

## Biology 101: General Biology

Instructor: Dr. Brian C. Barringer  
Email: [bbarring@uwsp.edu](mailto:bbarring@uwsp.edu)  
Phone: 715-346-2452  
Office: TNR 337  
Office Hours: Wed 1:00 – 3:00 PM and Fri 9:00 – 11:00 AM

Lecture: MWF 12:00 – 12:50 PM Sci A208  
Lab: Mon (section 7) or Wed (section 8) 9:00 – 11:50 AM TNR 254

**Course Objectives:** This course introduces non-biology majors to the fundamental principles of biology and the diversity of living things on earth. After taking this course students will be familiar with basic cellular and molecular processes, genetics, heritability, reproduction, mechanisms of evolutionary change, and many of the important ways that organisms interact with each other and their abiotic environment. Because it permeates all levels of biological organization, evolutionary theory will be used throughout the course as a contextual framework to help students explore and understand the forces that have influenced (and continue to influence) the complexity and diversity of living things. Biology is an extremely dynamic and broad scientific discipline; therefore, students will be encouraged via quizzes, exams, laboratory exercises and evaluation of both textbook and non-textbook reading assignments, to develop and hone their abilities to think broadly and critically about the complex (and fascinating!) topics covered. These valuable skills will serve students well not only in future science courses but throughout the rest of their lives.

**Required Texts:** *Campbell Biology: Concepts and Connections* (Pearson), 7<sup>th</sup> Ed.

*Biology 101 Lab Manual* (bring with you to all labs)

**Exams:** This course includes five exams total: four midterms and a final. Exams will generally contain a mixture of question types (e.g., short answer/short essay, fill-in-the-blank, quantitative, labeling/drawing figures or diagrams, and multiple-choice questions). Midterm exams will be given at the same time and place as our regular lecture (see lecture schedule, below). The final exam will be weighted toward material covered at the very end of the semester, but it is cumulative and worth a bit more than the midterms (see grading, below).

**Quizzes:** A number of short, unannounced (i.e., “pop”) quizzes will be given to you during lecture at various times throughout the semester. Quizzes are not meant to be particularly difficult. If you attend and participate in lecture, study your notes on a regular basis and conduct the assigned reading in a timely manner you should find them to be relatively easy. Quizzes will always be administered promptly at the start of our meeting and collected after 4-5 minutes. Extra time and/or make-ups WILL NOT be given to you if you are late and/or miss class for ANY reason. However, I will drop your lowest quiz score, so if you miss one quiz it will not impact your final grade.

**Lab:** We will meet 14 times for lab this semester. Each lab includes a small number of pre-lab questions that must be answered before lab and turned in at the beginning of lab. Each lab also includes a lab “report” that must be completed during lab and turned in before you leave. All of this material can be found in your lab manual.

**Attendance:** I do not formally take attendance in lecture. However, I do notice who is there (and who is missing), and regularly missing class might influence your participation grade. Also, based on my experience teaching these kinds of courses I can promise you that students who regularly attend and participate in lecture do significantly better than students who habitually skip and/or are late. Finally, being late and/or missing lecture means a finite chance of missing a quiz (and quizzes cannot be made-up, regardless of the reason you were late or absent).

On-time attendance in lab is mandatory. Students arriving late (i.e., after I call role during the first few minutes of class) will lose 5 points from their attendance score. In addition, significantly late arrivals (i.e., more than 15 minutes late) will not be allowed to complete that day’s lab activity (thus losing the points associated with the prelab questions and lab report as well).

**Participation:** You are expected to be an active participant in all of our meetings and activities. This means that I expect you to take notes, engage in discussions, ask questions, share thoughts and opinions, and volunteer to help each other out when appropriate. The course will be more enjoyable (for everyone) if you do your best to engage with me, each other, and course material to the maximum extent possible. A finite number of points are allocated to participation. You must earn these points! Students who are always quiet, unengaged, and/or generally appear uninterested in our activities will not fare well in this regard, and a low participation score has the potential to impact your final grade in a negative way.

**Grading:** The total number of points possible in this course will be 600-620 (depending on the number of quizzes given and taking into account the fact that one quiz will be dropped). Of these, 300-320 points are allocated to lecture (quizzes and exams) and 280 points are allocated to laboratory activities. In addition, 20 points are allocated to participation (and can be influenced by your level of participation in both lecture and lab). A breakdown of these points follows:

	<b>Activity</b>	<b># points possible</b>
<b>Lecture</b>	Quizzes (3-5)	10 each
	Midterms I - IV	50 each
	Final exam	80
<b>Lab</b>	Prelab questions (14 labs)	5 each
	Lab reports (14 labs)	10 each
	Attendance (14 labs)	5 each
<b>Miscellaneous</b>	Participation	20

Your final grade in this course will be based on the percentage of all possible points that you earn throughout the semester. To determine your final grade the following metric will be used:

≥ 94%	90- 93%	87- 89%	84- 86%	80- 83%	77- 79%	74- 76%	70- 73%	67- 69%	60- 66%	≤ 59%
A	A-	B+	B	B-	C+	C	C-	D+	D	F

**Late Policy and Make-ups:** Assignments lose one point for each day they are late. Missed quizzes (regardless of the reason) cannot be made-up. Make-ups for missed exams are given only in truly extraordinary situations. In general, the reasons that you miss an exam should be the same as those for which you would miss your own wedding. Make up exams are time-consuming and difficult to administer, and students usually do poorly on them. However, if you are very ill or have an emergent medical situation, death in the family, etc., you can take a make up exam. In order to qualify for a make up exam, you must provide a written, verifiable excuse from an authorized person (doctor, dentist, minister, etc.) within one week of the missed exam. This excuse should clearly articulate that you were unable to make it to class for the exam, including a timetable for restriction from work or school. I reserve the right to verify the legitimacy of all excuses by contacting the authority figure. All exam make-ups will be given in TNR 254 on May 10<sup>th</sup> at 4:00 PM.

**Cell/Smart Phones, Laptops, ipads, ipods, etc.:** Please note that using cell phones, smart phones, laptops, ipads, ipods, etc. is absolutely not allowed (unless explicitly told otherwise) during our meetings. Out of respect for your fellow students and me please turn these items off. If I observe that you are using these items during class I will (1) deduct one point from your participation score and (2) ask you to leave. Please do not force me to do that; it's not fun for either of us.

**Students with Disabilities:** I am happy to help you if you need special accommodations to succeed in this course. Please see Student Disability Services to complete the paperwork required to document your needs and then contact me so that appropriate arrangements can be made. More information can be found here:

<http://www.uwsp.edu/disability/Pages/default.aspx>

**Academic Integrity:** It is your responsibility to be aware of your rights and responsibilities as a UWSP student. Please take the time to read and understand the information found here (and let me know of any questions):

<http://www.uwsp.edu/stuaffairs/Documents/RightsRespons/SRR-2010/rightsChap14.pdf>

**Lecture Schedule:** All lectures are associated with reading assignments in your textbook. You should strive to complete the assigned reading before attending the associated lecture. Note that I reserve the right to change this schedule, with due notice, as we progress through the semester.

<b>Date</b>	<b>Topic</b>	<b>Chapters in textbook</b>
1/23	Introduction	1
1/25	Biochemistry I	2
1/28	Biochemistry II	3
1/30	Introduction to cells	4
2/1	Cellular processes	5
2/4	Cellular respiration	6
2/6	Photosynthesis	7
2/8	Cell cycle and mitosis	8
2/11	Meiosis	8
2/13	<b>*** Midterm exam I ***</b>	
2/15	Genetics and Inheritance I	9
2/18	Genetics and Inheritance II	9
2/20	Genetics and Inheritance III	9
2/22	The flow of genetic information	10
2/25	Evolutionary processes I	13
2/27	Evolutionary processes II	13
3/1	Evolutionary processes III	13
3/4	<b>*** Midterm exam II ***</b>	
3/6	Species and speciation I	14
3/8	Species and speciation II	14
3/11	History of life on earth	15
3/13	Phylogenetics	15
3/15	Prokaryotes and protists	16
3/18	Plants I	17
3/20	Plants II	17
3/22	<b>*** Midterm exam III ***</b>	
3/25	<b>*** Spring break ***</b>	
3/27	<b>*** Spring break ***</b>	
3/29	<b>*** Spring break ***</b>	
4/1	Fungi	17
4/3	Invertebrates I	18
4/5	Invertebrates II	18
4/8	Vertebrates I	19
4/10	Vertebrates II	19
4/12	Behavior	35
4/15	Introduction to ecology	34
4/17	Population ecology I	36
4/19	Population ecology II	36

4/22	Population ecology III	36
4/24	<b>*** Midterm exam IV ***</b>	
4/26	Community ecology I	37
4/29	Community ecology II	37
5/1	Community ecology III	37
5/3	Ecosystem ecology	37
5/6	Conservation biology	38
5/8	Catch-up and special topics	
5/10	Catch-up and special topics	
5/16	<b>*** Final exam 8-10 AM ***</b>	

**Laboratory Schedule:** Note that I reserve the right to change this schedule, with due notice, as we progress through the semester.

Week of	Topic	Notes
1/21	No lab	
1/28	Lab C: The scientific method	
2/4	Lab D: Biochemistry of foods	
2/11	Lab E: Exploring enzymes	
2/18	Lab H: DNA, asexual reproduction, and the cell cycle	
2/25	Lab I: Sexual reproduction, meiosis, genetics, and inheritance	
3/4	Lab Q: Modeling natural selection	
3/11	Lab J: Biological classification Lab K: Microorganism culture preparation	
3/18	Lab L: Bacteria, protist, fungal diversity	
3/25	Spring break	
4/1	Lab M: Plant diversity I	
4/8	Lab N: Plant diversity II	
4/15	Lab O: Animal diversity I	
4/22	Lab P: Animal diversity II	
4/29	Lab S: Tree identification	Outside lab; please dress appropriately
5/6	Lab U: Ecology at Schmeckle Reserve	Outside lab; please dress appropriately