

BIOLOGY 112: General Zoology  
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Instructor: Dr. James Mitchell  
Spring 2007

Office Hours: T Th 8-10:30 a.m.  
Lecture: M W F 11:30-12:20  
Laboratory: Section A -T 12:45-3:45 p.m.  
Section B -Th 12:45-3:45 p.m.

Prerequisite: High school biology or permission of instructor.

Required text: Hickman, Roberts, Larson, I-Anson, Eisenhour, *Integrated Principles of Zoology*, 13<sup>th</sup> edition, McGraw-Hill Science/Engineering/Math, 2005.

Required items: A good dissection kit, a large loose-leaf notebook for handouts, and goggles. Bring lecture text to lab.

Course description:

This course deals with morphology, evolution, reproduction, development, and behavior of selected groups of animals. It is the basic course in animal science taken by students who major in Biology. I cannot cover all animals in a one-semester course, but will attempt to emphasize major concepts and features. I have elected to introduce you to the Animal Kingdom last. Part of the reason for this is the necessity for scheduling two major field trips, taking into consideration possible weather conditions and the students' schedules as they become more hectic. Also, I have to consider the availability of off-campus facilities.

Course objectives:

- A. To present to the students an introduction to certain areas of animal science.
- B. To gain an understanding of the structural and functional relationships between animals and their environment.
- C. To understand some major biological problems confronting man and society.
- D. To appreciate the history, complexity, and diversity of animal life.
- E. To see how animals have been used as experimental organisms to solve important biological problems.

Attendance:

You should plan to attend all regular classes, labs, and exams. Missing an exam without a valid excuse means that the exam will be given a score of zero and averaged with other test grades for the semester. In the event that the exam is missed for a valid reason, it will not count against the final average and the remaining test scores will be averaged.

Grading Policy:

There will be three hourly exams covering the notes, text, and handouts. Exams may be objective and subjective in nature. I expect you to use good English in your answers.

Spelling: Why is it important? Confusion may arise from imprecision. Many biological or medical terms are similar—they may have the same Latin or Greek roots. Would you like your pharmacist to misread your prescription?

Also, in ALL jobs, written communication is important in making a good first impression. Would you hire someone whose application has spelling and/or grammatical errors?

The lecture will count as two-thirds (2/3) of the grade, and the laboratory one-third (1/3)—before the end-of-the-term exam. The average from these figures will represent 2/3 of your course grade and the final exam 1/3. When assigning a final course grade, I will also consider such intangibles as attendance, interest, industry, and cooperation.

Cancelled classes:

The Registrar's Office will post cancelled classes on the intranet. Students and faculty may access this listing from on-or off-campus; a link to the page exists on both the home page and main page of the intranet. (The link is <http://home.moravian.edu/public/regis/classCancellations.htm>). The Registrar's Office will also notify, via distribution list, key individuals on campus for posting of information about cancelled classes. The distribution list includes the Academic Affairs office, department secretaries, LouAnn Vlahovic (campus operator), and Ann Claussen (Hauptert Union).

Mrs. Vlahovic will also post class cancellations, due to inclement weather, on Moravian's Weather Hotline (610-625-7995).

If the school closes due to inclement weather or another emergency, notification will be posted on the website listed above, on the Weather Hotline, and on local TV and radio stations (Channel 69, AM 790, AM 1400, FM 96.1, FM 100.7, and FM 104.1).

Academic honesty:

I adhere to the policy statement concerning academic integrity that is published in the current Student Handbook.

Extra Credit:

If you want to improve your grade there will be extra credit videos that must be viewed in Reeves Library. To receive credit you will need to sign a form in the library and submit a paper discussing the main ideas. **Give the paper to Mrs. Vlahovic in the Hall of Science within one week after observing the film.** The amount of credit awarded will be dependent on the completeness of your work. All work must be turned in on or before **Friday, April 20<sup>th</sup>**. You may select up to four from the following list.

Helpful Tips for Success:

1. See the instructor if you need help. I will attempt to facilitate the learning process.
2. Make good use of lab time. Be on time; don't leave early.
3. Make a study schedule.
4. Frequently review material that was covered.
5. Make zoology interesting. How does it relate to you? How can it make your life more meaningful?
6. Study with peers who are serious and have similar goals.
7. Cramming and "all nighters" usually don't work. Keeping up is much easier than catching up.
8. When possible, attempt to correlate structure and function.
9. Be willing to accept constructive suggestions.

General Rules and Information:

1. Student behavior in lecture and lab is to be maintained in a manner conducive to learning and study.
2. You should attend the lecture and lab unless there are extenuating circumstances (illness, family problems, etc.)
3. You are not allowed to remove any materials from the laboratory. Please return microscopes to their proper place (with scope # corresponding to slot #) at the end of the lab.
4. Food, drinks, and all tobacco products are not allowed in lab.
5. I expect you to treat the animals, models, slides, microscopes, and specimens with care and respect.
6. Dissection products should be placed in the designated containers, NOT in the sinks.
7. At the end of each lab, you are responsible for cleaning your work area. Wipe the table with antibacterial soap, clean your dissection tools, and return materials to their proper location.
8. Activated electronic devices, such as cell phones, radios, Walkman, etc., are NOT allowed in the lab or lecture hall. Please turn them off.
9. No form of academic dishonesty will be tolerated. Refer to the Moravian College Honor Code in the Handbook.
10. If you want to use the lab and another instructor is conducting a class, ask for permission to work quietly in the back of the room.

Lecture Schedule

January 15	Introduction
January 17	Scientific Methods pp. 2-4
January 19	water study questions 4, 5 on pp. 34-35 start carbohydrates
January 22	Carbohydrates, fats pp. 22-31 study questions 7,8 on p. 38
January 24	Proteins, study question 9 on p. 35
January 26	nucleic acids pp. 88-96, study questions 15, 16, 17, 18, 19 on p. 100
January 29	microscopy and cells pp. 37-46 study questions 1,2,3 on p. 55
January 31	continued
February 2	mitosis and cancer pp. 50-53 study questions 11, 12, 13 on p. 55
February 5	meiosis pp. 75-78
February 7	<b>EXAM I</b>
February 9	Evolution pp. 102-128 study questions 3,4,5,6,10,12,13 on p. 129
February 12	continued
February 14	continued
February 16	reproduction pp. 131-150 study question 2
February 19	continued
February 21	Development pp. 151-174 study questions 1,2,3,4,5,6,11,12,13 on p. 175
February 23	continued

February 26	continued
February 28	Principle of Taxonomy pp. 194-205
March 2	cartilaginous fish pp. 499-508 study questions 1,5,6,7 on p. 525
March 5-March 9	<b>NO CLASSES COLLEGE CLOSED</b>
March 12	continued
March 14	<b>EXAM II</b>
March 16	Bony Fish pp. 509-525 study questions 10,11,13,15,16,18,20,21,22,23
March 19	Amphibians pp. 527-533 study questions 1,3,10 on p. 546
March 21	Reptiles pp. 547-554 study questions 2,4,5 on p. 566
March 23	Dinosaurs
March 26	Birds pp. 568-590 (selected sections) study questions 1,2,3,4,7
March 28	Mammalia pp. 597-614 study questions 3,4,5,6,7,8 on pp. 622-23
March 30	continued
April 2	bats pp. 609-610 study question 12 on p. 624
April 4	Primates pp. 615-616 study question 18 on p. 674
April 6	<b>NO CLASS COLLEGE CLOSED, GOOD FRIDAY</b>
April 9	<b>NO CLASS COLLEGE CLOSED EASTER MONAY</b>
April 11	<b>EXAM III</b>
April 13	Circulation pp. 668-680 study questions 2,4,5,6 on pp. 688

April 16	continued
April 18	continued
April 20	muscle pp. 637-646 study questions 14, 15 on p. 646
April 23	continued
April 25	review
April 27	continued

LAB Schedule

January 16-18	NO LAB
January 23-25	Introduction to lab protocol Microscopy
January 30, February 1	Cells and Tissues
February 6, February 8	Mitosis and Meiosis
February 13, February 15	Evolution
February 20, February 22	Development
February 27, March 1	Development
March 6, March 8	NO CLASS, COLLEGE CLOSED
March 13, March 15	Shark dissection
March 27, March 29	Field Trip
April 3, April 5	Bronx Zoo Field Trip
April 10 April 12	Amphibian Circulation
April 17, April 19	practice practical
April 24, 26	PRACTICAL EXAM



\* What is a practical exam? These are tests where you will be asked to identify labeled structures, locations, functions, etc., from slides, dissections, models, at various stations that are distributed around the laboratory.

NOTE: There will be a series of brief, objective, announced quizzes at the beginning of each laboratory. They will cover the previous lab material.