

WILDLIFE BIOLOGY-BISC 419

The goal of the course is to present and discuss general biological principles relevant to the management of wildlife populations. Wildlife will be defined broadly to include game and non-game vertebrate, generally homeothermic, free-living species of commercial, recreational, or educational interest to the public. Wildlife management, which is the art of finding compromises between competing human interests that involve wildlife, will not be covered. In lectures general principles will be presented and elucidated using case studies taken from the literature. In the lab sessions we will first learn about the characteristics and diversity of mammals and birds, with an emphasis on local fauna. This will be followed by a more in-depth study of avian anatomy, and depending on our luck, an exposé of avian parasites. Finally, there will be a term paper (more details later) and a very interesting final exam.

Instructor.- Dr. George A. Lozano
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Teaching Assistant.- Brent Gurd
Office.- the Cooke lab

Lectures.- Tue and Thu 12:30 AQ3005
Labs.- Tue, Wed, and Thu 13:30 (but one of them will be cancelled)

Textbook.- None, but it would be useful to get bird and mammal field guides.

Final Exam.- April 18, 2000.

Grading

Lab Exam	20%
Paper	20%
Midterm Exam	30%
Final Exam	30%

Labs

January

11	lab 1.- Mammalia I
18	lab 2.- Mammalia II
25	lab 3.- Aves I

February

1	lab 4.- Aves II
8	lab 5.- Aves III
15	Labs cancelled
22	lab 6.- Bird Anatomy and parasites I
29	lab 7.- Bird Anatomy and parasites II

March

7	lab 9.- Field Trip
14	lab 10.- Work on your paper
21	LAB EXAM in during class hour, on Thursday!!
28	lab 12.- Have fun and prepare for the end

April

4	lab 13.- Have fun and prepare for the end
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Topics to Include

I will attempt to cover the following topics, in more or less this order. Sorry for the lack of details, but this is the first time I am putting this (or any course) together from scratch, and I was hired 2 weeks before it started, and the two weeks included Christmas and New Year. I will have to work out the details as we go. Luckily, my undergrad degree at the University of Guelph was specifically on Wildlife Biology, and I was able to dig out some of my old notes when I went back east for the holidays.

Energy requirements

- Maintenance
 - Metabolic rates (basal, resting, field)
 - Physical space
 - Cover and refugia
- Growth
- Reproduction
- Digestive anatomy and physiology

Physiological condition indices (Dr. Chris Guglielmo)**Energy Transfer**

- Food chains
- Trophic levels
- Stable isotopes

Interactions 1.- Predation**Interactions 2.-** Competition**Interactions 3.-** Parasitism, Disease and Immunity**Statistics** (very basic, just so I know where we stand)**Population Biology**

- life-history tables
- death, birth, migration, emigration
- dispersal (natal and breeding)
- censusing techniques
- additive vs. compensatory mortality
- maximum and optimum yields

Island biogeography**Seabird conservation** (Dr. Doug Bertram)