BIOL 160 Introduction to Animal Biology (Sections 10, 11 & 12)

Spring 2013

Instructor:	Dr. Daniel L. Graf	Course web site:	Desire2Learn site at http://mypoint.uwsp.edu
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email:	dgraf@uwsp.edu (include "BIOL 160" in subject)	Office Hours:	T 3-5 PM & Th 9-11 AM or by appointment

General Course Description. "Anatomy, physiology, adaptation, and classification of animals; morphology and anatomy of various types of animals." This course is an introduction to zoology that explores animal diversity and the general biology of animals. BIOL 160 is a required course for both Biology majors and minors.

Objectives. The objectives of BIOL 160 are 1) to examine the breadth of animal diversity, 2) to introduce students to general biological principles, and 3) to provide the foundation necessary for success in future coursework in the biological sciences.

Course Objectives:

Your instructor will:

1. Compare and contrast variation in form & function among the major groups of animals and their biological systems.
2. Explain the fundamental biological principles that guide the study of zoology.
3. Provide hands-on experience with living and preserved organisms.
4. Survey the various levels of biological organization, from cells to ecosystems.
5. Emphasize the relevance of organismal biology to human health and happiness.

Learning Outcomes:

You will be able to:

1. Differentiate and classify animal diversity.
2. Understand the significance of cell theory, inheritance, evolution, and developmental biology as the foundations of zoological science
3. Describe the variety of animal body-plans and organ systems.
4. Recognize the various levels of biological organization and their emergent properties.
5. Demonstrate the ability to learn a large body of knowledge, including a vast terminology.

Lecture/Lab Schedule.

Session	Sec.	When	Where
lecture	10-12	M T Th 2:00-2:50 PM	TNR 120
lab	10	W 9:00-11:50 AM	TNR 351
lab	11	F 9:00-11:50 AM	TNR 351
lab	12	W 1:00-3:50 PM	TNR 351
exams	10-12	W 7:00-8:00 PM	TNR 120

Open lab hours: M-Th 6:30-8:30 PM TNR 351 & TNR 355.

Required Materials. *Integrated Principles of Zoology*, 15th edition (2011), by Hickman, Roberts, Keen, Eisenhour, Larson & l'Andson. McGraw-Hill Higher Education, New York (ISBN 978-0-07-304050-9). This book is available for rent at the bookstore.

The lab manual, *Introduction to Animal Biology,* is available for purchase at the bookstore.

A dissecting kit and protective eyewear are available for purchase at the bookstore.

Exams, Assignments, and Grading. Your final grade for the course will be based upon 455 possible points.

BIOL 160	**points**
Lecture Exam 1	50
Lecture Exam 2	50
Lecture Exam 3	50
Daily Quizzes	60
Group Discussions	25
Lab Quizzes	120
Final Exam	100
TOTAL	**455**

There are three lecture exams (50 points each) that constitute about 33% of your total points. Lecture exams may include matching, multiple choice, short-answer, or essay type questions. These exams will NOT be cumulative — they will only include material since the previous exam. The cumulative final exam is worth 100 points (22%) and will cover material from the entire course, emphasizing lecture material. Exams will be designed to test your mastery of the material as well as your ability to use critical-thinking skills to apply that knowledge.

Daily 2-point quizzes will take place at the beginning of each lecture period. All questions will be short-answer format, and topics from preceding sessions *as well as the lecture scheduled for that day* are fair game. Any daily quiz points acquired above 60 are "bonus" points. Daily quizzes will constitute roughly 13% of your final grade.

We will occasionally suspend lecture to discuss articles or book chapters that supplement textbook material. Readings and associated assignments will be posted on the course D2L website. Your participation during each discussion session will be assessed based on a 5-point group exercise for a total of 25 points (5%).

Finally, we will have a 10-point quiz each week in lab. Your lowest quiz score will be dropped, for a total of 120 points (26%). Lab quizzes will test your knowledge of the material from the previous lab session as well as also your preparation for the current session.

Grades will be based upon the following percentages of the course total:

		100-93%	A	92-89%	A-
88-87%	B+	86-83%	B	82-79%	B-
78-77%	C+	76-73%	C	72-69%	C-
68-67%	D+	66-59%	D	<59%	F

REQUESTS FOR EXTRA POINTS WILL NOT BE HONORED.

Exam and Quiz Rules. The following rules apply to exam periods as well as quizzes.

- If you arrive so late for an exam that anyone else has finished and left, you will not be allowed to take the exam at that time. You may be able to take a make-up exam (see attendance policy below).
- If you arrive late for a quiz or exam, you will not be given extra time. When the rest of the class is finished, you will need to be done. There are no make-up quizzes.
- All exams, quizzes, lab exercises, etc. must be completed in black or blue ink or pencil.
- MP3 players, cell phones, etc. will not be allowed in the testing area.
- There may be multiple forms of exams and quizzes.

Laboratory. YOU MUST DRESS APPROPRIATELY FOR LAB.

- You MUST wear shoes — not sandals, flip-flops, or similar options that do not protect your feet.
- It is recommended that you wear clothes that you won't mind getting grubby.
- FAILURE TO COMPLY WILL RESULT IN YOUR REMOVAL FROM LAB UNTIL YOU ARE PROPERLY ATTIRED.

Attendance. YOUR COMMITMENT TO YOUR CLASSES IS AMONG THE MOST IMPORTANT THINGS IN YOUR LIFE RIGHT NOW. You are expected to attend all lecture, lab, and exam sessions. Absences relating to religious beliefs will be accommodated according to UWS 22.03 (URL below), providing that Dr. Graf is notified within the first three weeks of the beginning of class regarding the specific dates that you will be absent.

http://www.uwsp.edu/stuaffairs/Documents/RightsRespons/SRR-2010/rightsChap22.pdf

Make-Up Exams. You must make every effort to take exams at the scheduled times. MAKE-UP EXAMS MAY BE ALLOWED IN CASES OF MEDICAL EMERGENCY, FOR WHICH YOU MUST PROVIDE WRITTEN DOCUMENTATION. You must make arrangements with Dr. Graf within 24 hours of the exam to schedule a make-up exam within one week or you will forfeit the points.

- An emergency is a situation where your presence is required to alleviate extreme suffering (including but not limited to your own).
- Student Health Services does not handle emergencies.
- Scheduled appointments aren't emergencies.
- A good rule of thumb: *If your situation wouldn't cause you to postpone your wedding, then it isn't a good reason to miss a scheduled exam.*

Academic Integrity. Any misrepresentation of your work, including plagiarism, or cheating of any kind will result in a zero (0) being recorded for that assignment. Students are encouraged to become familiar with and understand the UWS/UWSP Student Academic Standards and Disciplinary Procedures governing student academic conduct. This is available for download at:

http://www.uwsp.edu/stuaffairs/Documents/RightsRespons/SRR-2010/rightsChap14.pdf

Remember: DR. GRAF IS NOT AS DUMB AS YOU THINK HE IS.

Classroom Conduct. Student and instructor behavior should promote an environment favorable to both teaching and learning. It is disruptive to come late to class, read extra-curricular media in class, or use cell phones (and other electronic devices) during class time. Students that choose to disrespect their classmates and their instructor by disrupting lectures or labs will be asked to leave.

Disabilities. Students with disabilities are welcome and encouraged in this class. Students with disabilities should contact the Disability and Assistive Technology Center during the first two weeks of the semester if they wish to request specific accommodations.

http://www.uwsp.edu/disability/Pages/default.aspx

LECTURE SCHEDULE

wk.	date	#	topic	reading	lab	manual
1	22 Jan.	0	Welcome! Introductions & Syllabus		none	—
	24 Jan.	1	The Science of Zoology	Ch. 1		
2	28 Jan.	2	The Chemistry & Physics of Life	Ch. 2	Microscopy & The Cell	1-1 to 1-12
	29 Jan.	3	Cells as the Units of Life I	Ch. 3		
	31 Jan.	4	Cells as the Units of Life II	Ch. 3		
3	4 Feb.	5	Enzymes & Metabolism I	Ch. 4	Invert. Survey I	3-1 to 3-26
	5 Feb.	6	Enzymes & Metabolism II	Ch. 4		
	7 Feb.	D1	*Discussion*	*TBA*		
4	11 Feb.	7	Body Plans	Ch. 9	Invert. Survey II	3-27 to 3-41
	12 Feb.	8	Genetics, Mendel & Meiosis I	Ch. 5		
	14 Feb.	9	Genetics, Mendel & Meiosis II	Ch. 5		
5	18 Feb.	10	DNA, Transcription & Translation I	Ch. 5	Invert. Survey III	3-42 to 3-59
	19 Feb.	R1	*Review*			
	20 Feb.	E1	**Exam (Wednesday evening)**		*Bring your dissecting kit!!*	
	21 Feb.	11	DNA, Transcription & Translation II	Ch. 5		
6	25 Feb.	12	Evolution I	Ch. 6	Invert. Survey IV	3-60 to 3-67
	26 Feb.	13	Evolution II	Ch. 6		
	28 Feb.	14	Evolution III	Ch. 6	*Bring your dissecting kit!!*	
7	4 Mar.	15	Phylogeny I	Ch. 10	Invert. Survey V	3-68 to 3-84
	5 Mar.	16	Phylogeny II	Ch. 10		
	7 Mar.	D2	*Discussion*	*TBA*	*Bring your dissecting kit!!*	
8	11 Mar.	17	Reproduction I	Ch. 7	Invert. Survey VI	3-85 to 3-103
	12 Mar.	18	Reproduction II	Ch. 7		
	14 Mar.	19	Reproduction III	Ch. 7	*Bring your dissecting kit!!*	
9	18 Mar.	20	Development I	Ch. 8	Chordate Surv. I	4-1 to 4-15
	19 Mar.	R2	*Review*			
	20 Mar.	E2	**Exam (Wednesday evening)**		Common Animals	6-16 to 6-31
	21 Mar.	21	Development II	Ch. 8		
			SPRING BREAK			
10	1 Apr.	22	Skeletons, Muscles, & Movement I	Ch. 29	Chordate Surv. II	4-16 to 4-20
	2 Apr.	23	Skeletons, Muscles, & Movement II	Ch. 29		
	4 Apr.	D3	*Discussion*	*TBA*		
11	8 Apr.	24	Homeostasis I	Ch. 30	Rat Dissection I	2-1 to 2-26
	9 Apr.	25	Homeostasis II	Ch. 30-31		
	11 Apr.	26	Homeostasis II	Ch. 31	*Bring your dissecting kit!!*	
12	15 Apr.	27	Digestion & Nutrition	Ch. 32	Rat Dissection II	2-27 to 2-43
	16 Apr.	28	Immunology	Ch. 35		
	18 Apr.	D4	*Discussion*	*TBA*	*Bring your dissecting kit!!*	

LECTURE SCHEDULE (continued)

wk.	date	#	topic	reading	lab	manual
13	22 Apr.	29	Nervous Systems & Sense Organs I	Ch. 33	Rat Dissection III	2-44 to 2-62
	23 Apr.	R3	*Review*			
	24 Apr.	E3	**Exam (Wednesday evening)**		*Bring your dissecting kit!!*	
	25 Apr.	30	Nervous Systems & Sense Organs II	Ch. 33		
14	29 Apr.	31	Endocrine System	Ch. 32	Macromolecules & Enzymes	5-4 to 5-19
	30 Apr.	32	Behavior	Ch. 36		
	2 May	D5	*Discussion*	*TBA*	*Bring your goggles!!*	
15	6 May	33	Ecology	Ch. 38	Metabolism	5-1 to 5-3
	7 May	34	Biogeography	Ch. 37		
	9 May	R4	*Review*			
16	14 May	F	**Final Exam (12:30-2:30 PM)**			