# Biology 131 "Introduction to Evolution"

**Instructor**: Dr. Debbie Schlenoff
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Office: 15A Klamath
Office hour: Wednesdays 2:30-3:30 and by appointment

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**Website:** All course documents will be posted on the **Blackboard** Course Website.

**Required Text:** Kardong, Ken. 2008. An Introduction to Biological Evolution, Second Edition. McGraw Hill. The text is on reserve at the science library.
In addition, you will be responsible for reading the documents posted on Blackboard.

## Course Goals

We will explore fundamental concepts in evolution such as natural selection, speciation, extinction, adaptations in living organisms, and human evolution. We will examine human-caused evolution including the impact of humans on the evolution of disease causing organisms. In addition, it is important for all citizens to be scientifically literate, whether or not they are in a science profession. Part of science literacy is the ability to find, evaluate, and communicate or act on scientific information and issues. We will practice these skills in this course.

## Course Format

*Lectures* Monday, Wednesday. 4:00-5:20, 282 Lillis

You will be responsible for all material presented in lecture.
The course schedule is tentative and subject to change; adjustments will be announced in class.
Lecture outlines containing the text of the PowerPoint slides are available on Blackboard. Most students find it useful to print out the outlines before class to take notes on without having to try and write down everything on the slide. Please keep in mind that these are merely outlines for your convenience in taking and organizing notes. They are not meant to serve as a complete set of lecture notes for studying for the exams. *There is a strong positive correlation between attendance in lecture and class grades*.

Occasionally, there are group and writing activities that occur during lecture. It is our expectation that you participate in these activities. Your active involvement promotes understanding of the material and preparation for exam questions.
I appreciate feedback on the lectures. Questions are welcome and encouraged during and after lecture, during office hours, and via e-mail.

*Discussion Sections* Tuesdays, 111 Huestis
Participation in discussion sections is a required part of this class and will count toward your final grade. Sections will provide an opportunity to question and discuss many of the topics presented in the readings and lecture. In addition, hands-on activities will allow us to ask questions about natural selection and evolution. Much of discussion will be devoted to preparing to research and write a project paper and to developing a group poster presentation.
**Changing Discussion Sections:** Students are expected to attend the section in which they are registered. If you need to change your discussion section time, please do not try to drop and add back the class with the new section. This will close you out of the class. Use the EXCHANGE option on the Duckweb menu or contact your instructor.

**Grading Evaluation:**
21% Midterm Exam 1
21% Midterm Exam 2
25% Final Exam

9% Problem sets (3 problem sets at 3 pts each)
21% Project (14% Paper + 7% Poster Presentation)
3% Discussion Section Participation

**Exams:** There will be three exams: two midterms and one final exam. Exams will include material from the lectures, readings, discussion sections and the film clips shown in class.
**Midterm Exams** will be mixed format (short answer, multiple choice, short essay). Details will be announced in class.
The **Final Exam** will be multiple choice and cumulative.
Scantrons will be handed out in class; please bring a #2 pencil to all exams.
***Make-up Exam Policy:*** **There will be NO make up exams** except in the case of a documented severe medical condition or other extreme documentable emergency. It is your responsibility to contact the instructor as soon as possible.
Note the date and time of the final exam. There will be no early exams!

**Project:** The project has two parts (see syllabus for due dates):
(1) a two to three page Mini-term Paper about a topic in evolutionary biology
(You will choose one of the assigned topics during the first week of classes.)
(2)a Group Poster Presentation
Information about the project is posted on Blackboard. Please read these documents carefully and ask if you have any questions.

**Problem Sets** get you thinking about the material and allow you to focus and organize your studies. They serve as study guides and are good preparation for taking the exam. The answers to the Problem Sets will be posted on Blackboard after the due date. We recommend you read through these in preparation for the exams.
Problem sets will be posted and submitted through Blackboard by the due date noted in the syllabus. Enter your answers in the textbox that appears when you open the assignment link. You do not need to copy and paste the text of the questions themselves.

**Plagiarism will not be tolerated.** You are expected to do your own work on homework assignments, projects, and exams. When writing up your homework assignments and papers, you are expected to paraphrase (use your own words). When writing up your project papers, give credit to the sources of your information.
You are encouraged to discuss ideas with each other and to study together, but don't copy someone else's work, or allow them to copy yours.
Academic dishonesty is a serious offense. Please refer to the University of Oregon Student Conduct Code by which all students are expected to abide.

**Classroom Etiquette:**
1. Please arrive on time.
2. Please don't leave early. This is very disruptive to everyone. In turn, I will not lecture beyond 5:20. If you have an unusual circumstance and must leave early, then please sit near the exit so you can leave unobtrusively.
3. Please refrain from engaging in activities that could be distracting to your fellow students.

- We ask that you not converse with your neighbors when someone else is talking (instructor or classmate) as this interferes with the ability of other students to learn.
- Please turn your cell phones off during lecture.
- Please use computers during lecture only to take notes. Other laptop activities have been reported to be distracting to your fellow students.
- Please do not pack up your things early as this makes it difficult for students around you to hear the end of the lecture.

If you are having a problem that interferes with your ability to do the work in this class, please tell us about it as soon as you can.

The University of Oregon is working to create inclusive learning environments. Please notify me if there are aspects of the instruction or design of this course that result in barriers to your participation. You may also wish to contact Disability Services in 164 Oregon Hall at 346-1155 or disabsrv@uoregon.edu

***Academic Deadlines***

| **Deadline** | **Last day to:** |
|---|---|
| January 2: | Process a complete drop (100% refund, no W recorded) |
| January 9: | Drop this course (100% refund, no W recorded) |
| January 9: | Process a complete drop (90% refund, no W recorded) |
| January 10: | Drop this course (75% refund, no W recorded; after this date, W's are recorded) |
| January 10: | Process a complete drop (75% refund, no W recorded; after this date, W's are recorded) |
| January 12: | Add this course |
| January 12: | Last day to change to or from audit |
| January 16: | Withdraw from this course (75% refund, W recorded) |
| January 23: | Withdraw from this course (50% refund, W recorded) |
| January 30: | Withdraw from this course (25% refund, W recorded) |
| February 20: | Withdraw from this course (0% refund, W recorded) |
| February 20: | Change grading option for this course |

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| | **LECTURE TOPICS**<br>**Exam and Problem Set Due dates** | **DISCUSSION SECTION** | **READING**<br>**Kardong** |
| **1** | **1/3 L:** Introduction & an example of why you should care: drug resistance<br>**1/5 L:** Studying Evolution | **1/4** Introduction. Fast plants- plant seeds. Overview of Project Topics. | pp. 3-14, 313-316<br>pp.99-120 |
| **2** | **1/10 L:** More human-caused evolution: Artificial Selection. Genetics.<br>**1/12 L:**Genetics: Heredity, Mutation and Genetic Variation | **1/11** How to locate your references that are due next week. Intro Genetics. | pp.123-128<br>pp.41-59 |
| **3** | **1/17 No class**<br><br>**1/19 L:**Natural Selection &Adaptation<br><br>***Problem Set 1 due on Blackboard by Thursday, 1/20, 5:00pm*** | **1/18** Fast Plants- measure & select. Genetic problems. ***Submit*** *potential* ***References*** including at least two peer-reviewed sources. | pp.145-155<br>pp.128-134 |
| **4** | **1/24 L:**Sexual Selection<br><br>**<u>1/26 MID-TERM I**</u>** | **1/25** Scientific Papers. READ assigned paper posted on Blackboard. Review. | *pp.117, 219-2*<br><br>Blackboard pa |
| **5** | **1/31 L:**Mechanisms for Change<br><br>**2/2 L:**Species and speciation I | **2/1** Selection and drift activity. | pp 134-141<br>pp 159-175 |
| **6** | **2/7 L:**Species and Speciation II<br><br>**2/9 L:** Co-evolution<br><br>***Problem Set 2 due on Blackboard by Thursday, 2/11, 5:00pm*** | **2/8** Phylogenies. ***PROJECT PAPER DUE IN SECTION!*** | 320-323,330-<br>pp.177-194 |
| **7** | **2/14 L:** Evolution of Social Behavior<br><br>**<u>2/16 MID-TERM Exam II**</u>** | 2/15 Review. Poster Planning. | pp 207-214 |

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| **8** | **2/21 L:**Time, Fossils, and Fossilization<br><br>**2/23 L:**Extinctions and Their Consequences | 2/22 **Work on posters. Fast Plants-plant next generation** | pp 19-39<br>pp227-246 |
| **9** | **2/28 L:**Human Origins I<br>**3/2 L:**Human Origins II | **3/1 Posters due. POSTER PRESENTATIONS!** | pp249-268<br>271-84,290 |
| **10** | **3/7 L:**Evolution and the Flu<br>**3/9 L:**Humans and Evolution<br>***Problem Set 3 due on Blackboard by Thursdayy, 3/10 at 5:00 pm*** | **3/8 Discussion:** Review. Fast Plants-the second generation | pp302-316 |

## FINAL EXAM: 3:15 (15:15) Monday March 14