

**Evolution - BSC 305  
Spring 2003**

**The course**

3 credit hours

*Day and Time*– Tuesday and Thursday 8:00-9:15 a.m.

*Where*– JST 210

*Prerequisites* – BSC 110 or equivalent; BSC 201 recommended and GLY 103 useful

*Instructor*– Brian Kreiser

*Office*– JST 409; phone - 266-6556

*Office Hours*– MWF 11:00-12:00 and by appointment.

*Email*– You can reach me through the WebCT email system.

*Text*– Evolutionary Analysis, 2<sup>nd</sup> ed. S. Freeman and J.C. Herron. 2001. Prentice Hall, Inc.

*Websites*–

I have prepared a supplement for this course using WebCT. WebCT is where you will take your quizzes and find my lecture notes. See attached handout for details.

The publisher also maintains a website for this textbook at <http://www.prenhall.com/freeman>.

**Background**

Why study evolution? The answer to this question is best summarized by a quote from Theodosius Dobzhansky, “Nothing in biology makes sense except in the light of evolution.” The concept of evolution is integral to all aspects of biology. Building a foundation of knowledge about evolutionary processes will enrich your perspective in any other biology class you might take whether it be ecology or developmental biology. The goal of this class is to introduce you to the major principles of evolutionary biology. Major theoretical topics will be addressed, and in addition you will also be exposed to the kinds of experimental methods that evolutionary biologists typically employ. The textbook is set up with this sort of approach in mind as many chapters deal specifically with formulating and answering various questions common in evolutionary biology.

**Expectations**

*Exams*— Exams will primarily be short answer and discussion. Not only will you be required to understand the facts, but I will expect you to be able to apply your knowledge. There are a total of 4 exams (3 in class exams and the final exam), which will count towards 90% of your grade. However, only your highest 3 exams will be included in your average. If you take all 4 exams you will have the option to drop your lowest exam score. Thus, if you take all 3 in class exams and are happy with your scores, should you so desire, you may skip the final exam. I will post a final point distribution before the day of the final so that you may determine what letter grade will correspond to your numerical score. Exams will be given on Thursdays (see Class Schedule for dates). The material that I cover in lecture on the Tuesday prior to the exam **will be covered**

on the exam. The final exam will be cumulative but with an emphasis on chapters covered since the 3rd exam.

*Quizzes (WebCT)*– There will be a total of 11 quizzes on WebCT throughout the semester (check the Class Schedule). Quizzes will be due by 5 p.m on Mondays and will cover material from lecture the week before. Furthermore, there may be one or two questions which will preview material to be covered during that week. The average of your best 10 quizzes will count for 10% of your grade.

The web quiz is not intended to be a group effort, but you are welcome to use your notes and textbook. The purpose of these quizzes is to encourage you to keep up with the material and prepare ahead of time. While the quizzes may seem time consuming at first, they will help you keep up with the material.

*Homework problems*– I will typically assign homework problems from each chapter. These problems will not be collected for a grade, but we will cover them in class. I encourage you to attempt these problems as you may very well see them again in some fashion on your quizzes or exams.

*Attendance* – There is no official attendance policy, although failure to attend class will more than likely hurt grade. This is an early morning class so I ask that you please arrive on time to avoid distracting your fellow students. Furthermore, turn off your cell phone.

As additional incentive for attending, I will periodically give graded quizzes at the beginning of class. However, these points will be used as bonus points on your exam score. Make-ups will not be provided for any of these assignments (WebCT or in class).

*Grading Policy*— Your final score will be based on the following point breakdown:

30% Each exam (best 3 of 4 exams) = 90%

10% WebCT quizzes

The grading scale will be

A = 90% and above

B = 80-89%

C = 70-79%

D = 60-69%

F = 59% and below.

The grading scale may be subject to change, but only to lower the cut off points for each letter grade. I will post the final grading scale before the day of the final exam.

*Missed exams*— Make up exams will not be given without prior authorization from myself, and the reason for missing an exam had better be one of major importance. Otherwise, missing an exam will mean that you will no longer have the option to drop your lowest exam score. Missing two exams means that one of your exam scores will be a zero.

*Academic Honesty*– I will hold you to the Code of Student Conduct. Any case of cheating will be penalized to the fullest extent as described on page 73 of the 2001-2002 Undergraduate Bulletin.

**Important dates**

**Last day to drop a class without academic penalty = Tuesday February 18.**

Mardi Gras = March 4

Spring Break = March 10- 14

Last day of classes = May 2

Final exam = Thursday, May 8 8:00-10:30 a.m.

If a student has a disability that qualifies under the Americans with Disabilities Act and requires accommodations, he/she should contact the Office of Support Services for Students with Disabilities (OSS) for information on appropriate policies and procedures: Box 8586; Tel: 266-5024; TTY: 266-6837; FAX: 266-6035.

## Class Schedule

Date	Day	Chapter	Topic
Jan. 7	T	-	Introduction to the course
9	TH	1	Case for evolutionary thinking
<b>13</b>	<b>M</b>		<b>Quiz #1</b>
14	T	2	Science as a way of knowing, Creationism and Science
16	TH	2	Science as a way of knowing, Creationism and Science
<b>20</b>	<b>M</b>		<b>Quiz #2</b>
21	T	2	The Evidence for Evolution
23	TH	3	Darwinian Natural Selection
<b>27</b>	<b>M</b>		<b>Quiz #3</b>
28	T	3	Darwinian Natural Selection
30	TH	4	Mutation and Genetic Variation
<b>3</b>	<b>M</b>		<b>Quiz #4</b>
Feb. 4	T	4	Mutation and Genetic Variation
<b>6</b>	<b>TH</b>		<b>Exam #1</b>
11	T	5	Mendelian Genetics in Populations I
13	TH	5	Mendelian Genetics in Populations I
<b>17</b>	<b>M</b>		<b>Quiz #5</b>
18	T	6	Mendelian Genetics in Populations II
20	TH	7	Evolution at Multiple Loci
<b>24</b>	<b>M</b>		<b>Quiz #6</b>
25	T	7	Evolution at Multiple Loci
27	TH	8	Studying Adaptation -Evolutionary Analysis of Form and Function
<b>3</b>	<b>M</b>		<b>Quiz #7</b>
Mar. 4	T	-	Mardi Gras
6	TH	8	Studying Adaptation -Evolutionary Analysis of Form and Function
11	T	-	Spring Break
13	TH	-	Spring Break
18	T	9	Sexual Selection
<b>20</b>	<b>TH</b>		<b>Exam #2</b>
25	T	10	Kin Selection and Social Behavior
27	TH	11	Aging and Other Life History Characters
<b>31</b>	<b>M</b>		<b>Quiz #8</b>
Apr. 1	T	12	Mechanisms of Speciation
3	TH	12	Mechanisms of Speciation
<b>7</b>	<b>M</b>		<b>Quiz #9</b>
8	T	13	Evolutionary trees
10	TH	14	The Origins of Life and Precambrian Evolution
<b>14</b>	<b>M</b>		<b>Quiz #10</b>
15	T	15	The Cambrian Explosion and Beyond
<b>17</b>	<b>TH</b>		<b>Exam #3</b>
22	T	-	Biological Diversity and Biogeography
24	TH	-	Biological Diversity and Biogeography
<b>28</b>	<b>M</b>		<b>Quiz #11</b>
29	T	16	Human Evolution
May. 1	TH	-	TBA

<b>8</b>	<b>TH</b>	<b>Final exam</b>	Final exam 8:00-10:30
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