

BIOLOGY 112:
General Zoology
Email: mejbm01@moravian.edu

Instructor: Dr. James Mitchell
Office: CHSc 321 (610-861-1427)
Spring, 2008

Office hours: T Th 8-10 a.m. (If these hours are not convenient, contact me for an appointment. If I am not in the office, check Room 324 or Lab 303.)

Lecture: M W F 10:20-11:10 a.m.

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, Keen, I-Anson, Eisenhour, *Integrated Principles of Zoology*, 14th edition, McGraw-Hill Science/Engineering/Math, 2008

Required items: A good dissection kit, a large loose-leaf notebook for handouts, and goggles.
Bring lecture text to lab. You may obtain all of these items in the Bookstore or at Staples and/or Lowe's.

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 major field trips, taking into consideration possible weather conditions and student schedules. 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.

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 (link is <http://home.moravian.edu/public/regis/cancellations.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 (Channel 69) and radio stations (AM 790, AM 1400, FM 96.1, FM 100.7, and FM 104.1).

Helpful hints for success:

1. See the instructor if you need help.
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.

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 consider such intangibles as attendance, interest, industry, and cooperation.

Extra credit options:

You will be able to improve your grade by doing some extra credit work. However, this does not mean that you should minimize your efforts in lecture and lab. We will discuss these options later.

Honesty policy:

I adhere to the honesty policy formulated by Moravian College. You should read the statement in the Student Handbook and the Catalog and consider its ramifications.

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 average 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.

Due to time and financial constraints, I cannot take you to Alaska, Australia, Bermuda, Hawaii, New Zealand, the deserts, etc. The next best thing is to show you visual information that I have personally obtained. You cannot obtain a full appreciation of the material unless you are in class. Also, this may provide you with ideas about spending a semester off-campus. It has been my experience that students who attend class do much better than those who habitually absent themselves.

TENTATIVE LECTURE SCHEDULE

M Jan 14	Orientation and history, pp. 2-16
W Jan 16	continued. Study questions 1, 2, 3, 8 on p. 20
F Jan 18	Water, pp. 21-24. Study questions 1, 2, 3, 4 on p. 36
M Jan 21	NO CLASSES. Martin Luther King, Jr. holiday.
W Jan 23	Carbohydrates, pp. 24-28. Study questions 6, 7, 8 on p. 36
F Jan 25	Fats
M Jan 28	Proteins
W Jan 30	Nucleic acids, pp. 91-96. Study questions 16, 17, 18, 19 on p. 103 Cells, pp. 38-47. Study questions 1, 2, on p. 56
F Feb 1	continued

M Feb 4 EXAM #1
 W Feb 6 Mitosis, pp. 52-56. Study questions 11, 12, 13 on p. 56
 F Feb 8 Meiosis, pp. 77-80. Study questions 1, 2, 3 on p. 102

M Feb 11 Evolution, pp. 104-125. Study questions 1, 2, 3, 4, 5, 6, 10, 12, 13 on p. 135
 W Feb 13 continued
 F Feb 15 continued

M Feb 18 Human evolution, pp. 631-636
 W Feb 20 continued. Study questions 18, 19, 20, 21, 22 on p. 642
 F Feb 22 continued

M Feb 25 The reproduction process, pp. 137-156
 W Feb 27 continued. Study questions 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
 on pp. 156-157

March 3-7 NO CLASSES. Spring Break

M Mar 10 Principles of development, pp. 158-182
 W Mar 12 EXAM #2
 F Mar 14 Study questions: 1, 2, 3, 4, 5, 6, 9, 11, 12, 13, 15, 16, 18 on p. 183

M Mar 17 Taxonomy and phylogeny of animals, pp. 199-213
 W Mar 19 continued. Study questions 1, 2, 3, 4, 5 on p. 215
 F Mar 21 NO CLASSES. Easter Recess

M Mar 24 NO CLASSES. Easter Recess
 W Mar 26 Fish, pp. 514-539. Study questions: 1, 5, 6, 10, 13, 15, 16, 22 on pp. 541-542
 F Mar 28 continued

M Mar 31 EXAM #3
 W Apr 2 Amphibia, pp. 543-546, 548, 557. Study questions: 9, 10, 11 on p. 561
 F Apr 4 Amniota, origins and non-avian reptiles, pp. 563-564, 567-570.
 Study questions: 1, 2 on p. 583

M Apr 7 Venomous animals
 W Apr 9 Birds, pp. 585-607. Study questions: 1, 2, 4, 6, 8 on p. 611
 F Apr 11 continued

M Apr 14 Mammals, pp. 612-632. Study questions: 3, 4, 6, 7, 8, 9, 13 on pp. 641-642
 W Apr 16 continued
 F Apr 18 continued

M Apr 21 continued
 W Apr 23 Review
 F Apr 25 Classes End

TENTATIVE LABORATORY SCHEDULE
(Tuesday/Thursday)

Jan 15/17	Orientation. Microscopy
Jan 22/-24	Invertebrate biology
Jan 29/31	Cells
Feb 5/7	Mitosis, Meiosis
Feb 12/14	Evolution
Feb 19/21	PRACTICAL EXAM
Feb 26/28	Reproduction
Mar 3/5	NO CLASSES
Mar 11/13	Echinoderm development
Mar 18/20	Avian development
Mar 25-27	Shark dissection
April 1/3	continued
Apr 8/10	Amphibian biology
Apr 15/17	Field Trip
Apr 22/24	PRACTICAL EXAM