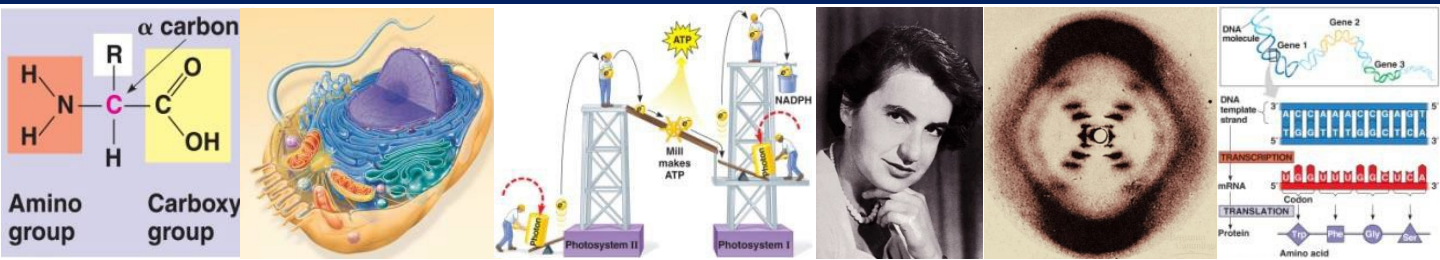


BI 211 Principles of Biology, Fall 2022



COURSE INFORMATION

Class Meetings: 9:00 – 9:50 am MWF, NS 103
Lab Meetings: 9:00-11:50 am T, NS 204
 9:00-11:50 am R, NS 204

You must be co-registered for one of the two lab sections.

- Course materials:**
- *Biology 2e by OpenStax* (also used for BI 212/BI 213)
 - *Calculator* (for most labs, for some class problems, homework)
 - Lab Instructions (online at the lab Canvas sites)

Instructor Information:

Dr. Baltzley (he/him), DFSC 114, baltzlem@wou.edu; 8-8832

Office Hours: Monday 3:00-5:00 pm
 Wednesday 10:00 am – 12:00 pm

INTRODUCTION

About Biology 211: This is the first of a three-course series required for all biology majors. Biology 211 covers basic chemistry and biological molecules, cells and metabolism, genetics, and gene expression. BI 211 is designed for students who have taken high school biology and chemistry courses, have an understanding of basic cell biology and genetics, and have strong study habits.

Course Goals:	Aligns to:
1. Master basic concepts of cellular biology, including cell structure and cell metabolism.	<i>Biology Program Outcome 1</i>
2. Master basic concepts of genetics, including DNA structure and patterns of inheritance.	<i>Biology Program Outcome 1</i>
3. Understand the scientific process, from hypothesis generation to experimental design.	<i>WOU ULO: Inquiry and Analysis; Biology Program Outcome 2</i>

This course addresses the **General Education Learning Outcomes for Intellectual foundations and breadth of exposure** (Course goals 1 & 2) and **Critical Thinking** (Course goal 3) in fulfillment of an **Exploring Knowledge: Scientific Perspectives** requirement.



Course Outcomes: At the end of the course, students should be able to...

A. UNIT ONE

- Describe properties of life, emphasizing levels of biological organization through the cell
- Explain biological molecules, including building blocks, chemical properties, and function
- Describe required parts of eukaryotic (both plant and animal) cells and prokaryotic cells

B. UNIT TWO

- Describe membrane structure and function, including diffusion, osmosis, and transport
- Explain basic thermodynamics, emphasizing the relationship between order and energy
- Diagram and explain how cells harvest energy via respiration, fermentation, photosynthesis

C. UNIT THREE

- Understand the cell cycle and compare and contrast mitosis and meiosis
- Recognize inheritance patterns, including for genetic diseases, to predict cross outcomes
- Describe DNA, replication, and understand the basis for genetic variation and evolution

D. UNIT FOUR

- Explain gene expression (transcription and translation), and mechanisms of gene regulation
- Describe special examples of molecular biology, including viruses and cancer
- Describe molecular applications, including biotechnology, genomics, and bioinformatics

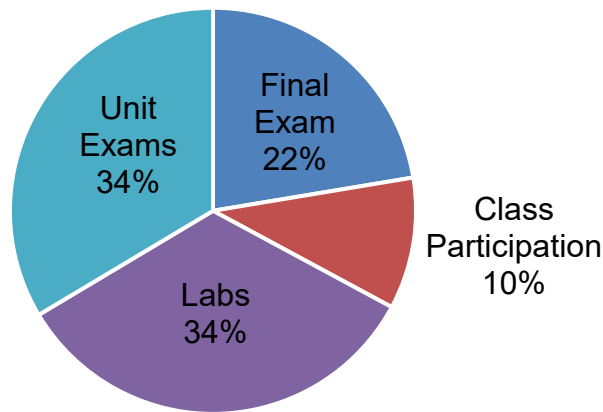
E. CROSS-CUTTING

- Engage in laboratory experimentation, data analysis and interpretation, and critical thinking

STUDENT EVALUATION AND EXPECTATIONS



Course Points Distribution



Course Point Distribution:	Points	Grading	
Unit Exams	3 x 80 = 240	90 - 100%	= A
Final Exam	= 160	80 - 89%	= B
Lab (Quizzes & Worksheets)	= 240	70 - 79%	= C
Class Participation	= 75	60 - 69%	= D
		<60%	= F
Total 715 points			

Tentative Schedule

Week	Classroom Meetings	Lab Topic
1	M Intro to Biology W Atoms and Chemical Bonds F Water, Molarity, and pH	Scientific Method
2	M Organic Chemistry W Carbohydrates and Lipids F Proteins	Separating Molecules by their Properties
3	M Nucleic Acids W Microscopy and Subcellular Structures F Exam 1 (Ch 1-4)	Cell Structure and Membrane Function
4	M Membrane Structure and Transport W Energy and Metabolism F Enzymes	Enzymes and Spectrophotometry
5	M Respiration W Photosynthesis F Exam 2 (Ch. 5-8)	Photosynthesis
6	M Cell Cycle and Mitosis W Meiosis F Mendelian Inheritance	Cell Division: Mitosis
7	M Mendelian Inheritance, continued W Inheritance Patterns F Sex-linked traits	Genetics and Problem Session I
8	M Chromosomes (and Inheritance) W DNA Discovery F DNA Replication	Genetics and Problem Session II
9	M Exam 3 (Ch. 10-14) W Transcription (Online, No Class Meeting) F Thanksgiving Holiday (No Class)	No Labs
10	M Translation W Gene Expression F Biotechnology	Biotechnology

Final Exam:

Friday, Dec. 9th, 8:00 – 9:50 a.m.

Cumulative Portion (100 pts): Units 1-3 [Ch.1-14]

New Material (60 pts): Unit 4 [Ch. 15-17]

Lecture Attendance and In-Class Activities

Assessment:

We are continuously working to improve success for our students in reaching the above objectives and the Biology Department continues to study teaching and learning in Biology 211. Thus, all students are required participate in a pre-course survey and a post-course survey.

Class Participation:

Research shows that students who are in class, engaged, and studying regularly perform better. In an effort to improve student learning, there will be a variety of **in-class exercises** based on **lecture videos that you will need to watch on-line the day before class**. There will also be **quizzes with each lecture video** that will be graded for completion. There will be at least 90 points available throughout the term, but we will only count 75. No make-up assignments are available.

If you can't make a class meeting, you can still earn your participation points by completing the in-class assignments and submitting them to me. Because one of the purposes of the in-class activities is to keep you on track and I will be posting answer keys the day after class, the in-class assignments must be submitted within 24 hours of the class meeting.

Exams:

I intend to give timed, asynchronous online exams. You will have a 48-hour time window in which to complete your exam. Course exams will be composed of 70% multiple choice and 30% short answer.

I am open to having in-person exams if the class prefers that format. We will discuss and vote on the exam format at the beginning of the term.

Lab Assignments:

The lab topics and assignments complement the topics we are covering in lecture. Each lab will consist of an online pre-lab quiz and in-class assignments that add up to 30 points. Weekly lab assignments must be completed by the end of each week. Your lowest lab score will be dropped.

Withdrawal:

The last day to drop this course without receiving a grade is Friday, October 21, 2022. The last day to withdraw from this course is Friday, November 11, 2022.

Academic Misconduct:

Cheating and presenting the work of another person as one's own (plagiarism) are serious breaches of academic honesty. This includes allowing another student to take online quizzes or complete other assignments for you.

We expect you to abide by the university's Code of Student Responsibility, which can be found at <http://www.wou.edu/studentconduct/files/2015/10/CSR-2015-161.pdf>. Academic Misconduct is defined on page 5. Cheating or plagiarism will result in a zero on that assignment and may lead to a failing grade for the course, and/or disciplinary action through WOU's Campus Judicial Program. A continuing pattern of failure to maintain a high level of academic honesty can lead to dismissal from WOU.

Office of Disability Services

WOU values diversity and inclusion; we are committed to fostering full participation for all students. Please notify your instructor if there are aspects of the instruction or design resulting in barriers to your participation.

Disability related accommodations are determined through the Office of Disability Services (ODS). If you, as a student, believe you may be eligible for disability related accommodations please contact ODS, they would be happy to work with you. ODS notifies students and faculty members of approved academic accommodations and coordinates implementation of accommodations.

Academic Programs Services Center (APSC) 405, 503-838-8250 (voice), ods@wou.edu
<https://wou.edu/disabilityservices/>

Military Service Personnel (active duty, guard, or reserve)

WOU recognizes that those who are actively serving in the Reserves or National Guard of the United States are required by their military contract to attend mandatory training. If you will be absent due to military orders, please communicate that with me as soon as possible so we may discuss alternative arrangements.

Free Tutoring

Are you searching for a personalized learning experience and support from a fellow WOU student who is qualified in their subject area? Do you want to polish your performance in a subject or skill? Look no further than WOU Free Tutoring!

WOU Free Tutoring features peer tutoring from the Math Center, Science Center, Writing Center, Computing Science tutoring, English Tutoring Center (English as a Second Language), and Student Success and Advising (SSA) tutoring (for other general education and introductory major courses as well as study skills tutoring).

Additionally, WOU Free Tutoring includes technology tutoring for academic projects (Digital Media Center), peer coaching for improving leadership and creative problem solving skills (Center for Leadership and Creativity), and advising help for Psychology majors and minors (Psychology Peer Advising).

For more information on how to access these tutoring services, please visit: <https://wou.edu/freetutoring/>

Center for Academic Innovation:

The CAI (503-838-9300) provides technology support and resources to faculty, staff and students. Their website is www.wou.edu/cai. Some very helpful technology guidance is here: <https://wou.edu/cai/students/>

Library

Library and Media services offer assistance with research and information retrieval. Ask at the reference desk in Hamersly Library. Phone/TTY: 503-838-8418.

WOU Student Success Specialist

If your faculty member at any point in the term is concerned about your academic progress and ability to succeed in the course, they may make a referral to Student Success and Advising through the Wolf Connection System (WCS). If a referral is created, an Academic Success Advisor from SSA will connect with you via email or telephone to discuss challenges you may be facing and your plan to overcome those obstacles and achieve success. This referral process is in place as a way to support you in this class and not a punishment. Anytime you want to discuss strategies for academic success, you may schedule an appointment with an Academic Success Advisor by calling 503-838-8428, emailing studentsuccess@wou.edu, or online by logging into the Portal, selecting WCS and selecting Get Advising.

Center for Professional Pathways Office: The Center for Professional Pathways office has numerous resources to help you explore career options and to strengthen your resume to make your career goals achievable. You should visit the office as early as possible in your time at WOU.

Masks and Face Coverings

In our community we support and respect everyone, whether they are wearing a mask or not:

- Masks are welcome in all spaces, and free KN95 masks are readily available for anyone who needs or wants one
- We don't make assumptions or judgments about a person's choice to wear a mask (or to not wear one)

We protect those who are vulnerable and take personal responsibility for our choices:

- We stay home when we are sick or don't feel well
- We acknowledge that masks limit the spread of disease
- We get our vaccines and boosters to protect our community: our employees and students have high vaccination and booster rates
- We alert HR (employees) or SHCC (students) when we test positive for COVID-19
- We contact HR (employees) or ODS (students) if we need accommodations

We recommend that people wear masks indoors, regardless of vaccination status. Up-to-date mask requirements can be found here: <https://wou.edu/coronavirus/>

What to do if you test positive for COVID-19?

If you test positive for COVID-19, please complete the "Report Positive COVID Test Results Here" at the bottom of your "My Programs" channel in the Portal. To prevent the spread of COVID-19, it is important for WOU to know about positive tests in our community. For additional information from the Oregon Health Authority, please see this website: <https://govstatus.egov.com/or-oha-covid-19-positive-test>.

What to do if you are feeling sick?

If you are feeling ill, stay home and do not go to class or work. Please call the WOU Student Health and Counseling Center (SHCC; 503-838-8313), or your preferred health care provider if you experience COVID-19 symptoms, including fever, cough or shortness of breath. Your questions will be answered by phone, and if necessary you will be directed to the best medical option, which might be an in-office visit, telemedicine, or a referral to urgent care. It is important that you call first as the SHCC will be working with students who have prior appointments and you may unnecessarily expose other students—or yourself be exposed—to COVID-19.

Your health care provider will also determine whether COVID-19 testing is appropriate based on symptoms and test availability in their area. The Oregon Health Authority has published a COVID-19 test site locator to help people in Oregon find testing sites in their community. The interactive map is available on pages in both English and Spanish and can be toggled into multiple other languages:

<https://govstatus.egov.com/or-oha-covid-19-testing> (English)

<https://govstatus.egov.com/or-oha-pruebas-de-covid-19> (Spanish)

What to do if you are feeling sick, continued

You may also call the SHCC if you just have questions about possible exposure to COVID-19 or symptoms of COVID-19. Any student eligible for services can call the SHCC whether they live on or off campus.

Any student enrolled in one or more credits for in-person or hybrid courses is automatically assessed the SHCC health fee and is eligible to receive care on campus. Students enrolled only in online classes are not assessed the fee and are therefore not eligible for care; however, if you are in Oregon, you can choose to pay the fee to access SHCC services. The fee is \$150 per term. If you are currently out of state, please call the SHCC to see if you are eligible for services because counselors face restrictions on practicing across state borders. Medical providers can only practice in Oregon.

Some Study Tips—Things To Do After Every Lecture or Lab:

LEARN VOCABULARY FIRST!

Learning biology is like learning a new language. Highlight every new word from lecture and lab that you do not fully understand and generate a definition using the lecture notes and your textbook. Use terms to make vocabulary flash cards and study them every day until you can state and explain them from memory.

READ THE BOOK! Carefully review each accompanying text chapter, emphasizing vocabulary, figures, problems, and making sure you understand all concepts from lecture and lab. Use lecture notes and lab handouts to make sure you are focused on the right material—and skip anything that is not covered or assigned in lecture or lab.

TEST YOURSELF! Many students think they understand the material just by sitting in lecture and listening to their instructor describe figures or solve complex story problems—and then they are surprised when they recall little to nothing during the exam. Do not let the exam be the first time you actually see whether you really know the material.

SEEK HELP EARLY! Stay on top of the course material so you have time to go to your instructor's office hours or to schedule an appointment with a tutor. If you find that things are too challenging, talk to your instructor and advisor about pursuing a less intense track of study. Some students, for example, decide it is in their best interest to take 100-level biology first (we recommend 102)—either as a way to ease into the material more slowly or as a way to discover they are not as into biology as they thought.

