

INTRODUCTION TO ANIMAL BIOLOGY

BIOL 160, Sections 4 and 5, Spring 2013

INSTRUCTOR: Dr. Karin Bodensteiner

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Office Hours: Tuesday/Thursday/Friday 9:00-10:00 a.m., by appointment, or try and find me

CLASS MEETINGS:

Lecture: SCI A208, Tuesday/Thursday/Friday 10:00-10:50 a.m.

Laboratory: TNR 355, Tuesday (Section 4) OR Thursday (Section 5) 1:00-3:50 p.m.

Lecture Exams: TNR 122, Thursday 7:00 to 8:30 p.m., Feb. 14, Mar. 14, and April 18

Open Lab Times: TNR 351 and 355, Monday-Thursday 6:30-8:30 p.m.

Additional Course Information: Available off of Desire 2 Learn (D2L)

REQUIRED TEXT: Raven, Johnson, Losos, Mason, and Singer. (2008) Biology, 8th Edition. McGraw-Hill, New York. Available for rent in bookstore.

REQUIRED FOR LABORATORY:

1. Introduction to Animal Biology Lab Manual. Available for purchase in the bookstore.
2. Dissecting kit. Available for purchase in bookstore.
3. Strongly recommended for laboratory: rubber or plastic gloves. Available for purchase in local stores.

Note: Some students find A Photographic Atlas for the Zoology Laboratory to be a helpful reference.

COURSE DESCRIPTION:

This course will introduce students to the amazing and diverse world of animals. To do this, a wide range of topics pertaining to animal biology will be covered including (but not limited to): the chemistry of life, basic cellular biology, genetics, animal form and function, and animal diversity.

COURSE LEARNING OUTCOMES: By the end of the semester, students should be able to—

1. Apply fundamental concepts in cell biology, genetics, physiology, and animal diversity to your everyday life.
2. Describe key biological principles.
3. Compare and contrast physiological processes in animals from different phyla.
4. Perform basic laboratory procedures including light microscopy and animal dissection.
5. Identify animals based on taxonomy.
6. Show improvement in critical thinking, writing, and oral communication skills.

POINT BREAKDOWN:

Lecture Exams	4 @ 100 pts each
Laboratory	150 pts
Professionalism	50 pts
<u>Other Assignments/Quizzes</u>	<u>TBA, 50 pts total</u>
TOTAL	650 pts

GRADE SCALE (out of 100% of Total):

A	≥ 93-100	C	= 73-76
A-	= 90-92	C-	= 70-72
B+	= 87-89	D+	= 67-69
B	= 83-86	D	= 60-66
B-	= 80-82	F	< 60.0
C+	= 77-79		

DATES TO REMEMBER*:

Lecture Exam 1	Feb. 14: 7:00-8:30 p.m.; TNR 122
Lecture Exam 2	Mar. 14: 7:00-8:30 p.m.; TNR 122
Lecture Exam 3	Apr. 18: 7:00-8:30 p.m.; TNR 122
Lecture Exam 4	May 14: 10:15 a.m.-12:15 p.m.; SCI A208

*Please note: Thursday evening test sections meet **ONLY** when a laboratory exam is scheduled and not on other Thursdays during the semester.

EXAMS AND OTHER GRADED WORK:

There will be four exams: three during the course of the semester and one during finals week. Each lecture exam is worth 100 points. Exams will consist of multiple choice, problem sets, definitions, fill-ins, and short answer questions. In addition, application of information provided in lecture to an unknown problem may be required.

Points will also be awarded in the laboratory. These points will come from in-lab quizzes over the course of the semester. Expect a quiz on previous material every-other week in lab (see dates below for specifics).

There will also be a number of assignments (to be announced) and some random, pop quizzes during the semester. All exams, quizzes, and assignments will count towards the final grade (i.e. no grades will be dropped). If you have an unexcused absence, you will **NOT** be allowed to make up a missed quiz or assignment (i.e. skip at your own risk).

Exams (both lecture and laboratory) are not comprehensive. That said, course material will build over the semester and it will be important for you to remember and apply basic information learned early on to material covered later in the course. If there are students in the class who have a disability and need accommodation, please see me.

PROFESSIONALISM:

Attendance: Class and laboratory attendance are mandatory and you are expected to arrive on time and ready to learn. Unexcused absences and/or chronic tardiness **WILL** reveal themselves in your grade. Assignments are due when they are due. Exceptions to this rule will only be granted if arrangements are made with the instructor **WELL IN ADVANCE**. Exams must be taken at the assigned time and alterations to this schedule will only be made for personal injury or emergencies (e.g. death in the family, serious accident, or hospitalization). In such cases, evidence of some kind must be provided and you are expected to complete the work as soon as possible. If you **ARE** allowed to make up work, format will be at the discretion of the instructor. It is your responsibility to get the notes for any missed classes.

Participation: I expect that students will come to class ready to be engaged and actively participate in the classroom experience. Open, honest discussion is encouraged and will factor in to your participation/professionalism grade.

Classroom Behavior: I expect nothing short of complete mutual respect and courtesy. Cell phones and other personal electronic devices must be turned off while class and/or lab is in session.

ACADEMIC INTEGRITY:

Academic dishonesty in any form will result in disciplinary action in accordance with UW System Administrative Code.

See <http://www.uwsp.edu/centers/rights/RRBOOKLET8-2005-06.pdf> (pages 4-9) for more information.

EXTRA HELP:

Tutors are available to help students with lecture and lab material. Interested students should contact the Tutoring-Learning Center.

GENERAL COURSE OUTLINE*:**CHAPTER(S)**Unit 1: Macromolecules and the Cell

Introduction/Overview	1
Macromolecules	(2) 3
Cellular Organization	4
Cell Membranes	5
Cellular Communication	9
Cellular Respiration	(6) 7

Unit 2: Genetics, Heredity, and Evolution

Mitosis and Meiosis	10 & 11
Patterns of Inheritance	12
DNA Replication	14
Transcription and Translation	15

Unit 3: Animal Diversity, Reproduction, and Development

Reproductive Strategies	52
Vertebrate Sexual Differentiation	52
Animal Development	53
Other Relevant Chapters:	
The Tree of Life	26
Protists through Vertebrates: an analysis	29, 32-35

Unit 4: Major Systems Physiology

Homeostasis and Feedback Mechanisms	43
Digestion and Nutrition	48
Circulation and Respiration	49
Nervous System	44
Endocrine System	46
Osmoregulation	50
Other Relevant Chapters:	
The Animal Body and Its Regulation	43
Musculoskeletal System	47
Sensory system	45

*Please note: Course schedule and topics covered are subject to change.

LABORATORY SCHEDULE:

Week of Jan. 22	NO LAB
Week of Jan. 29	Lab Introduction, Microscopy, and Cell Biology
Week of Feb. 5	Metabolism Lab (with 5 pt worksheet); Microscopy Quiz (10 pts)
Week of Feb. 12	Invertebrates 1
Week of Feb. 19	Invertebrates 2
Week of Feb. 26	Invertebrates 3; Inverts 1 and 2 Quiz (20 pts)
Week of Mar. 5	Invertebrates 4
Week of Mar. 12	Invertebrates 5; Inverts 3 and 4 Quiz (20 pts)
Week of Mar. 19	Invertebrates 6
Week of Mar. 26	SPRING BREAK
Week of Apr. 2	Chordates 1; Inverts 5 and 6 Quiz (20 pts)
Week of Apr. 9	Chordates 2
Week of Apr. 16	Rat 1; Chordates 1 and 2 Quiz (20 pts)
Week of Apr. 23	Rat 2; Common Animal Quiz (25 pts)
Week of Apr. 30	Rat 3
Week of May 7	Rat Quiz (30 pts)
Week of May 14	FINALS