

Biology 160- Introduction to Animal Biology

UW-Stevens Point

Fall 2018

Instructor: Dr. Ashley Driver

Office: CBB 307

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Lecture (CBB 165): M W 2:00pm-3:15pm

Lab (CBB 160): *Section 1* T 2:00pm-4:50pm, *Section 2* R 2:00-4:50pm

Office Hours: Wednesday 11am-noon, Thursday noon-1pm, or by appointment.

Course description: This course is a comprehensive view of animal composition, diversity, and function. During the semester we will address topics ranging from the molecular to macro scale and define numerous concepts necessary to life. Additionally, we will discuss social contexts of animal biology.

By the end of the course a student should be able to:

1. Recognize cell theory, inheritance, evolution, and developmental biology as the foundations of zoology.
2. Integrate various levels of biological organization and their emergent properties.
3. Compare and contrast physiological processes in animals from different phyla.
4. Apply principles of zoology to broader personal and societal issues.

Textbook: *Campbell Biology*, eleventh edition (CB 11e) by Urry, Cain, Wasserman, Minorsky, and Reece. The book should be available through the UWSP bookstore rental program at the Dreyfus University Center.

Lab Manual: "Rat Manual" and the Biology 160 manual are available at the UWSP bookstore.

Additional items: Dissection kits and safety goggles are available at the UWSP bookstore.

I highly recommend acquiring some rubber gloves for labs- these can be acquired at grocery and hardware stores.

Course website: Course content (lectures, grades, announcements, etc.) will be posted to D2L which should be *checked regularly*.

Point Distribution:

Exams (100 pts each x 4 exams)	400 points
Lecture Activities/Quizzes (11, 1 drop)	50 points
Lab Assignments	130 points
Pre-Lab/Post-Lab Quizzes (11 quizzes, 1 drop)	<u>50 points</u>
	630 points

Exams: You will have four total exams in this course, each totaling 100 points. Exams are closed-notes, closed-book. These exams will be given in class on selected dates shown in the schedule. **Attendance is mandatory for exam sessions.**

Lecture Activities/Pop Quizzes: During random class periods either a short assignment or pop quiz will be given that is worth 5 points. **You must be present for the full lecture period to receive points for these!** There will be no make-ups. Out of the 11, the lowest score will be dropped

Lab Assignments: Lab assignments will be due during the semester with varying point totals. You will be expected to write thorough and clear findings. Additionally, when applicable, you will be asked to interpret your data (i.e.- what do these results tell you? Why is this important?). *You must attend lab to receive points!*

Pre-Lab/Post-Lab Quizzes: A total of eleven 5-point quizzes will be given during the laboratory session, with the lowest score dropped. **Lab quizzes cannot be made up without advance and approved notice of absence (see Absences).**

Grading Scale:

91.0-100	A	81.0-88.9	B	71.0-78.9	C	60.0-68.9	D
90.0-90.9	A-	80.0-80.9	B-	70.0-70.9	C-	00.0-59.9	F
89.0-89.9	B+	79.0-79.9	C+	69.0-69.9	D+		

Course grading: Your grade in this course will be determined by dividing the total number of points that you earn by the total (630), then multiplying by 100, and rounding to the nearest 0.1%.

Extra Credit: Extra credit assignments will not be given in this course. There is a *possibility* that bonus points may be given in the class—so plan to regularly attend! If you aren't here, you can't get the extra points!

Absences: It is expected that you will regularly attend both lecture and laboratory sessions for this course. Success cannot be attained if you are not actively participating with your colleagues to understand the material.

- **If you are ill on the day of an exam or an in-class activity, you must contact me before class (if at all possible) and you should be prepared to provide documentation.** I must be notified of other conflicts, such as those arising from University sponsored athletic teams and student organizations, **at least two weeks prior to the event.**
- If you are a student athlete or student organization member whose team/organization will be traveling to away games/events on *any of the dates* on which in class activities or exams are scheduled, it is imperative that you provide me with your travel letter **as soon as you receive it** from your coach/advisor, so we can schedule your makeup activities/exams.

Electronic Devices: Laptops will be allowed in lecture with the premise that they are used for the sole purpose of accessing course material during class time. It is expected that you stay on task and do not cause distraction during the class period. Moreover, it is expected that you will silence your cell phone during class and refrain from using text messaging/surfing the web/etc. during the class period. *Please be respectful!*

Academic Policies: Academic misconduct (as outlined and defined by Chapter 14 in the Academic Handbook.<https://www.uwsp.edu/acadaff/Pages/handbook.aspx>) will NOT be tolerated in this course. *As a student you are expected to show integrity and honesty!* Cheating or plagiarism related to any of the course assessments *will not be tolerated* and result in a score of zero for that assessment.

Disability Services: Any student who feels that he/she may need an accommodation based on the impact of a disability should contact the Disability and Assistive Technology Center (Room 609 Albertson Hall, datctr@uwsp.edu). If you have already registered with this office and would like to discuss your class accommodations for the semester, please set up an appointment to meet with me privately.

Grade Discrepancies: Grades will be posted on D2L throughout the semester. If there are discrepancies on any assignments, quizzes, or exams they can be addressed with the instructor, in person, up to *one week* after the grade is posted (for online quizzes) or the assignment/exam/quiz is handed back in class. After this time, the grade will stand with whatever was originally granted.

Emergencies: In the event of a medical emergency call 9-1-1 or use Red Emergency Phone in the hallway outside of the classroom. Offer assistance if trained and willing to do so. Guide emergency responders to victim.

In the event of a tornado warning, proceed to the first floor of the CBB Building where there is designated shelter rooms. In the event of a fire alarm, evacuate the building in a calm manner. Meet outside the building and notify instructor or emergency command personnel of any missing individuals.

Active Shooter/Code React – Run/Escape, Hide, Fight. If trapped hide, lock doors, turn off lights, spread out and remain quiet. Call 9-1-1 when it is safe to do so. Follow instructions of emergency responders.

See UW-Stevens Point Emergency Procedures at www.uwsp.edu/rmgt/Pages/em/procedures for details on all emergency response at UW-Stevens Point.

Open Labs: Biology 160 labs are open for night study from 6:00pm- 8:00pm on Tuesday through Thursday nights (except week I & II). This service is to provide you an opportunity for additional study and is **NOT** meant to substitute for regular attendance and participation in your day lab section. There are **NO** instructors present and the student monitors on duty are there **SOLELY** to provide security for the area, are **NOT TUTORS**, and **SHOULD NOT BE EXPECTED TO ANSWER QUESTIONS!** While we hope that all students wishing to put additional time will be able to find some of the Open Lab hours that allow them to come in for night study, it is **IMPOSSIBLE** to guarantee all students availability to the labs at their convenience due to limitations on student assistance and the need to set up, tear down and prepare for laboratory examinations and regularly scheduled labs. **Open labs are NOT a substitute for attending your regularly scheduled lab!!!!**

References available in open lab include: “A Photographic Atlas for the Zoology Laboratory”, Peterson Field Guide to Freshwater Fishes of North America North of Mexico” and “A Guide to Field Identification Birds of North America”.

Lost & Found: Items left in the Zoology labs will be retained until the end of the current semester. Check with your instructor if you lost an item in lab. **Your name on notebooks, etc. is important.**

Common Animal Website:

<https://www4.uwsp.edu/biology/courses/zoolab/default.htm>

Recommendations for improving course performance...i.e.- “How can I achieve my goals for this course”

1.) Understand that as the instructor, I do not hand out grades...*you earn them.*

You are accountable for your performance which goes beyond assignments or exams. You are observed for performance and interactions in lab and lecture periods. You are accountable to reach out to me should you have questions or need assistance. As your instructor *I am your resource*, so make sure you are following through when you need it!

2.) Assess your learning methods.

Research has shown that individuals take in information in different ways. There are four main categories for learning styles (VARK; V: Visual, A: Aural, R: Reading/writing, K: Kinesthetic). In certain cases, you may be a combination of learning styles (requiring visual and kinesthetic). By understanding how you take information, it can improve your study and even lecture habits. There are online quizzes that can help you understand what learning style fits you best (<http://vark-learn.com/the-vark-questionnaire/>). It may be helpful to take the quiz and see if you have a definitive learning style or if you are multi-modal. Does this fit with your study habits? Could it change them?

3.) Assess how you study.

One of the biggest errors I see with students is that when they study, they do so in a passive way. That is, they study with the book or answers right in front of them. The issue with this is that it isn't requiring the person to create an answer from blank and may allow them to “cheat” themselves by looking at the answer and assuming they know it. I recommend to all of my students that they *study in a way that mimics a testing environment*. Put yourself *under pressure* to create an answer from nothing. For example: create practice questions while studying, then close your notes/book/etc. and attempt to answer these questions on a *blank* sheet of paper. Once you have completed a set of questions, *grade your answer*. Then go back over material you answered incorrectly, review material, and retest yourself. Another way to be more active in your studying is to form *study groups*. Meet at the library and test each other- have one person at the white board and another asking questions. *If you can teach it to your peers, you know it!*

4.) Find balance.

While regular attendance and studying are essential for this course, there are other factors you must keep in mind! SLEEP is absolutely necessary (and no, that short nap between cramming does not count!). It is recommended to get 7-8 hours of sleep to allow your body to rest and repair each day. Avoid cramming and stressing yourself out. *Don't believe me?* Well I hope you'd believe science, which has shown that lack of sleep is detrimental to brain cell function: <https://www.nature.com/articles/nm.4433>.

5.) Be realistic.

To succeed you must be realistic in terms of your input and expected output. You will need to both attend and engage in course sessions (whether it be lecture or lab). You will need to *regularly* (yes, on at least a *weekly* basis) review information in this course to stay on track. You may need to seek assistance with course material (tutoring, study groups, office hours). You should seek out the instructor if you have questions or concerns. I have posted office hours, but should those not fit your schedule, please e-mail me and we can set up an alternate time. *You are accountable for your performance* and should regularly review your progress to determine whether you are on track for your goals.

Date	Lecture Topic*	Book Chapters	Lab topic (Lab Manual Pages)
9/5	Intro to Animal Biology	Chapter 1	(No lab)
9/10	Chemistry of life	Chapters 2,3	Microscopy and cells
9/12	Macromolecules	Chapter 5	
9/17	Cellular organization: Membranes and organelles	Chapters 6,7	Membrane properties. Diffusion and osmosis **YOU WILL NEED GOGGLES**
9/19	Cellular function: Metabolism and enzymes	Chapter 8	
9/24	Cellular function: Respiration	Chapter 9	Properties of enzymes **YOU WILL NEED GOGGLES**
9/26	Cellular interactions: Signaling/communication	Chapter 11	
10/1	Exam 1		Metabolism
10/3	Cell division: Mitosis	Chapter 12	
10/8	Cell division: Meiosis and inheritance	Chapters 13	Mitosis and meiosis
10/10	Genes and inheritance	Chapter 14	
10/15	Chromosomal basis for inheritance	Chapter 15	Phylogeny and classification
10/17	Gene expression: From DNA to protein	Chapter 17	
10/22	Descent with modification: a Darwinian View	Chapter 22	Deuterostomes I (Echinoderms, Amphibians, and Fish)
10/24	Phylogeny and the Tree of Life	Chapter 26	
10/29	Exam 2		Deuterostomes II (Birds, Reptiles, and Mammals)
11/31	Animal Diversity	Chapter 32	
11/5	Invertebrates	Chapter 33	Invertebrates I (Porifera, Cnidaria, Platyhelminthes, Nematoda)
11/7	Vertebrates	Chapter 34	
11/12	Principles of Animal Form and Function	Chapter 40	Invertebrates II (Mollusca, Annelida) **BRING DISSECTION KITS**
11/14	Animal Reproduction	Chapter 46	
11/19	Animal Development	Chapter 47	No Lab- Thanksgiving Break
11/21	Exam 3		
11/26	Animal nutrition	Chapter 41	Invertebrates III (Tardigrada, Arthropoda) **BRING DISSECTION KITS**
11/28	Circulation and gas exchange	Chapter 42	
12/3	Immune system	Chapter 43	Rat Dissection I and II **BRING DISSECTION KITS**
12/5	Osmoregulation	Chapter 44	
12/10	Hormones and the endocrine system	Chapter 45	Rat Dissection III **BRING DISSECTION KITS**
12/12	Neuronal signaling and the nervous system	Chapter 48,49	
FINAL EXAM- TBD			

*Lecture topics are subject to change upon discretion of the instructor.