Biology 160 Introduction to Animal Biology Syllabus

Instructor Information:

Instructor: Dr. Jamee Hubbard
Office: CBB 216
E-mail: jhubbard@uwsp.edu (best way to reach)

When can you see me if you have a question, need help, or simply want to chat?

- **Student Hours:** Face-to-Face at 2:00-3:00pm on M, W in CBB 216
- **Coffee with Dr. Hubbard**: Zoom at 8:00am on M, T, W, Th
- **Zoom by Appointment**: send me an email or select a time from my appointment calendar (when sent out)

Required Supplies:

- **Textbook** (University Bookstore rental)**:** Urry, Cain, Wasserman, Minorsky, Reece. ***Campbell Biology**, 11h Ed.*
- **Technology:**
  - **Microsoft Office:** This course focuses on creating content using Microsoft Office and online platforms. All faculty and staff at the colleges should have access to Microsoft Office - either as software they can load onto their home and office computers, or as software they can access from a campus computer. We strongly recommend that you use the most recent versions of Office. Older versions do not support accessibility as well as the new versions do. **If you're using a version older than Office 2013 please consider contacting your IT office for an update.** We will not provide instruction or support for outdated software. And keep in mind, outdated software means it's unsupported and may create security risks -- another reason to upgrade.
  - **Printer:** Occasionally you may need to print a paper, assignment, or template to be worked on by hand.
  - **Scanner or Scanner App.** There will be instances where you will be required to upload an assignment. In this case, merely taking a photograph is not the best option. The better option is to use a desktop scanner, photo copier that has a scan and email option, or a scanning app for a mobile device. Examples of free scanning apps for Android are: Adobe Scan, Microsoft Office Lens and many many more with high ratings. Examples of free iOS scanning apps are: Adobe Scan, Apple Notes, Microsoft Office Lens.

What are those funny abbreviations, what are some terms & other things that new college students might not understand, I use and what pet peeves do I have?

- **You will often see the following abbreviations, so I want you to know what they mean.**
  - "**e.g.,**" means "for example" and it is usually followed by a comma before I give the example. In this case, I will only give some examples, but there are other items that are related that I am not referencing.
  - "i.e.," means "that is to say" (used to add explanatory information or to state something in different words). It is also followed by a comma and then the explanatory information. "i.e.," and "**e.g.,**" are *not* interchangeable.

Other things you should know:

- "Office hours" is a term that describes when faculty and staff are available to see students during a specific time of the week. It is a time reserved just for you! You should use them whenever you need to, and never feel bad or apologize about dropping by during office hours because that is a time we have designated and made available specifically for students to use to come see us about anything you the feel is important to them, and *no* question is a dumb question. I am using some other terms ("student hours" "Coffee hour with Dr. Hubbard" to describe the same thing. Be aware that faculty and staff sometimes need to change their office hours, and sometimes at the last minute, for various reasons, so be patient if that happens and just contact them to make an appointment with them or find out their next availability.
- The bio office is in CBB 300 if you need to make changes to your biology major, and you can find links to faculty and staff emails on the biology faculty page. (Links to an external site.)

What are my biggest pet peeves when grading assignments and assessments and what are some personality & teaching style things about me that you should be aware of? (Okay, these make me sound really grouchy, but I'm not, honest!!)

- **Don't use "etc." at the end** of a typed sentence on a quiz, exam, or written assignment (including discussions). It's a nice catch-all term, but it is too vague, and when you are providing information that I am asking for in an assignment or assessment, you should be definitive. *If you know more, say more, otherwise end with the last item on your list*. I'm super serious!
- **Don't use a slash ("/")** when you mean "and" or "or", or whatever you might mean by the the slash. It is way too vague, and when I'm looking for information, I need to know if you mean "and" or "or" or something else. The only exception is when you are saying "and/or", which is a commonly understood phrase and has a specific, not vague, meaning.
- I am strict in my grading and look for very specific answer and details, but I am fair. If you put in the work on the right materials, I will know it and grade

accordingly. I am also helpful and willing to work with you if you ask for help or ask for understanding about something (e.g., about why I graded the way I did, about any course material). If you come see me or meet with me on Zoom, you will know that I am not a grouchy bear but am your cheerleader, BUT I am not afraid to call out the class and tell you all when I think you all could have done better and to ask for more discipline in your work.

- Please address me by any of the following terms; I do like the endearing professional terms, but I don't like being called by my first name. I will call you by your first name because it helps me connect to you better, but if you prefer me not use your first name, please let me know.
    -
    - Dr. Hubbard, Dr. H., Professor Hubbard, Professor H., or, simply, Professor
- I've had 14 years of college, most of it in the area of entomology (my professional area of expertise), but I am learning every day. It never stops. I don't claim to know everything about biology, as it is always changing, so if you ask something and I don’t know the answer, I will tell you "I don't know, but I will do my best to find out" or I may send you on a hunt for the information.
- That brings me to another thing I think is very important: ***We learn best by teaching ourselves and by testing ourselves.*** Seriously! I am here to guide you to the right information to know to better your basic knowledge in animal biology, but its your job to take the reigns and learn, and the best way to learn is to be open to new ideas, to be curious, to explore outside of the basic textbook information, and to figure out best study habits for yourself. I will talk more about studying later, but known this now, just reading is not going to cut if for the majority of you. And its boring. I mean really boring. Unless it's an awesome dystopian novel, you know?
- I can get a bit distracted sometimes (I take a stimulant and drink too much coffee when school is in session!) and that can come across in my presentation. Because my mind is scrambling a million miles an hour, I sometimes get ahead of myself when I am providing important information, so occasionally I have to go back and fill in where I may have accidentally left something out. I would just move on and leave it out, but I feel an inherent obligation to provide accurate and complete information to you. If I am lecturing to you, one of the most helpful things you can do for yourself is just to plan on leaving some space at the bottom of your page or to the margin to add additional notes, in case I feel the need to add something in. If there is ever anything you need clarification on, don't be afraid to ask.

Course Overview

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 in some way, whether it is personally or professionally.

Course Objectives

Learning outcomes (CLO) for the course and how they align with the Natural Sciences (NS LO) General Education Program (GEP) learning outcomes at UWSP:

Natural Sciences GEP Learning Outcomes (NO LOs)	Program (Biology Department) Learning Outcomes (PLOs)	Bio 160 Course Learning Outcomes (CLOs):
• **NS LO 1:** Explain major concepts, methods, or theories in the natural sciences to investigate the physical world.	• **PLO 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. • **PLO 2**: Describe mechanisms for the continuity of life, including the processes of inheritance, development, and evolution.	• **CLO 1:** Integrate various levels of biological organization and their emergent properties. • **CLO 2:** Differentiate and classify animal body plans and organ systems. • **CLO 3:** Recognize cell theory, inheritance, evolution, and developmental biology as the foundations of zoological science.
• **NS LO 2:** Interpret information, solve problems, and make decisions by applying natural science concepts, methods, and quantitative techniques.	• **PLO3:** 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. • **PLO 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.	• **CLO 4:** Explain how scientific inquiry is different than other intellectual endeavors.
• **NS LO 3:** Describe the relevance of aspects of the natural sciences to their lives and society	• **PLO 5:** Articulate the application of biological science to meeting the needs of society, including basic research, stewardship of biodiversity, human health, and entrepreneurial innovation.	• **CLO 5:** Apply principles of zoological science to broader personal and societal issues.

Assignments & Assessments

Check out the *schedule of tentative lecture and lab topics*, and make sure to put the exam dates and other key assignments into your planner (e.g., lab recitations because that gives you a clue as to when you need to have your lab assignments completed). Also, below this syllabus, you will see links to the currently published assignments for the the Course Summary. Come back and check the Course Summary often to make sure you are on task. This is where you will see the most up-to-date happenings in this class.

Tentative Points:

Assignment types and their associated point values, plus total points for the course.

Assignment Type	est. points per assignment	est. total points
Unit Quizzes	20 @ +/- 5	100
One-pagers	8@+/-20	160
Labs, post-labs, post-lab quizzes	10 @ 20	200
Mid-term presentation	45	45
Exams	3 @ +/- 100	300
Final Exams	150	150
Total Estimated Points		**955**

Grade Policy

- You are responsible for checking your own grade. Please click Grades from the left navigation menu to see your grade and my comments. Once grades are posted for an assignment, you have two weeks (14 days) to discuss your grade or outcomes, including any grades that may inadvertently be missing. After the two-week period has passed for any assignment, I will not discuss any grade changes for that assignment.
- The lecture and laboratory material is weighted. 67% (2/3) of your score will come from lecture, and 33% (1/3) of your score will come from lab.
- **Grades:** A=93-100%, A-=90- 92%, B+=87-89%, B=83-86%, B-=80-82%, C+=77-79%, C=73-76%, C-=70-72%, D+=67-69%, D=60-66%, F=< 60%

Extra Credit Policy

- I do not give extra credit assignments on an individual basis, so please do not ask: I would rather you use any extra time you have toward your best effort on the assigned material. I will work with you in any way I can to help you get a better grade *on future course work assigned to the entire class*.

Students with Disabilities

- Students with disabilities are welcome and encouraged in this class. If you have a medical problem (e.g., ADHD, migraine headaches that require medical attention, depression) that may cause you to miss class or exams often, please contact the Disability and Assistive Technology Center, (609 ALB) so your professors can be notified appropriately of accommodations that should be made for you.

Student Academic Standards and Disciplinary Procedures

- You can find out about the academic standards and your responsibilities as a UWSP community member at https://www.uwsp.edu/stuaffairs/Documents/RightsRespons/SRR-2010/rightsChap14.pdf. Any form of cheating, plagiarism, or any misrepresentation of your work, or if you are knowingly assisting someone in cheating, will result in a grade of zero (0) points for that test, quiz, or other assignment.

Biology Tutoring:

- The Tutoring-Learning Center (TLC) offers free group and drop-in tutoring to support you in your biology classes. In addition, the TLC offers the option for individual biology tutoring sessions. The tutors are UWSP students who have done well in their classes and who are here to share their successful study habits and biology content knowledge to help others succeed. Discussing biological concepts and processes together clarifies and solidifies knowledge, and the tutors are eager to study with you. If you have questions about the schedules or would like to make an appointment, please visit the TLC in ALB 018 (library basement), email (tlctutor@uwsp.edu), or call (715) 346-3568 for information.

Communication

- **My messages to you:**
  - Please check Announcements from the left navigation frequently. I will communicate with the participants through Announcements, not Canvas messages.
  - Please check for any comments I made on your assignments and/or rubrics with your grade.

Your messages to me:

  - If you have any questions about the course, please post them in the Course Q&A Discussion Forum. I'll be checking the forum frequently. If other class members know the answer to your question(s), they should feel free to respond.
  - For questions about your individual grade/submissions, etc, you can **email me through the CANVAS inbox**.

Students Resources & Support at UWSP:

- If you need assistance with any of the following: academics (tutoring), reading in your discipline, study skills, technology, or writing, check out the Tutoring and Learning Center: https://www.uwsp.edu/tlc/Pages/default.aspx (Links to an external site.)
- If you have a disability or think you may have a disability and would like to try to get accommodations for your courses, go to the **Disability and Assistive Technology Center Office (DATC)** website: https://www.uwsp.edu/datc/Pages/default.aspx (Links to an external site.)
- If you need mental health support: https://www.uwsp.edu/counseling/Pages/default.aspx (Links to an external site.)

COVID-19 INFORMATION

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 (Links to an external site.) 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 During COVID-19:

- Please monitor your own health each day using this screening tool (Links to an external site.). 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.

Resources

- UWSP COVID-19 Information Page: https://www.uwsp.edu/coronavirus/Pages/default.aspx (Links to an external site.)
- UWSP Online Learning Resources: https://www.uwsp.edu/tlc/online-learning-resources/Pages/default.aspx (Links to an external site.)

Exam Schedule

Week	Dates	Exam Materials (tentative)
5	09/28-09/30	Through Cell Membranes & Communication and Enzyme lab
10	11/02-11/04	From Metabolism through Gene Expression and Central Dogma Lab
13	11/16-11-18	From Evolution through Nutrition
16	12/14-12/18	Comprehensive Final Exam - from Circulation & Gas Exchange *PLUS* questions from previous lecture and lab materials

Tentative Class Schedule

Day	Wk	Date	Lecture topic	Reading	Lab Assigned	Lab Recitation Period
M	1	8/31	No Classes		Scientific Method	No recitations
W		9/2	Themes of Life	Ch.1		No recitations
M	2	9/7	Labor Day		None	No recitations
W		9/9	Intro to Chemistry & Water, Carbon	Ch. 2, 3, 4		No recitations
M	3	9/14	Carbon, Macromolecules & Enzymes	Ch. 4, 5, 48 (in part)	Enzymes	01L1: Introduction to Lab, Scientific Method follow-up
W		9/16	Eukaryotic Cell Structure	Ch. 6.2-6.8		01L2: Introduction to Lab, Scientific Method follow-up
M	4	9/21	Cell Membranes & Communication	Ch. 7	Osmosis & Diffusion	01L1: Enzymes
W		9/23	Metabolism & Respiration	Ch. 8,9		01L2: Enzymes
M	5	9/28	Metabolism & Respiration	Ch. 8,9	Introduction to Good Presentations	01L1: Osmosis & Diffusion
W		9/30	Cell Cycle, DNA Replication, & Mitosis	Ch. 12		01L2: Osmosis & Diffusion
M	6	10/5	Sexual Life Cycle & Meiosis	Ch. 13	Mendelian Genetics	01L1: Introduction to Good Presentations
W		10/7	Mendelian Genetics	Ch. 14		01L2: Introduction to Good Presentations
M	7	10/12	Gene Expression & Mutations	Ch. 17	Central Dogma (gene expression)	01L1: Mendelian Genetics
W		10/14	Gene Expression & Mutations	Ch. 17		01L2: Mendelian Genetics
M	8	10/19	Evolution: Descent with Modification	Ch. 2 2	none	01L1: Central Dogma
W		10/21	Evolution of Populations	Ch. 23		01L2: Central Dogma
M	9	10/26	Evolution: Origin of Species	Ch. 24	Evolution	01L1: Student Presentations
W		10/28	Evolution: Phylogeny & the Tree of Life	Ch. 26		01L2: Student Presentations
M	10	11/02	Animal Diversity	Ch. 32	Ecology & Behavior	01L1: Student Presentations
W		11/04	Principles of Animal Form & Function	Ch. 40		01L2: Student Presentations
M	11	11/09	Nutrition	Ch. 41	Introduction to the Invertebrates, Ch.	01L1: Evolution

					33, Invertebrate Dissection	
W		11/11	Circulation & Gas Exchange	Ch. 42		01L2: Evolution
M	12	11/16	Circulation & Gas Exchange	Ch. 42	Origin & Evolution of Vertebrates, Ch. 34, Mammal Dissection	01L1: Independent lab work (no classes): Invertebrate Study & Virtual Arthropod Dissection
W		11/18	The Immune System	Ch. 43		01L1: Independent lab work (no classes): Vertebrate Study & Virtual Mammal Dissection
M	13	11/23	Reproduction & Development	Ch. 46.1-46.2, Ch. 47		01L2: Independent lab work (no classes): Vertebrate Study & Virtual Mammal Dissection
W		11/25	Introduction to Ecology	Ch. 52		01L1: Independent Study: Ecology & Behavior
M	14	11/30	Population Ecology	Ch. 53		01L1: Independent Study: Ecology & Behavior
W		12/02	Community Ecology	Ch. 54		01L2: Independent Study: Ecology & Behavior
M	15	12/07	Conservation & Global Change	Ch. 56		no lab
W		12/09	Behavior	Ch. 51		no lab
	16		**12/14-12/18 COMPREHENSIVE FINAL EXAM ONLINE**			