

BIOLOGY 160 – INTRODUCTION TO ANIMAL BIOLOGY

Section 03, Fall 2017 Course Syllabus

Instructor:

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Course Information:

Lecture - Room 464, Trainer Natural Resources Building (TNR)
Monday & Wednesday; 9:30am – 10:50am

Lab - Room 355, Trainer Natural Resources Building (TNR)
Section L1 – Tuesday; 8:00am – 10:50am
Section L2 – Thursday; 9:00am – 11:50am

Office hours: 11:00 to 11:50 Monday & Wednesday, also by appointment

Course website – see D2L

Required Text:

Urry, Cain, Wasserman, Minorsky, Reece. 2017. *Campbell Biology*, 11th ed. Can be rented in the university bookstore.

Course Objective:

This course will introduce you to how animals work, from cells to organ systems, how traits are inherited, and how animals interact with and adapt to their environments. You will also learn about animal classification, diversity of animals, and evolutionary relationship between many different types of organisms covered in lab, from sponges to mammals, as well as how those evolutionary relationships take shape (i.e., how evolution occurs). Even if you are not a biology major, you will leave this course with information that will affect your life, whether it is personally or professionally.

Learning Outcomes:

By the end of the biology introductory sequence (Biol 130, Biol 160, and Biol 270), you should be able to:

1. Recognize the multiple levels of complexity at which biological systems operate, from molecules to ecosystems and the biosphere, and explain the emergent properties and processes characteristic of each level.
2. Describe mechanisms for the continuity of life, including the processes of inheritance, development, and evolution.
3. Demonstrate proficiency in the methods and philosophy of science, including articulation and application of the Scientific Method, collection and analysis of biological data, and application of professional ethics.
4. Critically evaluate and synthesize biological information from multiple sources, including the primary scientific literature, and communicate biological knowledge to both professional and non-professional audiences.
5. Articulate the application of biological science to meeting the needs of society, including basic research, stewardship of biodiversity, human health, and entrepreneurial innovation.

Grading:

Grade Items	% of Course Grade	Points
Exam I	12.5 %	125
Exam II	12.5 %	125
Exam III	12.5 %	125
Comprehensive Final	20 %	200
Lecture Quizzes	12.5 %	125 (10 @ 12.5 points each)
Lab Practicals	30 %	300 (10 @ 30 points each)
Total	100 %	1000

Grade Scale:

A ≥ 93%	B+ ≥ 87%	C+ ≥ 77%	D+ ≥ 67%	F ≤ 59%
	B ≥ 83%	C ≥ 73%	D ≥ 63%	
A- ≥ 90%	B- ≥ 80%	C- ≥ 70%	D- ≥ 60%	

Grades will be posted on D2L

Exams and Quizzes:

There will be three Exams given during class lecture time, and a comprehensive Final. All exams must be taken for a grade. Missed exams can only be made up upon acceptance of documentation for an excusable absence.

Weekly quizzes will be given at the end of class on Wednesday each week. These quizzes will cover only material from that week and are meant to be assess whether you have attended and incorporated the content from lecture.

Extra credit opportunities are not available to individuals, so please do not inquire about this. If extra credit is offered, it will be communicated and made available to the entire class.

Attendance Policy:

- Attendance at all lectures and labs is required. Any missed assignments cannot be made up without approved documentation for an excusable of absence.
- Excusable absences include illness, accident, family emergency, professional development activity, religious activity (see UWSP University Handbook Chapter 22), or university sanctioned event. Acceptable documentation is the instructor's discretion, but may be written or electronic documentation for the reason of absence. In the case you have an expected or unexpected absence, please contact the instructor **AS SOON AS POSSIBLE** to notify about the nature of the absence and determine if it can be excused.
- Late arrival to class will not be excused and any assignment, quiz, or exam due during that class will not be granted a time extension.

Generally, missing any class will put you at a distinct disadvantage in this and all courses. You are paying to attend this course and learn about Biology. Attending is the first step to getting your money's worth!

Academic Conduct:

Do not copy the work of other students; Do not represent the work of other students as your own; Do not share your work with other students

You are responsible for the honest completion and representation of your work and for the respect of others' academic endeavors. Any action of cheating, plagiarism, or academic misconduct is subject to the penalties outlined in UWS University Community Rights and Responsibilities, Chapter 14. Please refer to the University Community Rights and Responsibilities rules and regulations for more information: <https://www.uwsp.edu/dos/Documents/CommunityRights.pdf#page=11>

Student assignments determined to be in violation of these policies will result in a grade of zero (0). Depending on the circumstance, students may receive further penalty in accordance with these policies.

Course Communication:

Information about this course will be communicated through D2L and/or sent to University email accounts. Students are responsible for/expected to check their University email regularly. If you use an email account other than your University account to contact the instructor, be sure your full name is included in the message!

Electronic Devices:

Cell phones should be turned **OFF** and **NOT BE USED** during class times. No other communication or musical devices are allowed. Students needing an electronic language dictionary during exams may use one with permission from the instructor (see below). No video or audio recording of lectures is permitted without the prior permission from the instructor (see below).

Students Seeking Assistance & Students Disabilities:

As the instructor, it is my goal to meet the educational needs of ALL STUDENTS and to provide the best learning environment possible.

Any students seeking/considering use of assistive technology, materials, or accommodations are encouraged to talk with the instructor at the beginning of the course. It is my goal to find the most effective way to teach all students. Students with a disability seeking accommodations should also register with the Disability and Assistive Technology Center (<https://www.uwsp.edu/disability/Pages/default.aspx>) in the Learning Resource Center (the Library).

Suggested study habits:

It is often observed that people learn more when they encounter and interact with subject material in different ways. The following scale presents representative measures of how we might learn through different forms of interaction.

You learn:

10% of what we **read**
20% of what we **hear**
30% of what we **see**
40% of what we **see & hear**
50% of what we **write**
60% of what is **discussed**
70% of what we **experience**, and
95% of what we **teach**

Before each class:

- a) Read the textbook chapters and summary sections that pertain to the info in the lecture slides (Powerpoint). While reading, take notes on the side of each slide to help clarify the information discussed in class. These notes can be used as lecture slide guide sheets.

Before the exam:

- a) **Rewrite your notes!** For each lecture, continue developing your lecture slide guide sheets and write out the information that was covered for each slide. Try to describe any images/figures on the slide in your own words. Try to do this for each lecture BEFORE the next lecture. Then read it over once to see the whole picture or overall theme of that lecture. When appropriate, make a table of info to help compare concepts.
- b) **Anticipate exam questions.** Come up with 1-2 questions of your own from each slide to quiz yourself later. Definitions, short answers, problems, and comparisons are all good types of questions.
- c) **Study your notes.** At the end of each week you will have made lecture slide guide sheets that include your notes for that material. Before the week's lectures, read over your lecture slide guide sheets and highlight only the information you could not remember.
- d) **Focus your studies.** Before the exam you will have made a set of lecture slide guide sheets with the information you need to reinforce already highlighted. Focus on this highlighted material one or two days before the exam. Reread, highlight info that you are having trouble learning or remembering and say it out loud, to yourself, with another person from class, a friend or study group.
- e) **Practice questions.** At the end of each chapter, try the practice questions (suggested on D2L) before looking at the answers in the back of the book. Write down the ones you do not understand and ask the instructor for guidance with those problems.
- f) **Revisit your study questions.** Try to answer the questions that you generated for each slide. Study with someone in class and try to answer each other's questions.
- g) **Teach your peers.** If you can teach it to another person, then you know it!

The night before the exam:

- a) **Value your sleep.** Being wakeful and well rested can help your performance on the exam. Be sure to get a good night's sleep before the exam. Cramming at the expense of sleep is not the best method.
- b) **Try to relax.** Study hard, but also seek ways to reduce your stress. Take breaks to help refocus your mind.

After the exam:

- a) A good grade can result from **reading** the text and your notes, **listening** to lectures, **seeing** the words and figures, **writing** and **rewriting** notes from class, the **experience** of answering questions from the chapters or provided, and **discussing** topics with another person (saying it out loud).
- b) Your grade should reflect the amount of cumulative effort you put into your studying. Remember, for every hour of lecture, you should a lot two hours of designated studying time. In other words, for each exam you should be spending about 10-15 hrs studying! It isn't possible to effectively achieve that right before an exam.

BIOL160 COURSE SCHEDULE – Introduction to Animal Biology, Lentz Fall 2017

Wk	Date	Topic	Chapter	
1	6	Syllabus & Themes of Biology	1	Exam I Content
	Lab	Introduction & Orientation		
2	11	Biomolecules	4 & 5	
	13	Structures of Animal Cells Quiz #1	6	
3	Lab	Microscopy & Cells		
	18	Membrane Function in the Cell	7	
4	20	Cellular Metabolism with Enzymes Quiz #2	8	
	Lab	Properties of membranes: Diffusion & Osmosis		
5	25	Cellular Respiration: Energy Production	9	
	27	Cell Communication Quiz #3	11	
6	Lab	Properties of enzymes		
	2	The Cell Cycle: Mitosis	12	Exam II Content
4	Exam I (Chps - 1, 4, 5, 6, 7, 8, 9, 11)			
7	Lab	Metabolism		
	9	The Cell Cycle: Meiosis	13	
8	11	Genes and Inheritance Quiz #4	14	
	Lab	Mitosis & Meiosis		
9	16	The Chromosomal Basis of Inheritance	15	
	18	DNA as Genetic Material and it's Replication Quiz #5	16	
10	Lab	Phylogeny & Classification		
	23	Gene Expression: DNA to Protein	17	
11	25	Descent with Modification: Principle of Evolution Quiz #6	22	
	Lab	Deuterostomes I (Echinoderms, Amphibians, & Fish)		
12	30	Evolution in Populations	23	Exam III Content
	1	Exam II (Chps - 12, 13, 14, 15, 16, 17, 22)		
13	Lab	Deuterostomes II (Birds, Reptiles, & Mammals)		
	6	Evolution in Speciation	24	
14	8	Animal Diversity Quiz #7	32	
	Lab	Invertebrates I (Porifera, Cnidaria, Platyhelminthes, Nematoda)		
15	13	Animal Form and Function	40	
	15	Animal Nutrition and Digestive Systems Quiz #8	41	
16	Lab	Invertebrates II (Mollusca, Annelida)		
	20	Circulatory & Immune Systems	42 & 43	
17	22	Nervous & Sensory Systems Quiz #9	49 & 50	
	Lab	No Lab This Week – Thanksgiving Holiday		
18	27	Animal Reproduction and Development	46 & 47	Final Exam Content + Cummu- -lative
	29	Exam III (Chps – 23, 24, 32, 40, 41, 42, 43, 49, 50)		
Lab	Invertebrates III (Tardigrada, Arthropoda)			
19	4	Ecology and Populations	52 & 53	
	6	Population Ecology Quiz #10	53	
20	Lab	Rat Dissection I and II		
	11	Community Ecology	54	
21	13	Ecosystems and Conservation Biology	55 & 56	
	Lab	Rat Dissection III		
Comprehensive Final Exam: Wednesday, December 20 (12/20) 8am - 10am				

