ORGANIC EVOLUTION

Tentative Schedule
Spring 2003

Class Reference:	PCB 4674	Instructor:	Dr. Stephen Karl
Class Time:	MW 3:30 - 4:45 PM	Office:	BSF 211
Class Room #:	LIF 262	Phone:	974 - 1592
Bio. Dept. Office:	SCA 112, 974 - 3250	Office Hours:	MW 4:45 - 5:45 PM
Email:	karl@chuma.cas.usf.edu		or by appointment

Date		Topic	Chapter
January	6	Course Introduction & Basics	1 & 2
	8	Basics Continued	3
	13	Mutation and Genetic Variation	4
	15	Selection and Mutation as Mechanisms of Evolution	5
	20	*Dr. Martin Luther King Jr. Day - No class*	
	22	Selection and Mutation as Mechanisms of Evolution	5
		Last day to notify me of conflicts with final exam time	
	27	Selection and Mutation as Mechanisms of Evolution	5
	29	Mutation, Genetic Drift, and Nonrandom Mating	6
February	3	" " " " " "	6
	5	Evolution at Multiple Loci	7
	10	" " " " "	7
	12	**MIDTERM I**	**1 to 7**
	17	Studying Adaptation	8
	19	Sexual Selection	9
	24	" "	9
	26	Kin Selection and Social Behavior	10
March	3	Aging and Other Life History Characters	11
	5	" " " " " "	11
	10 - 14	**Spring Break - No Classes**	
	14	*Friday - Last Day to Drop Class and receive a grade of "W"*	
	17	**IN CLASS MIDTERM REVIEW**	
	19	**MIDTERM II**	**8 to 12**
	24	Mechanisms of Speciation	12
	26	" " "	12
	31	Reconstructing Evolutionary Trees	13
April	2	" " "	13
	7	The Origins of Life and Precambrian Evolution	14
	9	The Cambrian Explosion and Beyond	15
	14	Development and Evolution	17
	16	" " "	"
	21	Molecular Evolution	18
	23	" "	18
	30	**Final Exam 3:30 - 5:30 PM, LIF 262**	**ALL MATERIAL**

ORGANIC EVOLUTION
General Information

The goal of this course is to provide you with a foundation in the basic concepts of evolution. The first part of the course will cover processes of evolution such as natural selection, neutral genetic variation, quantitative and population genetics, adaptation and speciation. The second part deals with patterns of evolution, such as classification, phylogeny reconstruction, and biogeography. Functional details (i.e., facts) and general concepts will be stressed.

Text: **REQUIRED:** Evolutionary Analysis 2nd Edition. 2001. S. Freeman and J.C. Herron, Prentice Hall. Available in the USF Book Store.

Overheads Available from ProCopy

Exams: There will be two 100-point midterms and a 150 point, cumulative final. Exams may consist of multiple choice, short answer, and essay questions. Questions will be taken from the assigned reading and class lecture. **You are responsible for knowing all the material covered in the assigned reading even if it was not presented in classes**. There will be no make up exams (Only University approved absences will be accepted). The final will be offered only at the scheduled time. The date and time of the final exam is given in the course syllabus and the Final Exam Schedule Matrix in the Spring 2003 Schedule of Classes. If you currently have engagements that conflict with this time you **must** notify me before **January 22, 2002**. After this date, any conflict will be considered poor planning on your part and cannot be excused.

Grading: The final class grades will be standardized and assigned as follows: A: 90 to 100%, B: 80 to 89%, C: 70 to 79%, D: 60 to 69%, F: < 60%. I will not be using the +/- system. Any exam or question can be re-graded, however, I reserve the right to regrade your entire exam**.** Unfair questions will be identified based upon the class results. If more than 85% of the students choose an incorrect answer, the question will be dropped from the exam at my discretion. If you have questions concerning grades, see me first during my office hours or by appointment. If there are unresolved conflicts you should make an appointment to discuss them with Dr. E. McCoy, Biology Dept. Assistant Chair, SCA 112.

Cheating: Cheating **or the appearance of cheating** will not be tolerated. If irregularities are noted, you will be given a verbal warning. If suspicious behavior continues you will be moved to a seat at the front of the class. This should not be considered an accusation of cheating, only an effort to remove suspicion. All assignments must be original in nature and generated by you for this course and semester (Organic Evolution, Spring 2003). If you have questions concerning plagiarism please consult the 2002/2003 USF Undergraduate Catalog. If you are caught cheating you will receive, as a minimum, a grade of FF for the course. A grade of FF means that you failed the course due to academic dishonesty. This grade cannot be removed by grade forgiveness. All violations of academic standards will be handled according to the procedure outlined in the 2002/2003 USF Undergraduate Catalog.

Attendance: Attendance is mandatory. Due to the size of the class, roll will be taken at my discretion. Students who anticipate the necessity of being absent from class due to the observation of a major religious observance must provide a notice of the date(s) to me, in writing, by the fourth class meeting.

How Do I Get an A in EVOLUTION?

At this point you are most likely asking yourself this important question. The assumption is that if you get an A in this course you will have mastered the basic concepts of evolution. Every student is different, but there are **basic and fundamental** things that you can do to help yourself do well in this course. The material is complex and interrelated and the concepts are not intuitive. Nonetheless, I can all but guarantee that if you follow the suggestions below you will get a good grade in this course. I recognize that this is not your only class and that you wish to do well in all of them, but the closer you follow these suggestions the better are your chances of doing well in this course.

1) ***READ, READ, READ! each and every assignment BEFORE coming to class***. (Note this is bolded, underlined, capitalized, italicized, and generally emphasized!) This is by far the most important thing that you can do to get a good grade. Don't just drag your eyes over each word and think that you have read the section. If you see a word that you are not familiar with, **look it up in a dictionary**. If you see a concept that you are unfamiliar with, **look it up in another evolution textbook, genetics, general biology, or other appropriate textbook**. THINK about what idea the author is trying to convey.

2) **Don't miss class.** There will be a lot of things covered in class that are not in the book. Hopefully, I will have perspectives and insights that will help you to understand better what you read. If you could learn evolution by reading the book then USF could save the millions of dollars that they pay me! If you must miss a class then get together with someone that did attend and review their notes with them.

3) **Take careful class notes and review them after class**. What is presented in class should expand and clarify points presented in the text. You will not have enough time in class to take complete notes. If you do not edit or expand them as soon as you can after each class, they will be useless to you later. **A tape recorder can be very helpful**.

4) **Do not just write down what I write.** Students commonly take notes only on what is written on the overhead or chalk board. Although important, the things that I write down are only a SUMMARY of what is said or to emphasize a point. The information you need to learn is in my words. Try to paraphrase what I am saying in your notes.

5) **Do all the study and review questions at the end of each chapter**. There are several new concepts that you must master in this course. There also are several commonly held incorrect beliefs that you must unlearn. I will be happy to review and discuss your answers to any of the questions during my office hours or by appointment. It is actually very simple; if you can correctly answer all the problems at the end of each chapter without help then you **will** do well in this class. If you can't answer the questions, then you need help. One of the best ways to do well in this class is to form small study groups (3-4 people of **comparable** abilities) and meet regularly (once a week!)

6) **Try to answer questions yourself**. If you have a question (no matter how big or small) try to find the answer in the textbook. If you cannot find it there, then check your notes, other textbooks, or ask someone in the class (during your study group sessions). You can learn a great deal by going through the process of trying to answer a question yourself. If you have done all the above and still have questions, come see me as soon as you can and bring your textbook and class notes. Since much of the material relies on previously presented material, letting a question fester until just before the exam is a **very** bad idea.

7) **Don't cram for tests (AKA the final is cumulative for a reason)**. Your goal for this class should be to learn the basic concepts. Cramming for tests may help you get a good grade on that test, but it won't help you when it is time to take more advanced courses!

8) **Don't make memorization the goal**. This is related to #7 above. There is a fair bit of memorization that you must do (new names, terms, etc.). **Memorize the terms but learn the concepts**. Not doing this would be like trying to learn a foreign language by memorizing a dictionary! The terms are useless unless you know how they are involved in the concepts presented.

OVERALL - Take an active role in learning. I will do my best to be prepared to **help** you through this course and you should do your best to learn and understand the material.