

Biology 203 - Evolution
Fall 2002
Kerry S. Kilburn, Ph.D.

OFFICE AND OFFICE HOURS:

MGB 302-A, phone (voice mail) 683-5680; e-mail kkilburn@odu.edu or kkilburn@infi.net, <http://www.lions.odu.edu/~kkilburn/home.htm>

Office hours: MWF 10:30 - 11:30 a.m. and by appointment

TEXT (REQUIRED):

Freeman and Herron, 2/e. *Evolutionary Analysis*.

OTHER RESOURCES:

This course has a web site (<http://www.lions.odu.edu/~kkilburn/evohome.htm>). It includes links to course materials (lecture notes in both Word Perfect and Adobe Acrobat formats; on-line syllabus and study guide) and to other resources relevant to the course. Prentice-Hall also maintains a web page for the text book at <http://www.prenhall.com/freeman>.

COURSE OBJECTIVES:

Evolution, in its broadest sense, is the fundamental unifying theory in biology; as such, its scope in both depth and breadth is arguably the greatest in all the biological sciences. In this course, you will be introduced to the major principles of evolutionary biology, beginning with a brief history of evolutionary thought and working through the fundamental concepts of evolutionary genetics, adaptation and natural selection, the origins of biological diversity, and paleobiology and macroevolution.

Although the primary emphasis will be on major concepts, you will also be expected to gain some understanding of the methods used in evolutionary investigations: the kinds of observations and experiments that are used, the facts that are observed and inferred, and the kinds of reasoning by which those facts are used to develop and test hypotheses.

EVALUATION:

Your grade in this course will be determined by your performance on the weekly quizzes and other assignments, three lecture exams, and the final exam, as follows:

1. Lecture exams: Three lecture exams worth 100 pts. each will be given. Exams will assess your understanding of facts and concepts as well as your ability to apply facts and concepts to novel situations. Exam dates are indicated on the course schedule and will be taken at the Learning Assessment Lab ("Testing Center" in the Gornto building; 683-3170; you are responsible for checking the lab's hours and the latest times you can begin the exam). You will need to provide your own scantrons and number 2 pencils for all exams. I will drop the lowest of the three lecture exam scores. No makeup exams will be given unless you have an ongoing, irreconcilable conflict with

the exam dates and/or a legitimate reason for missing two exams.

2. The final exam will be worth 100 points and will be partially comprehensive. It may not be used as one of your “dropped” exam scores. The general format will be the same as for the lecture exams; you will need a scantron and number 2 pencil. The final will be given in the classroom on **Friday, 13 December, at 8:30 a.m.** If you miss the final exam for a legitimate reason (illness, family emergency, or inability to travel due to weather), you must notify me the day of the final and arrange to make up the exam within 24 hours.

3. Weekly quizzes will be given at the end of the period on Fridays and will be worth 5 points each. The questions (and format) will be similar to those on the lecture exams. Short writing assignments based on outside readings will also be assigned periodically and graded as quizzes. I will use your top 10 quiz scores (quizzes + assignments) in computing your final grade. No makeup quizzes or writing assignments will be given.

GRADING:

<u>Point distribution</u>	<u>Grading scale</u>
“midterms” (3 @ 100 pts ea: low score dropped) = 200	90 - 100% = A
final exam (1 @ 100 pts) = 100	80 - 89.9% = B
<u>quizzes (10 @ 5 pts. ea) = 50</u>	70 - 79.9% = C
Total = 350 pts.	60 - 69.9% = D
	below 60% = F

I do not grade on a curve, nor do I provide extra-credit assignments. I may, but do not guarantee to, adjust exam scores if I feel that an exam is unreasonably difficult or unfair. If a student receives an anomalously low score on a single exam, I reserve the right (but do not guarantee) to weigh that exam less heavily than others when computing the final score. If, at the end of the semester, a student’s grade falls on a “borderline”, I reserve the right to take improvement, effort, and class participation into account in determining your final grade.

I reserve the right to use plus/minus grades for students whose grades fall on grade borderlines, but such use will not result in a lower grade than indicated by the scale above (a 90% will result in an A, not an A-, e.g.).

In keeping with University regulations, grades of Incomplete (I) will be given only in exceptional circumstances beyond the student’s control (such as illness or injury), and only after the student has completed 80% or more of the course requirements.

HONOR CODE:

By taking this course, you agree to adhere to Old Dominion University’s honor code. Cheating on exams, plagiarism in written work, and failing to participate fully in group work will not be tolerated; infractions will be dealt with according to University policy.

EXPECTATIONS:

I do not use attendance in calculating your grade. Most students will find, however, that missing numerous classes will hurt their grades. I expect you to arrive in class promptly and to be ready to learn when you arrive. If I find that late arrivals are consistently disrupting the class, I will take appropriate action.

Cell phones and pagers should be turned off while you are in class. You should refrain from any activity that creates noise and disrupts the attention of the students sitting around you.

You should plan on spending a minimum of three hours out of class for every hour you spend in lecture preparing for this class. That time includes skimming each section of the text before it's covered in class, reviewing and/or rewriting lecture notes, re-reading text material in depth, and preparing questions over any material with which you need additional help. You may also need additional time to prepare for exams. This is not a formula for receiving an "A" in the course -- remember that your grade is based on demonstration of learning, not on time or effort.

IF YOU ARE EXPERIENCING DIFFICULTY:

If you are having any difficulty -- with specific course content or with anything else I can help with -- please don't hesitate to ask for my help. Remember also that you have access to a variety of student services on campus; I'm more than willing to help you locate those as necessary.

IF YOU HAVE ANY SPECIAL NEEDS:

Please inform me as soon as possible of any special needs you might have.

CHANGES:

I reserve the right to make reasonable changes to the syllabus following timely notification of the students.

HELPFUL HINTS:

For most students, the best way to maximize academic performance is to develop a consistent, regular program of preparation, review, and study and to ***STICK WITH IT.*** That means setting aside specific times each week to "preview" upcoming material from the text and to review previous material from the text and lecture. With a regular, consistent study program, test preparation becomes much more effective and much less traumatic.

Although none of the strategies included here will guarantee your success in the course, they have proven helpful to many of my students in a variety of classes. You might consider trying several of the following until you work out the study style that works best for you.

1. *Tape the lectures* and listen to them in the car, at home, etc. for review.
2. *Ask questions* in lecture and during my office hours.
3. *Rewrite your lecture notes*, filling in details and concepts from the text.

4. Ask questions in lecture and during my office hours.
5. Test yourself by making up questions and answering them aloud or in writing.
6. Ask questions in lecture and during my office hours.
7. Use flash cards to study vocabulary whenever you've got a few minutes.
8. Study in a group; take turns explaining material to each other.
9. Ask questions in lecture and during my office hours.
10. Come to office hours any time you have a question or want help reviewing.

E-MAIL, WEB, BULLETIN BOARD:

The web offers a number of resources that you may find valuable in this course, some of which I may assign as required reading. If you do not have web access from home, you must plan to use the computers in the labs around campus to complete those assignments.

Although we are attempting to enter the computer age, the class bulletin board is the kind made of cork and mounted in the third-floor hallway down from my office. I will post information there throughout the semester; please be sure to check it regularly. You may also use the board to set up study groups, communicate with classmates, etc., as long as you get permission from me.

I'm always looking for new additions to the website; if you have suggestions, please let me know!

TENTATIVE SCHEDULE

Week	Date	Topics	Text
1	8/26	Introduction to evolutionary biology	1
2	9/2	The history of evolutionary thought	
3	9/9	The evidence for evolution	2
4	9/16**	**EXAM 1 9/19 ; Darwinian natural selection	3
5	9/23	Mutation and genetic variation	4,
6	9/30	Selection and mutation as mechanisms of evolution	5
7	10/7**	**EXAM 2 10/10 Migration, drift, and non-random mating	6
8	10/14	Fall break (no class M 10/14); Quantitative genetics	7
9	10/21	Evolutionary analysis of form and function	8
10	10/28	Sexual selection	9
11	11/4	Mechanisms of speciation	12
12	11/11	Reconstructing evolutionary trees	13
13	11/18**	**Exam 3 11/18 ; Human evolution	16
14	11/25	TBA; Thanksgiving holiday (no class W or F)	
15	12/2	TBA	
		<i>FINAL EXAM – FRI 12/13 at 8:30 a.m.</i>	