INTRODUCTION TO ANIMAL BIOLOGY
BIOL 160, Fall 2020
Sections 03 and 03H

Instructor: Dr. Karin Bodensteiner
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Lecture: Synchronous online via Zoom, Monday/Wednesday/Friday 12:00-12:50 a.m.
Meeting ID: 980 1735 1580
Passcode: 3a220q
Meeting Link: https://uwsp.zoom.us/j/98017351580?pwd=ZFlndTZUWGY5cllIU2F1bFU3MUJCdz09

Textbook: Urry, Cain, Wasserman, Minorsky, and Reece. (2017) Campbell Biology, 11th Edition. Pearson, New York. Available for rent in bookstore.

Laboratory Exercises: Will be posted on Canvas and discussed during in person recitation once a week.

Recitation: In person via cohort attendance, Mondays at 2:00, 3:00, or 4:00 p.m.; or Wednesdays at 2:00, 3:00 or 4:00 p.m.

Virtual Office Hours: 2:00 to 3:30 p.m. Tuesday and Thursday via Zoom, or by appointment
Meeting ID: 924 9642 6808
Passcode: 9n813w
Meeting Link: https://uwsp.zoom.us/j/92496426808?pwd=NGxTa0pVQjBxM3QvMTFSMEJTc0Jhdz09

Course Content and Additional Course Information: We will use Canvas for delivery of course material. Please visit the Canvas training site for help with using Canvas. https://uwstp.instructure.com/enroll/36GKLY
Material associated with each lecture and lab will be posted to Canvas as we go through the semester.

Zoom Support: https://www.uwsp.edu/infotech/Pages/Tutorials/Zoom/Zoom.aspx

System Requirements:

Because this is largely an on-line course, it is important that you have the appropriate tools to access course content. Your phone is not an adequate interface for some course components, so you will need a computer outfitted with Chrome (version 80 or higher) or Firefox. Other internet browsers can be extremely glitchy and do not work well with Canvas.

As some components of this course are synchronous (meetings on line that you attend at a specific time), you should have a stable internet connection that meets the following specifications:

- 800kbps/1.0Mbps (up/down) for high quality video
- For gallery view and/or 720p HD video: 1.5Mbps/1.5Mbps (up/down)
- Receiving 1080p HD video requires 2.5mbps (up/down)

If you are unsure of your internet specifications, please check with your internet provider.

If you need to access computers on campus, please consult this listing of availability:
https://www.uwsp.edu/infotech/Pages/ComputerLabs/All-Labs.aspx

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. To reinforce content information, we will also be pulling in information from outside sources from articles and other media for in-class discussions. This course meets natural science general education requirements by fulfilling the learning outcomes for this category of the general education program.

General Education Program Natural Science Learning Outcomes: (upon completing this requirement, students should be able to…)

1. Explain major concepts, methods, or theories in the natural sciences to investigate the physical world.
2. Interpret information, solve problems, and make decisions by applying natural science concepts, methods, and quantitative techniques.
3. Describe the relevance of aspects of the natural sciences to their lives and society.

Student Learning Outcomes: (with diligent effort on their part, upon completing this course, students should be able to…)

1. Explain how scientific inquiry is different from other intellectual endeavors.
2. Recognize cell theory, inheritance, evolution, and developmental biology as the foundations of zoological science.
3. Integrate various levels of biological organization and their emergent properties.
4. Differentiate and classify animal body plans and organ systems.
5. Apply principles of zoological science to broader personal and societal issues.
6. Recognize critical thinking as a process of identifying, analyzing, evaluating, and constructing reasoning in deciding what conclusions to draw or actions to take.

Lecture:

Our class will be held synchronously at the scheduled lecture time (M/W/F from 12:00 to 12:50 p.m.) in a regularly scheduled Zoom meeting. I am hopeful that these meetings will be similar to an in-person class, where you are free to ask questions, discuss material, and engage with the instructor and course material. Although I will be posting recordings of these lectures on Canvas once they are completed, synchronous attendance will help you stay on track and keep you from falling behind in the work load.

Laboratory and Recitation:

Labs will consist mainly of on line exercises that will help you hone your skills in scientific reasoning and data analysis. Most labs also provide an opportunity to apply concepts covered in lecture. We will be using a combination of on line laboratories provided by an outside resource, and “in house” laboratories. You will complete one lab per week on line. The following week, you will meet with a cohort of other students and your instructor to go over that lab. This in-person meeting may help you to clarify points in the lab that you didn’t understand, and will give you an opportunity to ask questions and interact with others. Due to camera incompatibility, recitation sessions will not be broadcast or provided via Zoom. However, each recitation will entail a short assignment which all students are expected to complete. If you are unable to attend the recitation and have questions, please reach out to your instructor and/or your fellow classmates. Note that because of the way labs are scheduled, you will be dealing with two labs each week—you will finish one (in your lab section) and begin the next (on-line). Please see the lab schedule at the end of this document for additional details.

Point Distribution:

Lecture Exams	4 @ 100 pts each
Online Laboratories	140 pts
Recitation	60 pts
Professionalism	50 pts
Total	650 pts

Grading 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	

Exams and Assignments:

All exams 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 assignment.

There will be four lecture exams over the course of the semester. Each exam is worth 100 points and will consist of multiple choice, definitions, fill-ins, and short answer questions. In addition, application of information provided in lecture to an unknown problem may be required. 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. Points will also be awarded in the laboratory. These points will come from lab-based quizzes, recitation exercises, and assignments throughout the semester. You should expect some form of quiz or assignment almost every week in lab.

Professionalism:

Attendance: You are expected to attend and/or complete (either virtually or in person) all lectures, labs, and recitations. If you will miss a class due to a college-sanctioned event, you must notify your instructor in advance and complete any coursework before the next scheduled lab or class period. Exams must be taken at the assigned time and alterations to this schedule will only be made for emergencies. In such cases, evidence of some kind must be provided and you are expected to make arrangements within 48 hours of the exam to schedule a make-up. It is your responsibility to communicate concerns and get notes for any missed classes. As part of your professionalism grade, you will also be evaluated on course participation, including participation in virtual classes and on line discussions.

Behavior: Complete mutual respect and courtesy is expected and all students should come to class ready to be engaged and actively participate in the learning experience. Open, honest discussion is encouraged and will factor in to your professionalism grade.

Lecture materials and recordings for this course are protected intellectual property. Students in the course may use course materials and recordings for their personal use as related to participation in this class. Students may also take notes on course material. Students may not copy or share lecture materials outside of class, including posting on internet sites or selling to commercial entities. Students are also prohibited from selling their personal notes or being paid for taking notes without the instructor's express written permission. Unauthorized use of copyrighted materials (lecture notes, slides, and recordings) constitutes copyright infringement under university policy, and University of Wisconsin System Chapters 14 and 17, governing student academic and non-academic misconduct.

Face Coverings:

- At all UW-Stevens Point campus locations, the wearing of face coverings is mandatory in all buildings, including classrooms, laboratories, studios, and other instructional spaces. Any student with a condition that impacts their use of a face covering should contact the Disability and Assistive Technology Center to discuss accommodations in classes. Please note that unless everyone is wearing

a face covering, in-person classes cannot take place. This is university policy and not up to the discretion of individual instructors. Failure to adhere to this requirement could result in formal withdrawal from the course.

Other Guidance:

- Please monitor your own health each day using this screening tool. If you are not feeling well or believe you have been exposed to COVID-19, do not come to class; email your instructor and contact Student Health Service (715-346-4646).
    - As with any type of absence, students are expected to communicate their need to be absent and complete the course requirements as outlined in the syllabus.
- Maintain a minimum of 6 feet of physical distance from others whenever possible.
- Do not congregate in groups before or after class; stagger your arrival and departure from the classroom, lab, or meeting room.
- Wash your hands or use appropriate hand sanitizer regularly and avoid touching your face.
- Please maintain these same healthy practices outside the classroom.

Course Assistance:

One-on-one tutors and walk-in tutoring are available to help students with lecture and lab material. Interested students should contact the Tutoring-Learning Center (tlctutor@uwsp.edu). Information on group tutoring to follow.

Grade Discrepancies:

Grades will be posted on Canvas 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. After this time, the grade will stand with whatever was originally granted.

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. Cheating or plagiarism will result in a score of zero for a give assessment and/or additional disciplinary action.

Disability Services:

Any student who feels that they 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 meet with me.

Emergency Response Guidance:

- In the event of a medical emergency call 9-1-1 and guide emergency responders to victim.
- In the event of a tornado warning, proceed to lowest level interior room without windows. Avoid wide-span structures (gyms, pools, or large classrooms).
- In the event of a fire alarm, evacuate building in a calm manner, meet on sidewalk to east of building, near UWSP sign. 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 protocols at UW-Stevens Point.

COURSE SCHEDULE	Week	Dates	Lecture Topic	Chapter	Online Laboratories	Recitation (Face to Face 1 hr./week)
Unit 1: Macromolecules and the Cell	1	M 8/31	No Class			No Recitation
		W 9/2	Introduction to Animal Biology	1		
		F 9/4	Chemistry of Life	2		
	2	M 9/7	***Labor Day Holiday***		McGraw Hill Connect Tutorial	No Recitation
		W 9/9	Water and Life	3		
		F 9/11	Macromolecules	5		
	3	M 9/14	Macromolecules	5	Scientific Method	Discussion of Scientific Method
		W 9/16	Cellular Organization	6		
		F 9/18	Cell Membranes	7		
	4	M 9/21	Cellular Communication	11	Osmosis and Diffusion	Discussion of Osmosis and Diffusion
		W 9/23	Cellular Communication	11		
		F 9/25	**Exam 1**			
Unit 2: From DNA to RNA to Protein	5	M 9/28	Cellular Respiration	8 & 9	Properties of Enzymes	Discussion of Enzymes
		W 9/30	Cellular Respiration	8 & 9		
		F 10/2	Mitosis and the Cell Cycle	12		
	6	M 10/5	Meiosis	13	Mitosis & Meiosis and Human Genetics	Discussion of Beach Mouse Paper and Mitosis and Meiosis
		W 10/7	Patterns of Inheritance	14		
		F 10/9	Chromosomal basis for inheritance	15		
	7	M 10/12	Chromosomal basis for inheritance	15	Mendelian Genetics	Discussion of Beach Mouse Paper and Mendelian Genetics
		W 10/14	Molecular basis for inheritance	16		
		F 10/16	Molecular basis for inheritance	16		
	8	M 10/19	Gene Expression	17	DNA Transcription and Translation (Netlogo)	Discussion of Beach Mouse Paper and Central Dogma Lab
		W 10/21	Gene Expression	17		
		F 10/23	**Exam 2**			
Unit 3: Animal Diversity, Reproduction, and Development	9	M 10/26	Animal Diversity	32	Natural Selection and Evolution (Stickleback Lab)	Discussion of Stickleback Lab
		W 10/28	Invertebrates	33		
		F 10/30	Invertebrates	33		
	10	M 11/2	Vertebrates	34	Survey of Invertebrate Body Plans; Begin Invertebrate Digital Collection (idigbio)	Discussion of Invertebrate Body Plans; Introduction of Digital Collection
		W 11/4	Vertebrates	34		
		F 11/6	Animal Reproduction	46		
	11	M 11/9	Animal Reproduction	46		Animal Diversity Student Presentations
		W 11/11	Animal Development	47		
		F 11/13	Animal Development	47		
		M 11/16	**Exam 3**			
Unit 4: Animal Form and Function	12	W 11/18	Basic Principles	40		Animal Diversity Student Presentations
		F 11/20	Animal Nutrition	41		
	13	M 11/23	Circulation and Gas Exchange	42	Invertebrate Digital Collection Due	No Recitation (Holiday Week)
		W 11/25	Circulation and Gas Exchange	42		
		F 11/27	***Thanksgiving Holiday***			
	14	M 11/30	Hormones & Endocrine System	45	Invertebrates: Crayfish Virtual Dissection	Features of Invertebrates (No Face to Face Meeting)
		W 12/2	Hormones & Endocrine System	45		
		F 12/4	Neuronal Signaling	48		
	15	M 12/7	Neuronal Signaling	48	Deuterostomes: Mouse Virtual Dissection	Features of Vertebrates (No Face to Face Meeting)
		W 12/9	Nervous System	49		
		F 12/11	Osmoregulation	44		
	Finals Week	W 12/16	**Exam 4: 2:45-4:45 p.m.**			