

Geology 3360 — Paleobiology  
University of Arkansas at Little Rock — Spring 2013

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## OVERVIEW

In this course, our primary goal is to understand the fundamental concepts and theoretical framework of paleontology. By the end of this course you should be able to: identify and classify the major groups of fossils; demonstrate knowledge of the stratigraphic distributions of the major groups of fossils; understand and know the major concepts, ideas, and vocabulary relevant to the study of ancient life; understand how the fossil record is scientifically studied; appreciate the impact that knowledge of the fossil record has had on evolutionary theory; and, apply a scientific approach to answer questions about ancient life.

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## CLASS & INSTRUCTOR INFORMATION

- Lecture Time & Location: Monday/Wednesday 1:40pm – 2:30pm, Earth Sciences 107
  - Lab Time: Monday/Wednesday 2:40pm – 4:10pm
  - Instructor: Dr. René Shroat-Lewis ([rashroatlew@ualr.edu](mailto:rashroatlew@ualr.edu))
  - Office: Friborough Hall 313
  - Phone: (501) 683-7743
  - Office Hours: I am typically in my office from 8am – 4pm, unless I am teaching. Feel free to swing by my office when I am there. You may also make an appointment.
  - Textbook: Benton & Harper: Introduction to Paleobiology and the Fossil Record. (Wiley-Blackwell: ISBN 978-1-4051-4157-4)
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## TAKE 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. Lewis (in class, after class, over email, etc.) for an explanation or clarification.
  - 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.
  - Do not send me an e-mail written the same way you might write a text message. Construct proper sentences and spell out words. I will not reply to these text message-like e-mails.
  - I do not answer emails after 5pm on weekdays. Sometimes I check my emails on the weekends, most times I don't.
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## ASSESSMENT

- A credit is defined as **three hours** of work per week. Count on spending two hours outside of class to assimilate an hour's worth of lecture properly. Cramming just does not work. You're better off getting a good night's sleep before class.
- I do not curve grades. I also do not *give* grades. **Your final grade in this class will be based on what you have earned.**
- Tests will draw from material covered during lectures and from assigned readings.

## **POINT DISTRIBUTION**

<b>Exam 1</b>	<b>100 points</b>
<b>Exam 2</b>	<b>100 points</b>
<b>Final Exam</b>	<b>100 points</b>
<b>Essay</b>	<b>100 points</b>
<b>Total</b>	<b>400 points</b>

## **GRADING SCALE AND GRADES**

<b>A = 360-400 points</b>
<b>B = 320-359 points</b>
<b>C = 280-319 points</b>
<b>D = 240-279 points</b>
<b>F = Less than 240 points</b>

## **MISSED TESTS AND ASSIGNMENTS**

- Except in cases of serious illness (supported by a doctor's note) or the death of a loved one, make-ups of exams, labs, and other course work WILL NOT be permitted.
- No late work will be accepted.

## **EXTRA CREDIT**

Besides the *possibility* of one to several extra credit questions on each of the exams, no extra credit work will be given or accepted.

## **ATTENDANCE**

University students are adults. Therefore, lecture attendance is your responsibility. However, it is highly unlikely that you will be able to perform well in this course without attending all lectures. As well as further explanation and emphasis of themes discussed on the PowerPoint presentations, there will be many points discussed in class that are not on the presentations. I strongly recommend that you attend all class sessions. You have spent a lot of money enrolling in this course – get your money's worth by going to class.

## **ESSAY**

Each student will complete an original research paper on the subject of their choice. This assignment is designed to encourage you to delve into the literature in your particular field of interest. In addition to exploring a new topic, the paper gives you a chance to be graded on something other than your performance on exams. The final paper should not be a "book report." I expect you to compare and contrast a variety of opinions on your selected subject. In order to do this you will need to consult multiple sources, all of which should be research papers in scientific journals. Your paper **must be based on at least 5 journal articles**, not encyclopedias, textbooks, websites, or Wikipedia! The latter may be consulted only to provide supporting graphics or supplement understanding of technical terms. The source of these illustrations should be indicated in the figure caption (e.g. from Jones, 2001). You may also use images from the web, but include the site information.

**The following journals are good sources and many of them can be accessed online:**

- **Semipopular journals:** Scientific American; American Scientist.
- **Research journals:** Paleobiology; Journal of Paleontology; Lethaia; Science; Nature; Paleoecology, Palaogeography, Palaeoclimatology; Historical Geology; Palaios.

The essay should have introduction and conclusion sections. All sources of information must be cited in the body of the text and must include a bibliography using MLA style. In-text citations consist of the author's name plus the publication date e.g. Jones (2001) or (Jones, 2001). To help with end-of-the-semester panic, I will offer an **optional** review of anyone's first draft, up to one week before the due date. Revisions offer you an opportunity to correct oversights and hone your science-writing skills.

**Length:** The text (excluding title page and references) of the essay should be 10-12 pages (double spaced) in length; 12 point font; margins should be one inch.

**Check that your essay is free from basic grammatical, spelling and typographic errors before handing it in!**

**Essay topics:** The essay can be on *any* topic in the broad field of Paleobiology. In order to assist you in choosing a subject, a list of potential topics is included below. However, you are free to come up with your own topic if none of these are appealing. It is a good idea to clear your essay topic with me prior to writing.

1. Mass extinctions at the end of the Cretaceous Period
  2. Mass extinctions at the end of the Ordovician Period
  3. Mass extinctions at the end of the Devonian Period
  4. Mass extinctions at the end of the Permian Period
  5. Ecology and physiology of a particular animal group
  6. Fossil record of life in the Precambrian
  7. Composition and significance of the Cambrian Burgess Shale and/or Chengjiang faunas
  8. Composition and significance of the Ediacaran fauna
  9. Geological history of reef-building organisms
  10. Changes in the composition of marine communities during the Phanerozoic Era
  11. Trace fossils as environmental indicators
  12. The “Cambrian Explosion” of life in the oceans
  13. Taphonomy of invertebrate fossil assemblages
  14. Discussion of some aspect of paleontology methodology
  15. Predation in the fossil record
  16. Extinction and environmental change in the modern world
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## YOUR EXPECTATION OF ME

- You should expect an instructor who cares about teaching and who makes an honest effort to engage your interest in the subject.
- You should expect to be treated fairly as students, to not be ridiculed or made to feel embarrassed in class.
- You should expect graded work to be evaluated in a timely fashion, because coursework loses meaning without regular evaluation.
- You should expect the material covered to be interesting and challenging, because you are adult students capable of learning all types of new material.
- You should expect relevant questions raised during the class period to be addressed at that time.

## MY EXPECTATIONS OF YOU

- I expect students who come to college to learn and who expect that it takes some effort to learn something well.
- I expect to be treated fairly as your teacher; you should give me your attention in class, and respect the other students in this class who have come here to learn. Anything (newspapers, smart phones, texting, etc.) that distracts you or others in the classroom is downright rude.
- I expect you to arrive for class on time, ready and eager to learn, and to not leave early.
- I expect that you will keep up with the course materials between classes with such activities as homework, taking notes, reading the chapters assigned, discussing the material with classmates, and preparing questions to ask me in, and out of, class.

- I expect you to answer questions that I ask.

## MY TEACHING PHILOSOPHY

- You are responsible for your own education, particularly now that you are in college. I am a guide, a helper, if you will. College is what ***you*** make of it.
- I am young enough to remember all the excuses and tricks, yet old enough to refuse to accept them. If you are going to use an excuse with me, be honest and be early, or be prepared to be sorely disappointed.
- The scientific thought process consists of four basic steps: *observe, think, explain, discuss*. Use of this thought process will be a lifelong endeavor.

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## CLASS POLICIES

- Dropping the course: Should you decide to drop this course, it is **your responsibility to do so**.
- Participation: Please feel free to ask questions at any time. I encourage you to contribute relevant comments to our class discussions. We will all learn more if there is active participation from all.
- Electronic gadgets: **All cell phones, pagers, i-Pods, and other electronic gadgets must be turned off during class**. Text messaging, Facebooking, checking out YouTube, etc. is **NOT allowed in class**. If you use a laptop, it needs to have class related material or notes up at all times. If you anticipate an important phone call, you must inform me **before** class begins, turn your ringer off (set phone to vibrate), and sit near the door so you will not disrupt the class. **You will be asked to leave if you fail to comply**.
- Behavior: Classroom behavior should be conducive to a positive learning environment. Students are expected to adhere to the Code of Conduct as outlined in the Student Handbook. Please treat all class members with respect and be thoughtful in your own contributions to the class. You will receive one warning concerning inappropriate behavior before you will be asked to leave the class. Students should read and understand UALR's Academic Misconduct Policy, which can be found in the student handbook or at: [http://ualr.edu/law/files/2010/12/code\\_studconduct.pdf](http://ualr.edu/law/files/2010/12/code_studconduct.pdf)
- Academic Honesty (READ THIS): As a college student, you are expected to honor and abide by academic integrity. This means doing your own work. **Cheating and plagiarism are not allowed** in any aspect of this course (or any other). Plagiarism is using (either verbatim or closely) the language, words, or thoughts of another to represent your own original work. If I know or suspect you are cheating or plagiarizing, you will receive a zero for that assignment. A second offense will result in an "F" for the course and your name will be referred to the Dean of Student Services for possible disciplinary action.
- Inclement weather policy: When UALR is closed, radio and television stations in central Arkansas will be notified through the Office of Communications. If there is no announcement, students should assume the university is open. For a full explanation of the UALR inclement weather policy, please see the following: <http://ualr.edu/policy/index.php/weather/>

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## STATEMENT ON DISABILITIES

Your success in this class is important to me, and it is the policy and practice of the University of Arkansas at Little Rock to create inclusive learning environments consistent with federal and state law. If you have a documented disability (or need to have a disability documented), and need an accommodation, please contact me privately as soon as possible, so that we can discuss with the Disability Resource Center (DRC) how to meet your specific needs and the requirements of the course. The DRC offers resources and coordinates reasonable accommodations for students with disabilities. Reasonable accommodations are established through an

interactive process among you, your instructor(s) and the DRC. Thus, if you have a disability, please contact me and/or the DRC, at 501-569-3143 (V/TTY) or 501-683-7629 (VP). For more information, please visit the DRC website at [www.ualr.edu/disability](http://www.ualr.edu/disability)

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