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Dr. Homer Montgomery Office: FN 3.308A 972.883.2480	Britney Pitts Assistant	Office hours: Fall and Spring (T 8:30-9:30; W 8:30-11) Other times by appointment or just drop by my office. **If in doubt about anything, contact us.**

COURSE DESCRIPTION AND GOALS

Basis of Evolution provides wide-ranging discussions of the unifying theory of the origin and modification through time of all organisms. Pertinent history, the fossil record, evolution as concerns the human experience, processes and mechanisms, and a look at the future are major topics. We will engage in discussions of natural and sexual selection, paleontology, island biogeography, evolutionary psychology, memes, and philosophy rather than discussions of genetics or cellular biology. Many topical, engaging, and controversial issues will be encountered. This course is specifically designed for non-majors. NATS 3330 is usually associated with a Humanities course or includes a Humanities strand. An optional trip to England is conducted in May of each year wherein we discuss evolutionary topics at locations including Darwin's house, the British Museum, etc. Contact Dr. Montgomery for details. NATS 3330 is a WebCT-assisted course. Active participation is required in order to make a top grade. Class meets on Tuesdays and Thursdays. Attendance in class is highly recommended. Questions are presented on WebCT and cover information in the linked material on the syllabus as well as material discussed in class. Students are encouraged to participate in field activities conducted during one weekend in Galveston. Those students who work or who cannot get away for the weekend will be offered an alternative project to be completed in lieu of the trip. Required field tips forms: www.utdallas.edu/dept/sci_ed/Homer/forms/forms.html

SYLLABUS

Class notes, readings from assigned books, and pertinent web sites for each week are linked on WebCT. You may need to look up some terminology in the notes (Glossary of Terms). There are several good web sources for this task. Google seems to be the best search engine for this. You might also want to augment the notes with online sites and post the URLs on the WebCT discussion board. Remember to stick with reputable sites such as those produced by museums, universities, and the like.

PREREQUISITES

None

Week of	Topic	Assignments (complete BEFORE class)	
Aug 18	Charles Darwin and the H.M.S. Beagle Guest lecture on Thursday: Dr. Kathy Downey	Chance and Design lecture PBS Definition (follow the *Next Topic* links	
Aug 23	Geology, plate tectonics, fossil record	Earth Made for Life Lectures	Jones, Ch. 1-8
Aug 30	Natural selection Micro- and macroevolution, speciation **Quiz in class on Thursday**	Microevolution (follow the *Next Topic* links) Macroevolution (follow the *Next Topic* links) Speciation (follow the *Next Topic* links)	Jones, Ch. 9-12
Sep 6	Sexual selection Histocompatibility project introduction	Dr. Tatiana lecture PBS PBS	Miller

		PBS The Mating Game Sex	
Sep 13	Patterns of evolution Form and function **Quiz in class on Thursday**	Cladistics Mechanisms (follow the *Next Topic* links) Patterns (follow the *Next Topic* links)	
Sep 20	Pace, Diversity, Complexity, Cooperation	X Chromosome lecture Berkeley (follow links) Cooperation (work through these scenarios)	
Sep 27	Evolution of Intelligence - Feb 24	Intelligence (pdf)	Dawkins, Ch. 1-6
Oct 4	Nature of science, a universe without design **Midterm Exam**		Dawkins, Ch. 9-10
Oct 11	Island biogeography	Evolution Suitcase Berkeley Oxford Case and Cody Hawaii (read article)	Whittaker
Oct 15-16	Field trip to Galveston (additional details will be provided in class)		Whittaker
Oct 18	Red Queen **Quiz in class on Thursday**	PBS	Ridley, Ch. 1-10
Oct 25	Primate evolution **Optional (but highly recommended) paper copies of rough drafts of term paper due no later than 5 pm in my office**	Becoming Human Work through the Documentary	Miller, review
Nov 1	Human evolution	Take this test Caveman lecture	Wells
Nov 8	Human evolution		Blackmore
Nov 15	A look at the future Nov 17-Presentations and discussions of term paper research **All term papers due by midnight at: www.turnitin.com and on WebCT**	Human Evolution lecture	
Nov 22	**Final Exam**		

BOOKS (required)
Blackmore, S., 1999, *The Meme Machine*, Oxford University Press
Jones, S., 2000, *Darwin's Ghost*, Ballantine
Miller, G., 2001, *The Mating Mind: How Sexual Choice Shaped the Evolution of Human Nature*, Anchor
Ridley, M., 1993, *The Red Queen*, Penguin
Wells, S., 2003, *The Journey of Man*, Princeton University Press
Whittaker, R., 1998, *Island Biogeography*, Oxford University Press

BOOKS (optional)
Darwin, C, 1859, *On the Origin of Species*

BROWSER UPDATES AND OTHER SOFTWARE

difficulties. Check the software download site at UTD or upgrade directly.

NOTES
There is certainly no need to print out the notes. You might consider downloading the notes to your computer.

You may need to look up some terminology in the notes. There are several good web sources. Google seems to be the best search engine for this. You might also want to augment the notes and book with online sites. Do stick with reputable URLs such as those produced by museums, universities, and the like. There are many.

QUIZZES and EXAMS
Question(s) are presented on WebCT each week. All are open-book. Some of the questions are rather tricky and thought provoking.
Exam 1 and Exam 2 are largely composed of a collection of questions similar to those you have seen each week. Exams are comprehensive.

TERM PAPER
Concept
In no way should a term paper be thought of a weighty tome of facts or descriptions. You must introduce a concept, show data, and offer logical interpretations.
Your paper must be on a subject from this course. You might want to choose some discovery in the science news. The science link at news.bbc.co.uk is a good source for ideas. Use the search window and you will get lots of the latest discoveries.

I would strongly advise running your ideas past me before launching into a misguided effort. Do not make the mistake of hurting your grade by choosing inappropriate topics. A paper arguing evolution (science) vs. creationism (theology) is not acceptable.

Get started with each paper as early as possible in the semester. I will certainly be happy to review your paper for you if you get it to me before the cutoff dates in the syllabus. My review does not take into account what TurnItIn may turn up as direct material from the web. Note the cutoff dates for review.

Present data first and interpretation after.
Use only the metric system.
Do not include any illustrations.

Format
Put these headings in your paper:

1. TITLE (do not include a title page)
2. INTRODUCTION (what is the purpose of your paper?, what is your hypothesis?, what are you going to tell us?)
3. body of your paper with whatever SUBHEADINGS you choose
4. CONCLUSIONS (sum up succinctly, what did you tell us)
5. REFERENCES (see detailed instructions below)

Length of papers (use the Word Count utility)
The term paper must be between **3,000 and 5,000 words** (approximately 6 to 10 double-spaced pages in 12 pt Times)
You may incur a penalty for not falling in this range. A tip: more words frequently does not make the paper better.

Term paper grading rubric
1. Well presented thesis posing thoughtful scientific problem(s)
2. Evidence of understanding of the concepts and pertinent literature
3. Well-reasoned conclusions compatible with your arguments
4. Top marks will be earned for papers that both miss none of the important research and that also propose (even minor) philosophical and/or analytical innovations
5. Did you take a solid scientific position and defend that position well? (Make strong statements and defend them well.)

TurnItIn does not automatically grade your papers. I do this one at a time, a process that can take a few days. No paper will be returned to you. It remains in the reference archive at TurnItIn.com. Log in to the term paper section of WebCT and you can view my comments. You can also access your TurnItIn report at that site.

Due dates and procedures (rough drafts and final editions)
Rough drafts and term papers are due on the dates indicated in this Syllabus. No drafts or papers will be accepted after posted deadlines without talking to me in advance of the deadlines. A good reason will be necessary.
Rough drafts: must be given to me in class, left it in my office, or mailed to my office. I will edit your paper draft within a day or two and put it in the box outside my office (FN3.308A).
Final editions: The only way to receive credit for your paper is to follow the procedure below. Your paper must be uploaded to TurnItIn and to WebCT. TurnItIn and WebCT are programmed to stop accepting papers after the indicated day. Do not give me a hard copy of your edited papers. Do not e-mail me your paper.

COURSE GRADE (500 possible points)
Quizzes: 60 points (mostly short answer with a few multiple choice)
Histocompatibility project: 40 points
Exam 1: 60 points
Exam 2: 140 points (comprehensive)
Term Paper: 200 points

FIELD TRIP
We travel to Galveston (Saturday through half day Sunday) to discuss island biogeography, allopatric speciation, etc. in a most appropriate setting (for Texas, anyway). The cost is covered by your field trip fee.

INCOMPLETES
I do not give incompletes without proof of major medical or similar serious problems. I will require an explanatory letter for my file. **STATEMENTS**
In this course students will conform to the University rules for academic honesty. For further information see http://www.utdallas.edu/student/slife/dishonesty.html Information from this course can be provided to students with disabilities through University services. For more information see http://www.utdallas.edu/student/slife/hcsvc.html