

# BIOL 160: Introduction to Animal Biology Syllabus

**Important Note:** This syllabus, along with course assignments and due dates, are subject to change. It is the student's responsibility to check Canvas for corrections or updates to the syllabus. Any changes will be clearly noted in a course announcement or through email.

## Course Information

### Instructor Information

**Instructor:** Sarah A. Orlofske

**Office:** TNR 446 and CBB 148

**Virtual Office Hours:** Monday 3-4:30 and Wednesday 10:30-12 via Zoom

Please schedule your appointment 24 hours in advance, by contacting me through the Canvas **Inbox** or **Help** menu located along the purple navigation bar on the left side of the screen. Please make the subject of the email Online Office Hours and Your Name.

**E-mail:** [Sarah.Orlofske@uwsp.edu](mailto:Sarah.Orlofske@uwsp.edu) (Email is my preferred contact method)

### Course Information

**Course Description:** Anatomy, physiology, adaptation, and classification of animals; morphology and anatomy of various types of animals. 3 hrs lec, 3 hrs lab per wk.

**Credits:** 5

**GEP:** GEP: NSC; AAS: LS, NW

**Course Meeting Days/Times Location:** Lecture ONLINE, Lab ONLINE. In addition to lecture and lab the instructor will schedule synchronous and asynchronous recitation activities with the class.

## Course Learning Outcomes

<b>GENERAL EDUCATION PROGRAM LEARNING OUTCOMES</b>	<b>COURSE LEARNING OUTCOMES:</b>
NS LO1: Explain major concepts, methods, or theories in the natural sciences to investigate the physical world.	1. Integrate various levels of biological organization and their emergent properties.  2. Differentiate and classify animal body plans and organ systems. 3. Recognize cell theory, inheritance, evolution, and developmental biology as the foundations of zoological science.
NS LO2: Interpret information, solve problems, and make decisions by applying natural science concepts, methods, and quantitative techniques.	4. Explain how scientific inquiry is different than other intellectual endeavors.
NS LO3: Describe the relevance of aspects of the natural sciences to their lives and society.	5. Apply principles of zoological science to broader personal and societal issues.

You will meet the outcomes listed above through a combination of the following activities in this course:

- View recorded lectures and read textbook chapters to gain knowledge of fundamental concepts in biology and how it relates to zoology.
- Conduct virtual labs designed to replicate the hands-on laboratory experience while simultaneously allowing you to practice using the scientific method.
- Participate in small group online discussions of peer-reviewed scientific literature
- Simulate biological processes through online educational tools and research grade software
- Describe the biodiversity of animals and identify of animal specimens through videos and virtual dissections.
- Address real-life scenarios through case studies, as well as short answer and essay questions on exams

## Textbook & Course Materials

**Required Text:** Campbell Biology, eleventh edition (CB 11e) by Urry, Cain, Wasserman, Minorsky, and Reece. Available through UWSP bookstore rental at the Dreyfus University Center.

**Other Readings:** Primary scientific articles for the recitations and online discussions will be provided directly in CANVAS.

## Expected Instructor Response Times

- I will attempt to respond to student emails within 24 hours or 48 hours on the weekend. If you have not received a reply from me within 24-48 hours please resend your email.
  - \*\*\*If you have a general course question (not confidential or personal in nature), please post it to the Course Q&A Discussion Forum found on the course homepage. I will post answers to all general questions there so that all students can view them. Students are encouraged to answer each other's questions too.
- I will attempt to reply to and assess student discussion posts within 48 – 72 hours of discussions closing.
- I will attempt to grade written work within 1 week, however longer written assignments may take me longer to read and assess.

## Student Expectations

In this course you will be expected to complete the following types of general tasks in addition to specific requirements outlined in assignment instructions.

- communicate via email
- download and upload documents to the LMS
- read documents online
- view online videos
- participate in online discussions
- complete quizzes/tests online
- upload documents to Canvas to submit an assignment

## Topic Outline/Schedule

**Important Note:** Refer to the Canvas course home page for pertinent information. Activity and assignment details will be explained in detail within each corresponding Module. As tasks come due, they will appear in your “to do” list. If you have any questions, please contact your instructor.

Week	Day	Lecture Topic	Reading	Quiz	Lecture Activity	Online Laboratory	Recitation
<i>Theme: Basics of life and What are the building blocks of animals?</i>							
1	M 1/25	Course Introduction					
	W 1/27	Animal Biology Major Themes	1			Begin Scientific Method Lab!	Complete Introduction to Scientific Literature and Reading Scientific Papers
	F 1/29	Chemistry of Life (PhET Simulation - Polarity)	2				
2	M 2/1	Water and Life (PhET Simulation - pH Scale)	3			Scientific Method Lab	Online Scientific Paper Discussion
	W 2/3	Biomolecules	5	Quiz 1			
	F 2/5	Biomolecules	5				
3	M 2/8	Tour of the Cell	6			Cell Biology	Writing Assignment
	W 2/10	Cells: Membranes and Organelles (PhET Simulation - Membranes)	7				
	F 2/12	Cells: Metabolism and Enzymes (PhET Simulation - Reactions and Rates)	8	Quiz 2			
4	M 2/15	<i>Lecture Activity!</i>			Cellular Biology and Evolution Activity	Properties of Enzymes	Cellular Biology Problem Solving Session! (Via ZOOM)
	W 2/17	Cells: Cellular Respiration	9				
	F 2/19	<b>Exam 1</b>					
<i>Theme: What processes produce the diversity of animals?</i>							
5	M 2/22	Cell Signalling	11			Mitosis and Meiosis	Writing Assignment + Peer-review
	W 2/24	Cell Cycle	12				
	F 2/26	Cell division: Meiosis and Sexual Life Cycles	13				
6	M 3/1	Genes and Inheritance	14	Quiz 3		Genetics Lab	Genetics Problem Solving Session! (Via ZOOM)
	W 3/3	Chromosomal basis for inheritance	15				
	F 3/5	Molecular basis for inheritance	16				
7	M 3/8	Gene Expression (PhET Simulation - Gene Expression)	17			DNA Transcription	Online Scientific Paper Discussion

	W 3/10 F 3/12	Lecture Activity! Descent with Modification	22		Gene Expression and Evolution	and Translation (Netlogo)	
	M 3/15 W 3/17	Microevolution  Speciation	23  24	Quiz 4		Natural Selection and Speciation	Evolution Problem Solving Session! (Via ZOOM)
8	F 3/19	<b>Exam 2</b>					
<i>Theme: How can we understand the different types of animals and How do they work?</i>							
	M 3/22  W 3/24 F 3/26	Spring Break!					
	M 3/29 W 3/31	Phylogenetics and Diversity  Animal Development and Diversity Overview	26  32, 46			Phylogenetics	Phylogenetics Problem Solving Session! (Via ZOOM)
9	F 4/2	Invertebrate Diversity	33		Invertebrate Diversity Activity		
	M 4/5  W 4/7	Invertebrate Diversity  Vertebrates: Chordate Evolution, Echinoderms, Fish, Amphibians	33  34		Invertebrate Diversity Activity  Chordates and Echinoderms Activity	No Lab - Presentations	Animal Diversity Student Presentations (Via ZOOM)
10	F 4/9	Lecture Activity!			Tetrapod Evolution Activity		
	M 4/12 W 4/14	Vertebrates: Reptiles, Birds, Mammals  Lecture Activity!	34		Evolution of Flight Activity	No Lab - Presentations	Animal Diversity Student Presentations (Via ZOOM)
11	F 4/16	Animal Form and Function	40				
	M 4/19 W 4/21	Animal Nutrition  Immunology	41  43			No Lab - Presentations	Animal Diversity Student Presentations (Via ZOOM)
12	F 4/23	<b>Exam 3</b>					

13	M 4/26	Hormones & Endocrine System	45				Writing Assignment	
	W 4/28	Nervous System (PhET Simulation - Neuron)	48					
	F 4/30	Lecture Activity!			Neurophysiology Lab	Invertebrates: Earthworm and Clam Virtual Dissection		
<i>Theme: What roles to animals play in the environment?</i>								
14	M 5/3 W 5/5	Animal Behavior <i>Lecture Activity!</i>	51		Animal Behavior Activity	Invertebrates: Crayfish Virtual Dissection	Animal Physiology Problem Solving Session! (Via ZOOM)	
	F 5/7	Population Ecology	53					
15	M 5/10 W 5/12 F 5/14	Population Ecology Community Ecology Conservation Biology	53 54 56	Quiz 5		Deuterostomes: Rat Virtual Dissection	Ecology Problem Solving Session! (Via ZOOM)	
	16	Thurs 5/20	<b>Exam 4</b>					

### Course Structure

**Lecture and Laboratory:** These components of this course will be delivered entirely online through the course management system Canvas. You will use your UWSP account to login to the course from the [Canvas Login Page](#). If you have not activated your UWSP account, please visit the [Manage Your Account](#) page to do so.

**Recitation:** In addition to lecture and lab, this semester will include recitations to provide an opportunity for interactions between faculty and students and among the class as well as more hands-on learning opportunities. The recitations will consist of 4 types of components 1) reading and online discussion of scientific papers, 2) writing assignments, 3) problem solving sessions, 4) and student oral presentations. The problem-solving sessions and student oral presentations will provide the opportunity for synchronous interaction but will also be recorded for asynchronous participation. Please check the course schedule and your emails regularly for details on the course zoom meetings.

Lecture, laboratory materials and recordings for BIOL 160 are protected intellectual property at UW-Stevens Point. Students in this course may use the materials and recordings for their personal use related to participation in this class. Students may also take notes solely for their personal use. If a lecture is not already recorded, you are not authorized to record my lectures without my permission unless you are considered by the university to be a

qualified student with a disability requiring accommodation. [Regent Policy Document 4-1] Students may not copy or share lecture materials and recordings outside of class, including posting on internet sites or selling to commercial entities. Students are also prohibited from providing or selling their personal notes to anyone else or being paid for taking notes by any person or commercial firm without the instructor's express written permission. Unauthorized use of these copyrighted lecture materials and recordings constitutes copyright infringement and may be addressed under the university's policies, UWS Chapters 14 and 17, governing student academic and non-academic misconduct.

## Grading Policies

### Graded Course Activities

Click the **Assignments** link in Canvas to access assignment listing, categories and points as applicable. Click the **Syllabus** link to see a chronological listing of assignments. Click the **Grades** link to see current grades. Overall assignments and accompanying points are listed below:

<b>ASSIGNMENTS</b>	<b>Total pts.</b>
Exams (4 x 75 pts. each)	300
Online Quizzes (5 X 10 pts each)	50
Lecture Activities (point values vary by assignment 5-20 pts per assignment)	100
Lab Activities (point values vary by assignment 10-15 pts per assignment)	165
Writing Assignments	35
Scientific Paper Online Discussions	20
Problem-Solving Sessions	30
Animal Diversity Presentation	30
<b>TOTAL</b>	<b>725</b>

If you believe I have made a mistake in grading your work, you must bring your concern to my attention within one week of receiving the graded assignment and I will re-evaluate it. I will not reconsider the assigned grade after one week. Please note that your grade at the end of the class will be based solely on the assignments and exams turned in up to and including the final. No extra projects, no re-submissions, no re-takes or no extra credit will be given to raise a grade no matter how close you are to the next letter grade. Please do not ask; the answer will be no. In addition, attending tutoring or office hours, class participation, and overall effort in the class will help improve your understanding but will not be considered when assigning grades.

## Participation

Students are expected to participate in all face-to-face and online activities as listed on the course calendar.

**ONLINE LAB IS REQUIRED FOR THIS COURSE! IF YOU DO NOT complete lab activities you will not receive a passing grade in the course!**

**RECITATION ACTIVITIES ARE REQUIRED FOR THIS COURSE. You can complete the recitations activities online in either synchronous or synchronous formats. These recitations are designed to provide opportunities for interaction in the course (online and through zoom) with the instructor and among students in the course.**

Make-ups after a lab assignment closes in CANVAS will **only** be allowed in the case of excused absences such as a documented illness (doctor's note required) or another documented emergency. If you are involved in University supported athletic teams or organizations I must be notified of absences at least TWO weeks in advance and as soon as possible if the activity will require you to miss a lecture exam or a lab for the entire duration it is available online. If you have an excused absence, then I will do my best to see that you can make up an assignment, but beware that there is NO guarantee that you can make up assignments. Make-ups will not be allowed after a week of the original due date. Absences that are not excused include (but are not limited to) car problems, public transportation issues, wedding/baby shower, sick without documentation, taking sister/friend/grandma to the dentist/doctor/mechanic, and going out of town/trips.

I will be checking weekly that students are accessing laboratory materials. Laboratory materials are designed to support understanding of lecture material and allow you to practice using the scientific method. This component of the course makes up 20% of the course grade. If you do not consistently access laboratory material (at least once per week) you will be given a warning. If there are 2 or more weeks you do not access laboratory materials at least once you will receive a 5% penalty on the associated lecture exams.

## Complete Assignments

**All assignments for this course will be submitted electronically through Canvas unless otherwise instructed.** Assignments must be submitted by the given deadline or special permission must be requested from instructor *before the due date*. Extensions will not be given beyond the next assignment except under extreme circumstances.

All discussion assignments must be completed by the assignment due date and time. Late or missing discussion assignments will affect the student's



grade.

## Late Work Policy

A grade for an assignment will be penalized **10%** for each calendar day it is late. No assignments will be accepted after the final exam.

## Viewing Grades in Canvas

Points you receive for graded activities will be posted to Grades. Click on the Grades link to view your points. Your instructor will update the online grades each time a grading session has been complete—typically 72 hours to 1 week (in the case of extensive writing assignments) following the completion of an activity. You will see a visual indication of new grades posted on your Canvas home page under the link to this course.

## Letter Grade Assignment

Final grades will be assigned based on the following minimum cutoff percentages:

Letter Grade	Percentage
A	93-100%
A-	90-92.9%
B+	87-89.9%
B	83-86.9%
B-	80-82.9%
C+	77-79.9%
C	73-76.9%
C-	70-72.9%
D+	67-69.9%
D	60-66.9%
F	0-59.9%

## Technology

### Protecting your Data and Privacy

UW-System approved tools meet security, privacy, and data protection standards. For a list of approved tools, visit this website.

<https://www.wisconsin.edu/dle/external-application-integration-requests/>

Tools not listed on the website linked above may not meet security, privacy, and data protection standards. If you have questions about tools, contact the UWSP IT Service Desk at 715-346-4357.

Here are steps you can take to protect your data and privacy.

- Use different usernames and passwords for each service you use
- Do not use your UWSP username and password for any other services
- Use secure versions of websites whenever possible (HTTPS instead of HTTP)
- Have updated antivirus software installed on your devices

### **Policies for Outside Online Programs**

This course requires posting of work on line that is viewable only by your classmates. None of the work submitted online will be shared publicly. Some assignments require account creation for on line programs. The instructor of this course will not share your academic records (grades, student IDs).

Confidentiality of student work is imperative, so you should not share the work of your peers publicly without their permission. By participating in these assignments, you are giving consent to sharing of your work with others in this class and you recognize there is a small risk of your work being shared online beyond the purposes of this course. Examples of additional risks include data mining by the company providing the service, selling of your email to third parties, and release of ownership of data shared through the tool. If you elect to not participate in these online assignments due to confidentiality concerns, then an alternate assignment will be offered to you. [UWSP Handbook Chapter 9 Section 5]

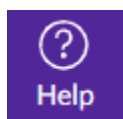
### **Course Technology Requirements**

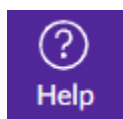
- View this website to see [minimum recommended computer and internet configurations for Canvas](#).
- You may also need access to the following tools to participate in this course.
  - o webcam
  - o microphone
  - o printer
  - o a stable internet connection (don't rely on cellular)

### **UWSP Technology Support**

- Visit with a Student Technology Tutor
- Seek assistance from the IT Service Desk (Formerly HELP Desk)
  - o IT Service Desk Phone: 715-346-4357 (HELP)
  - o IT Service Desk Email: [techhelp@uwsp.edu](mailto:techhelp@uwsp.edu)

## Canvas Support



Click on the  button in the global (left) navigation menu and note the options that appear:

Support Options	Explanations
<p><b>Ask Your Instructor a Question</b> Submit a question to your instructor</p>	Use <b>Ask Your Instructor a Question</b> sparingly; technical questions are best reserved for Canvas personnel and help as detailed below.
<p><b>Chat with Canvas Support (Student)</b> Live Chat with Canvas Support 24x7!</p>	<b>Chatting with Canvas Support (Student)</b> will initiate a <i>text chat</i> with Canvas support. Response can be qualified with severity level.
<p><b>Contact Canvas Support via email</b> Canvas support will email a response</p>	<b>Contacting Canvas Support via email</b> will allow you to explain in detail or even upload a screenshot to show your particular difficulty.
<p><b>Contact Canvas Support via phone</b> Find the phone number for your institution</p>	Calling the Canvas number will let Canvas know that you're from UWSP; phone option is available 24/7.
<p><b>Search the Canvas Guides</b> Find answers to common questions</p>	<b>Searching the <u>Canvas guides</u></b> connects you to documents that are searchable by issue. You may also opt for <b><u>Canvas video guides</u></b> .
<p><b>Submit a Feature Idea</b> Have an idea to improve Canvas?</p>	If you have an idea for Canvas that might make instructions or navigation easier, feel free to offer your thoughts through this <b>Submit a Feature Idea</b> avenue.

*All options are available 24/7; however, if you opt to email your instructor, s/he may not be available immediately.*

- Self-train on Canvas through the Self-enrolling/paced Canvas training course

## Course Policies

### Netiquette Guidelines

Netiquette is a set of rules for behaving properly online. Your instructor and fellow students wish to foster a safe online learning environment. All opinions and experiences, no matter how different or controversial they may be perceived, must be respected in the tolerant spirit of academic discourse. You are encouraged to comment, question, or critique an idea but you are not to attack an individual. Working as a community of learners, we can build a polite and respectful course community.

The following netiquette tips will enhance the learning experience for everyone in the course:

- Do not dominate any discussion.
- Give other students the opportunity to join in the discussion.
- Do not use offensive language. Present ideas appropriately.
- Be cautious in using Internet language. For example, do not capitalize all letters since this suggests shouting.
- Popular emoticons such as 😊 or / can be helpful to convey your tone but do not overdo or overuse them.
- Avoid using vernacular and/or slang language. This could possibly lead to misinterpretation.
- Never make fun of someone's ability to read or write.
- Share tips with other students.
- Keep an "open-mind" and be willing to express even your minority opinion. Minority opinions have to be respected.
- Think and edit before you push the "Send" button.
- Do not hesitate to ask for feedback.
- Using humor is acceptable

Adapted from:

Mintu-Wimsatt, A., Kernek, C., & Lozada, H. R. (2010). *Netiquette: Make it part of your syllabus*. *Journal of Online Learning and Teaching*, 6(1). Retrieved from [http://jolt.merlot.org/vol6no1/mintu-wimsatt\\_0310.htm](http://jolt.merlot.org/vol6no1/mintu-wimsatt_0310.htm)

Shea, V. (1994). *Netiquette*. Albion.com. Retrieved from: <http://www.albion.com/netiquette/book/>.

### Build Rapport

If you find that you have any trouble keeping up with assignments or other aspects of the course, make sure you let your instructor know as early as possible. As you will find, building rapport and effective relationships are key to becoming an effective professional. Make sure that you are proactive in informing your instructor when difficulties arise during the semester so that

we can help you find a solution.

## **Understand When You May Drop This Course**

It is the student's responsibility to understand when they need to consider unenrolling from a course. Refer to the UWSP [Academic Calendar](#) for dates and deadlines for registration. After this period, a serious and compelling reason is required to drop from the course. Serious and compelling reasons includes: (1) documented and significant change in work hours, leaving student unable to attend class, or (2) documented and severe physical/mental illness/injury to the student or student's family.

## **Incomplete Policy**

Under emergency/special circumstances, students may petition for an incomplete grade. An incomplete will only be assigned if student participation is impacted by a specific, identifiable, extenuating circumstance that affects a definable amount of work (one written assignment or exam). All incomplete course assignments must be completed within one semester.

## **Inform Your Instructor of Any Accommodations Needed**

If you have a documented disability and verification from the [Disability and Assistive Technology Center](#) and wish to discuss academic accommodations, please contact your instructor as soon as possible. It is the student's responsibility to provide documentation of disability to Disability Services and meet with a Disability Services counselor to request special accommodation *before* classes start.

The Disability and Assistive Technology Center is located in 609 Albertson Hall and can be contacted by phone at (715) 346-3365 (Voice) (715) 346-3362 (TDD only) or via email at [datctr@uwsp.edu](mailto:datctr@uwsp.edu)

### **Statement of Policy**

UW-Stevens Point will modify academic program requirements as necessary to ensure that they do not discriminate against qualified applicants or students with disabilities. The modifications should not affect the substance of educational programs or compromise academic standards; nor should they intrude upon academic freedom. Examinations or other procedures used for evaluating students' academic achievements may be adapted. The results of such evaluation must demonstrate the student's achievement in the academic activity, rather than describe his/her disability.

*If modifications are required due to a disability, please inform the instructor and contact the Disability and Assistive Technology Center in 609 ALB, or (715) 346-3365.*

## **Commit to Integrity**

As a student in this course (and at this university) you are expected to maintain high degrees of professionalism, commitment to active learning and participation in this class and also integrity in your behavior in and out of the classroom.

## **UWSP Academic Honesty Policy & Procedures**

### **Student Academic Disciplinary Procedures**

#### UWSP 14.01 Statement of principles

The board of regents, administrators, faculty, academic staff and students of the university of Wisconsin system believe that academic honesty and integrity are fundamental to the mission of higher education and of the university of Wisconsin system. The university has a responsibility to promote academic honesty and integrity and to develop procedures to deal effectively with instances of academic dishonesty. Students are responsible for the honest completion and representation of their work, for the appropriate citation of sources, and for respect of others' academic endeavors. Students who violate these standards must be confronted and must accept the consequences of their actions.

#### UWSP 14.03 Academic misconduct subject to disciplinary action.

- (1) Academic misconduct is an act in which a student:
  - (a) Seeks to claim credit for the work or efforts of another without authorization or citation;
  - (b) Uses unauthorized materials or fabricated data in any academic exercise;
  - (c) Forges or falsifies academic documents or records;
  - (d) Intentionally impedes or damages the academic work of others;
  - (e) Engages in conduct aimed at making false representation of a student's academic performance; or
  - (f) Assists other students in any of these acts.
  
- (2) Examples of academic misconduct include, but are not limited to: cheating on an examination; collaborating with others in work to be presented, contrary to the stated rules of the course; submitting a paper or assignment as one's own work when a part or all of the paper or assignment is the work of another; submitting a paper or assignment that contains ideas or research of others without appropriately identifying the sources of those ideas; stealing examinations or course materials; submitting, if contrary to the rules of a course, work previously presented in another course; tampering with the laboratory experiment or computer program of another student; knowingly and intentionally assisting another student in any of the above, including assistance in an arrangement whereby any work, classroom performance, examination or other activity is submitted or performed by a person other than the student under whose name the work is submitted or performed.

## Religious Beliefs

Relief from any academic requirement due to religious beliefs will be accommodated according to UWS 22.03, with notification within the first three weeks of class.

## 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.