

Lecture Section Meets:	Laboratory Section Meets:
Instructor: Dr. Karen E. Bledsoe	Instructor:
Phone: 503-838-8036	Phone:
Email: bledsoek@wou.edu	Email:
Office Location: NS 220	Office Location:
Office Hours: M, R, F 10:30-12:00, T 10:30-11:30	Office Hours:
Lecture Website Access: http://www.wou.edu/~bledsoek	Lab Website Access:

- Texts:**
- Audesirk T, Audesirk G, Byers BE, 2010. Biology: Life on Earth 9th Ed. WOU custom Volume II. ISBN 0558802974. This inexpensive custom edition is available at the WOU bookstore. This text is REQUIRED!
 - Biology 102 Laboratory is available online through Moodle. You will need to download and print the labs each week.

Course Description:

Biology 102 focuses on principles of Biology related to cellular structure and function, metabolism, and reproduction. Our focus will be on these key biological concepts- *what we know*- and key scientific practices- *how we know what we know*.

Learning Outcomes:

Upon completion of Biology 102, students will:

1. Demonstrate knowledge and understanding about relevant biological principles
2. Demonstrate understanding of the nature of scientific thought and the process of knowledge generation through scientific investigation
3. Demonstrate independent and self-directed learning

Evaluation of Learning (Grading):

Grades are *earned* based on the percentage of total possible points you have accrued through a series of instruments used to measure your learning.

100% - 90% = A 89.5% - 80% = B 79.5% - 70% = C 69.5% - 60% = D
59.5% or below = F (You also will earn an F if you fail lab or if you miss three or more labs)

Lecture Exams (310 points) ≈ 60% of grade

1. 2 Midterms – 90 points each
2. Final (**Cumulative**) – 130 points (100 points comprehensive; 20 points of new material)

Lecture In-Class Activities (Quizzes, Homework, etc.) (60 points) ≈ 12% of grade

This portion of your grade may include unannounced lecture quizzes, homework assignments and in-class activities. Quizzes and in-class activities cannot be made up due to absence, but your *lowest* score will be dropped.

Lab (144 points) ≈ 28% of grade

The percentage of points you earn in laboratory will be factored into your overall grade for the course. *If you fail the laboratory portion of this course (an overall lab score of <60%) you will earn a failing grade for the ENTIRE*

course. If you fail the course and decide to repeat it, you *must retake the laboratory along with the lecture* even if you received a passing grade for either portion.

Your lab grade is based on laboratory preparation and participation, on weekly quizzes, and on a course project. Your lowest week's lab score will be dropped (combined preparation, participation, and quiz scores). Homework is assigned for practice, but not submitted for a grade. However, at least two randomly selected homework questions will appear on each weekly quiz. The breakdown of graded lab work is:

Participation

There are 8 labs, with a possible 7 participation points per lab. *Full preparation for and participation in each and every laboratory activity is expected.* You are expected to download, print, and read the entire laboratory ahead of time. You must also complete the lab preparatory activity each week and submit responses on Moodle 24 hours before the beginning of class. You should arrive to class prepared to do the lab procedures or have your procedural questions ready. During class, you should be focused on lab activities. Before you depart you need to ensure that you have finished all the assigned activities, completed that day's participation log and cleaned up your workstation. If you are late to lab, if you are engaged in any non-lab activities, if you do not follow directions or demonstrate unsafe behavior, or if you fail to complete the participation log or clean up you will lose participation points.

Quizzes

Each quiz is worth 10 points. There will be a quiz during the first week's lab over your syllabus; every subsequent lab will include a 10-point quiz over both the previous lab and that day's lab.

Lab Report

You will complete one lab report worth 25 points this term. You will have two weeks from the day it is assigned to complete the lab report. You may use this as your final submission, or you may choose to revise the report to resubmit within one week of receiving instructor feedback. If you revise your report, your final score will be the average of your first and second drafts. If you submit your report after the due date, one point will be deducted for each day late, up to 5 days, after which you will earn a zero. All work **MUST BE** submitted by the end of dead week. *Late work will not be accepted during finals week.*

Top 3 ways to automatically lose lab points:

- **Unexcused absence:**
No quiz or participation points (not present for more than 20 minutes of lab- either late or missing any portion of lab also constitute absence)
- **Lateness:**
More than 5 minutes late = missed quiz
- **Late report:**
Deduction of 1 point for each day late, up to 5 days, after which, assignment = 0

General Course Policies:

Absence/Tardiness:

You are responsible for attending class on time. *You may not take a quiz if you are more than five minutes late.* I do not formally take attendance during lecture, but we engage in activities every day that you will miss out on if you are absent. You must complete all assignments and exams during the scheduled time. **Daily work, quizzes and exams canNOT be made up.** Your lowest quiz and/or in class work will be dropped. Your lowest exam score will be replaced by your score on the comprehensive portion of the final exam, provided your comprehensive score is higher than any of your previous exams. If you are participating in an official school event, you must make arrangements ahead of time to address that absence. In the event of a prolonged illness or family emergency that may cause you to miss multiple class sessions, you should contact the office of student affairs (503-838-8423) for assistance for verification and notification of your professors.

Laboratory attendance IS MANDATORY! Biology Department policy is that **3 or more lab absences** will result in a failing grade for the *ENTIRE* course. If you are more than **5** minutes late to lab, you will not be able to take that day's quiz, but will still be considered present for lab. If you are more than **20** minutes late or out of class for over 20 minutes, *you will be considered absent for that day's lab, and will not earn participation or quiz points.* If you are late, you are still encouraged to remain and complete the lab so that you get the experience. Your lowest daily lab score (combined preparation, participation and quiz) will be dropped. *A dropped score*

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does not eliminate an absence from your attendance record.

Makeup Labs:

If you miss a laboratory due to an official school event or physician documented illness, you may arrange to attend a different lab during the same week that you missed. To arrange a makeup lab, you must complete the laboratory change form and submit it along with **documentation** of your excuse to the Bi 100 series coordinator, Dr. Erin Baumgartner (NS room 117; baumgare@wou.edu; 838-8348) to change labs. **You will not be permitted to makeup a lab without a documented excuse.** You will not be permitted to do your makeup in a lab that is full. Any lab make-up work must be completed and turned in by the start of your regular lab session the following week. All work must be submitted before finals week.

Laboratory Safety:

Your safety and that of your classmates and instructor are a critical part of every lab. Failure to adhere to safety policies during a lab session will result in a complete loss of participation points for that lab.

- There is absolutely no eating or drinking in lab.
- Distractions, such as cell phones, must be put away. If you are texting, you are distracted.
- If laboratory safety equipment is provided, you must use it
- Carefully follow setup and cleanup instructions, especially regarding the use and cleanup and disposal of glassware and/or chemicals.
- Report any spills or breakage to your instructor immediately
- Because this is a biology lab and we use chemicals and glassware, we recommend that you wear close-toed shoes with good traction during lab.

Academic honesty:

Your performance on quizzes and exams must represent your own knowledge. Any written or verbal communication with other students (including via cell phone) during a quiz or exam is considered cheating. The use of notes, text-messaging during a quiz, use of electronic devices that have not been pre-approved, and looking at other student's test papers will be regarded as cheating.

Plagiarism refers to the use of original work, ideas, or text that are not your own. This includes cut-and-paste from websites, copying directly from texts, and copying the work of others. It also includes use of papers purchased online or turning in a paper written by someone else as your own work. If you submit any work that incorporates the ideas or words of others, you must cite their work (in-text indications of where the material came from and a detailed reference list at the end). If you are directly quoting any portion of a book or article, you must use quotation marks and citations. Be aware that an assignment comprised mostly of quotations does not constitute the quality of work that is expected of a university student. You must learn to synthesize ideas for yourself and explain them in your own words.

All forms of cheating, including plagiarism and copying of work will result in an immediate zero for the exam, quiz, or assignment. In the case of copying, all parties involved in the unethical behavior will earn zeros. Cheating students will be referred to the Student Conduct Committee for further action. You also have the right to appeal to the Student Conduct Committee.

Technology in the classroom:

Laptops are very useful to many students for note-taking, but they can be distracting to others. If you wish to use a laptop in class, please restrict your seating to the outer aisles or the back row of the room.

Electronic Translators create a distraction for you and others during lecture and are not permitted. If you require the aid of a translator, you may not be ready for this class.

Cell phones must be **turned off or put on silent mode** during class. Do not answer your cell phone or send/receive text messages during class. You will be warned and then asked to leave for the remainder of the session and will be responsible for getting the material on your own.

Email:

Email is an excellent communication tool and you are encouraged to use it. You will usually receive a response within 48-72 hours, but do not expect an immediate response, especially if you email in the evening or on the

weekend. Please use proper etiquette and treat your course-related email correspondence as a formal communication.

Online Component:

This course utilizes an online site to provide you with access to course material. It is your responsibility to access the course site on a regular basis for updates and activities. You will also need to complete your online laboratory preparation activities on Moodle each week. Your instructor will provide you with information on accessing the course site.

Peer-led Team Learning (PLTL) for Biology

Peer-led Team Learning (PLTL) is a separate, no-credit course that uses a learning model designed for participating students to develop a broader and deeper understanding of course concepts. Weekly 2-hour sessions are led by students who have successfully completed the course. While there is no letter grade for PLTL, leaders will arrange meeting times and take roll on a weekly basis; **attendance is mandatory**. The benefits for participating students typically include better performance (i.e., higher grades!) in corresponding courses. You can enroll at any time during the term, but the sooner you start attending a PLTL course the sooner you will begin to benefit from participation. If you are interested in learning more about PLTL, please ask your instructor!

Resources :

Students with a documented disability that may require assistance should contact the Office of Disability Services for coordination of your academic accommodations. The Office of Disability Services is located in APS 405, phone/TTY is 503-838-8721, www.wou.edu/student/disability

Veterans and active duty military personnel with special circumstances are welcome and encouraged to communicate these, in advance if possible, to the instructor. Veterans seeking assistance with educational benefits can visit WOU's Veteran's benefits page at http://www.wou.edu/provost/registrar/veteran_benefits.php for forms, links, and contact information for WOU's Veteran's representative.

The Academic Advising and Learning Center offers academic tutoring and study skills assistance. The Academic Advising and Learning Center is located in APS 401, 503-838-8428 phone/TTY or 503-838-8501, www.wou.edu/provost/aalc/learning

The Writing Center offers assistance with writing. The Writing Center is located in APS 301, 503-838-8286, www.wou.edu/las/humanities/writingctr

The Technology Resource Center provides technology support and resources to faculty, staff and students. The Technology Resource Center is located in ITC 204, 503-838-8965, www.wou.edu/trc

Library and Media services offers assistance with research and information retrieval. Ask for assistance at the reference desk in Hamersly Library, phone/TTY 503-838-8418.

SCHEDULE :**Subject to change at discretion of instructor.****Refer to Moodle for most up-to-date schedule.**

Week	Lecture topic	Reading	Lab
1	Organization of Life Atoms and Molecules	1.1; 1.3; 2.1-2.3	NO LAB
2	Organic molecules Intro to membrane movement	3.1-3.6; 5.1-5.3	Building Blocks of Life
3	Cell structure & function	4.1-4.4	NO LAB- (MLK holiday Monday)
4	Energy & Enzymes <i>Midterm 1</i>	6.1-6.5	Diffusion & Osmosis
5	Photosynthesis	7.1-7.3	Cells & Organelles
6	Cellular Energy Harvest	8.1-8.4	Enzymes
7	DNA & RNA Replication, Transcription & Translation	11.1-11.5; 12.1-12.5	Photosynthesis
8	Cellular Reproduction <i>Midterm 2</i>	9.1-9.10	DNA to Protein
9	Introduction to Inheritance	10.1-10.3	Cellular Reproduction
10	Inheritance	10.4-10.11	Genetic Inheritance
Finals Week	Cumulative Final Exam Monday, March 14 2-3:50 pm		

Extra credit opportunities

Students may earn up to 25 extra credit points (about 5% of the total possible points) added to their final score by completing any of the following at any time **before** finals week:

1. Interview a working scientist (in person, electronically, or by phone) who does research in any of the fields we will study this term: molecular biology, cells, genetics. Write a 1-2 page report (double-spaced, size 12 type) of the interview, including quotes. Include a description of the person's research, what got them interested in the field, and why that person became a scientist. (5 points)
2. Find an article in *Science News* or *Scientific American* (either print or online versions) on topics related to the subjects we are studying this term. In a 1-2 page report (double-spaced, size 12 type), summarize the main points of the article **and** discuss how the article relates to material in your textbook, labs, and/or class activities. (2 points per article)
3. Read a biography of, or a book by, a scientist who made a great contribution to one of the topics we study this term, such as: Anton Leeuwenhoek, Gregor Mendel, Rosalind Franklin, James Watson, Francis Crick, Barbara McClintock. Your reading must be an actual book! Write a 2-3 page summary of the biography, emphasizing why this person's work was so important to the history of science. Include a full book citation that includes author, date of publication, title of the book, and publisher. Photocopy the title page and staple it to your report. Biographies written for children are okay if they are around 100 pages or more. (7 points)
4. At least two activities related to the LearnGenetics website will be posted during the term as extra credit opportunities. (3-5 points each)
5. Use the eChem applet (<http://www.sciencegeek.net/eChem/eChem.html>) to build at least one *specific* amino acid, one *specific* simple sugar, one *specific* nucleotide base, and one fatty acid (use your textbook for models of fatty acids). You must do all four. Print your four images and include the *specific* names of your molecules (i.e. fructose, phenylalanine, etc.). (4 points)

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