

SCHEDULE FOR ZOOLOGY 3403
PRINCIPLES OF ECOLOGY --SPRING 98 MY ID
NUMBER:

Welcome to Zoology 3403. This course is designed to introduce you to the theoretical and practical aspects of ecology--the science of the distribution and abundance of organisms and their interactions with the biotic and abiotic environment. My chief goal is to teach you to think and reason like an ecologist. Many of the problems facing humanity have an ecological component. I hope to encourage some of you to consider making ecology one of your life's passions.

Facts about the course:

Lecture: MW 11:30-12:20, GLC 131

Lab: M, W, or F 1:30-4:20, 262 RHA¹

Required Reading

- 1) *The Economy of Nature* 4th edition, by RE Ricklefs.
- 2) Class handouts and readings on reserve in the library. Each Wednesday readings for the following week will be announced and lab handouts distributed. Copies of lectures will be put on reserve in the library each Wednesday and should be available to check out by Thursday.

Grading

You will be able to earn 500 points in this class. Those students earning >450 points will receive an A, 400-449 will receive a B, 350-399 will receive a C, 300-349 will receive a D, and <300 points will receive an F. A variety of methods will be used to teach you ecology and evaluate your progress.

INDIVIDUAL-BASED SCORING--These methods give you the opportunity to work and learn on your own

Exams (210 points)—There will be two exams, a mid-term (4 March, 100 points) and a final (8 May, 110 points). Exams will consist of multiple choice, short-answer questions, and essays. If you feel that an answer has been incorrectly graded, you may state your reasoning in the margin and return the exam to me within 1 week of taking the exam. I will reconsider the mark, and return it to you in a week's time. Missed exams will be considered on a case by case basis. It is your responsibility to notify me *before* you miss an exam.

Reading Quizzes (50 points)--You are expected to complete all assigned readings before coming to lecture or lab. Eleven times over the semester you will be given a 2-minute quiz, either at the beginning or the end of the lecture. *Always bring a 3x5 index card with your ID number and lab section at the top* ready to take this quiz. Quizzes are worth 5 points. Turning in a quiz on anything but an index card will lose you a point. You may drop one quiz. Given the brevity of the quiz it is in your best interest to arrive to lecture on time. Missed reading quizzes cannot be made up later.

Assignments (100 points)-- You will be given 4 writing assignments or problem sets (worth 25 points each) throughout the semester. Assignments allow you to develop and practice skills

¹ Any student with a disability that may prevent him or her from fully demonstrating his other abilities should contact me personally as soon as possible. We can discuss accommodations necessary to ensure your full participation and facilitate your education.

introduced in the lab, lecture, and readings. These will typically be 1-2 pages in length and *must be typewritten* unless otherwise stated. Three points will be deducted for every day late.

WorkGroup SCORING--Few projects in science can be accomplished alone. In this course, about 1/3 of your grade will come from lab WorkGroups. The points earned by your group will be distributed amongst the group by peer evaluation (more on group-based scoring in your lab section. See also handout *Introduction to Group Learning*).

Lab (140 points)--The labs are an integral part of the course. Topics correspond to the lecture. Lab results will be found on the lecture exams. A variety of reports and exercises, written collectively by your lab group, will sum to 140 points. *Always bring a calculator and graph paper (both standard and log-log) to lab.* Since all your lab work is done with your group, you *cannot* switch labs for a week.

About Academic Misconduct

Academic misconduct includes plagiarism and cheating on assignments and exams. Such misconduct is wrong in and of itself. It is also grossly unfair to your fellow students who play by the rules. As a result, the University of Oklahoma takes academic misconduct seriously. Teachers are *required* to bring any evidence of academic misconduct to the Dean, who then convenes a board of inquiry composed of faculty and students. This board interviews both the teacher and the student. A typical result is a notation made on the student's permanent record (i.e., any job or school that requires an official transcript will see this black mark) along with a penalty. In short, it is not worth the risk. For further information, see your student handbook.

About Your Teachers

As always, your primary teacher is yourself. Make the time to do the readings and assignments before coming to class. You will also learn from your fellow students, particularly your lab group. Finally, your lecturer and a lab instructor will guide you through the material. Please ask questions in lecture and lab and attend office hours. We are your instructors because we genuinely enjoy Ecology and want you to enjoy and understand it as well.

Dr. Mike Kaspari Lecturer

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Office Hours M (2-5 PM) and Tuesday (10AM-100 PM)

Education: B. S. (1983) Univ. of Nebraska, M. S. (1985) Univ. of Nebraska, Ph. D (1992) Univ. of Arizona, Post-doctoral work (1992-1995), Univ. of Texas, Univ. of Guelph (Ontario), and the Lawrence Livermore Labs (California).

My work as an assistant professor this semester involves a number of projects. First is the running of this course and a graduate seminar course. I also guide independent research for undergraduates, and serve on the committees of Zoology graduate students. My research focuses on many aspects of ant community ecology, including 1) the effects of global climate change on patterns of biodiversity in North and Central America, 2) the comparative structure of temperate and tropical litter communities, and 3) the timing of alate flights. For more information, see my web page.

SYLLABUS FOR ZOO 3403

Dates	Chapters	Lecture topics	Lab	Important Events
Jan 12-16	1	Setting the Stage Intro to BioDiversity	Action with Uncertainty	
Jan 19-23	2, 3 10	Physical Environment Physiological Ecology	No Lab	MLK Holiday
Jan 26-30	4,5 11 (part)	Global Ecology Life History I	Biomes	
Feb 2 - 6	11 (part) 14 (part)	Life History II Population Structure I	Human Demography	Assignment I due 4 Feb MidCourse Correction Survey
Feb 9 - 13	14(part) To be assigned	Population Structure II Env. Endocrines	Population Estimation*	
Feb 16 - 20	15	Pop Growth and Regulation	Pop Growth Lab	Hand Out Practice Exam
Feb 23 - 27	16	Metapopulations Metapops and SS's	Human Carrying Capacity	First Peer Review in Lab
March 2 - 6	19	Intro Pop Interactions MIDTERM EXAM	Tree Dispersion in Ol	Assignment II due 2 March so I can hand out key same day
March 7 - 15		<i>SPRING BREAK</i>		
March 16 - 20	20	Competition Galapagos	Ideal Free Distribution*	
March 23 - 27	22 23	Galapagos/IntroPred Parasitism	Community Gradients*	Need to start infusion culture Handout EC Assignment 1
March 30- April 3	24 25 (572-581)	Infectious Diseases Case Study—Bubonic plage	Species Area Curves*	
April 6 - 10	24	Succession Biodiversity	Biodiversity in protists	Hand Out Assignment 4, EC2
April 13 - 17	6	Biodiversity Ecosystem Energetics	Trophic Structure (collection)*	Hand back EC1
April 20 - 24	TBA	Regulating NPP Regulating Secona	Trophic Structure (analysis)	Teaching Evaluations
April 27-May 1	TBA	Trophic Webs Species and Ecosystem Function	Fire ants on Campus*	Assignment 3-4 due 27 April Final Peer Review in Lab

May 8 (Fr) FINAL EXAM, 1:30-3:30, 131 GLCH

- **These labs will be held outdoors. Come wearing appropriate clothes (this means “no” to sandals, “yes” to long pants, long-sleeve shirts, hats, and raingear). One location we will frequent is “Oliver’s Woods”.**

It lies in the flood plain of the Canadian River. Be prepared for some soggy walks. If you cannot recognize ticks, poison ivy, or poisonous snakes, ask your TA.