In other words, I cannot drop or withdraw any student. You must do the proper paperwork to ensure that you will not receive a final grade of F in a course if you choose not to attend the class once you are enrolled.

Student Grievance Procedures Procedures for student grievances are found in Title V, Rules on Student Services and Activities, of the university's Handbook of Operating Procedures. In attempting to resolve any student grievance regarding grades, evaluations, or other fulfillments of academic responsibility, it is the obligation of the student first to make a serious effort to resolve the matter with the instructor, supervisor, administrator, or committee with whom the grievance originates (hereafter called "the respondent").

Individual faculty members retain primary responsibility for assigning grades and evaluations. If the matter cannot be resolved at that level, the grievance must be submitted in writing to the respondent with a copy to the respondent's School Dean. If the matter is not resolved by the written response provided by the respondent, the student may submit a written appeal to the School Dean. If the grievance is not resolved by the School Dean's decision, the student may make a written appeal to the Dean of Graduate or Undergraduate Education, and the dean will appoint and convene an Academic Appeals Panel. The decision of the Academic Appeals Panel is final. The results of the academic-appeals process will be distributed to all involved parties. Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations.

Incomplete Grades As per university policy, incomplete grades will be granted only for work unavoidably missed at the semester's end and only if 70% of the course work has been completed. An incomplete grade must be resolved within eight (8) weeks from the first day of the subsequent long semester. If the required work to complete the course and to remove the incomplete grade is not submitted by the specified deadline, the incomplete grade is changed automatically to a grade of F.

Disability Services The goal of Disability Services is to provide students with disabilities educational opportunities equal to those of their non-disabled peers. Disability Services is located in room 1.610 in the Student Union. Office hours are Monday and Thursday, 8:30 a.m. to 6:30 p.m.; Tuesday and Wednesday, 8:30 a.m. to 7:30 p.m.; and Friday, 8:30 a.m. to 5:30 p.m. The contact information for the Office of Disability Services is: The University of Texas at Dallas, SU 22PO Box 830688Richardson, Texas 75083-0688(972) 883-2098 (voice or TTY) Essentially, the law requires that colleges and universities make those reasonable adjustments necessary to eliminate discrimination on the basis of disability. For example, it may be necessary to remove classroom prohibitions against tape recorders or animals (in the case of dog guides) for students who are blind. Occasionally an assignment requirement may be substituted (for example, a research paper versus an oral presentation for a student who is hearing impaired). Classes enrolling students with mobility impairments may have to be rescheduled in accessible facilities. The college or university may need to provide special services such as registration, note-taking, or mobility assistance. It is the student's responsibility to notify his or her professors of the need for such an accommodation. Disability Services provides students with letters to present to faculty members to verify that the student has a disability and needs accommodations. Individuals requiring special accommodation should contact the professor after class or during office hours.

Religious Holy Days The University of Texas at Dallas will excuse a student from class or other required activities for the travel to and observance of a religious holy day for a religion whose places of worship are exempt from property tax under Section 11.20, Tax Code, Texas Code Annotated.

The student is encouraged to notify the instructor or activity sponsor as soon as possible regarding the absence, preferably in advance of the assignment. The student, so excused, will be allowed to take the exam or complete the assignment within a reasonable time after the absence: a period equal to the length of the absence, up to a maximum of one week. A student who notifies the instructor and completes any missed exam or assignment may not be penalized for the absence. A student who fails to complete the exam or assignment within the prescribed period may receive a failing grade for that exam or assignment. If a student or an instructor disagrees about the nature of the absence [i.e., for the purpose of observing a religious holy day] or if there is similar disagreement about whether the student has been given a reasonable time to complete any missed assignments or examinations, either the student or the instructor may request a ruling from the chief executive officer of the institution, or his or her designee. The chief executive officer or designee must take into account the legislative intent of TEC 51.911(b), and the student and instructor will abide by the decision of the chief executive officer or designee.

Off-campus instruction and course activities that are off-campus, out-of-state, or foreign are all subject to state law and University policies and procedures regarding travel and risk-related activities. Information regarding these rules and regulations may be found at www.utdallas.edu/BusinessAffairs/Travel_Risk_Activities.htm. Additional information is available from the office of the school dean. These descriptions and timelines are subject to change at the discretion of the professor.

