



Oregon State University
Ecampus

Course Name: Cell and Molecular Biology

Course Number: BB 314

Credits: 4

Instructor name: Dr. Maria Clara Franco, Department of Biochemistry and Biophysics

Instructor email: maria.franco@oregonstate.edu

Course Description

This course explores the fundamental concepts of prokaryotic and eukaryotic cell biology and emphasizes cell structure and function at the molecular level.

PRE-REQS: (BI 211 or BI 211H) and (BI 212 or BI 212H) and (BI 213 or BI 213H) and (CH 331* or CH 334*) *Course may be taken concurrently

Communication

For questions about the course content, please post your messages in the discussion forum (can be accessed through Canvas). For personal matters that cannot be discussed publicly, please email me through Canvas email messages or at maria.franco@oregonstate.edu. I will reply to course-related questions and email within 24 hours, except weekends and holidays.

Course Credits

This course requires approximately 10-15 hours per week of instruction, online activities, and assignments for 4 credits over 10 weeks. Students are expected to participate in all graded discussions and homework. While there is great flexibility in online courses, this is not a self-paced course.

Technical Assistance

If you experience any errors or problems while in your online course, contact 24-7 Canvas Support through the Help link within Canvas. If you experience computer difficulties, need help downloading a browser or plug-in, or need assistance logging into a course, contact the IS Service Desk for assistance. You can call (541) 737-8787 or visit the [IS Service Desk](#) online.

Learning Resources

There is no required textbook for this course. However, the content of the course is derived from the following textbook which many find to be very valuable. All the course readings are from this textbook and listed on the Canvas course website.

Essential Cell Biology, 5th edition, Alberts, B. et al, Norton (Note: earlier editions are also acceptable but no readings list is provided).

In addition to the textbooks, other relevant material will be posted in the online course site including problem sets and unit level learning outcomes. The class schedule and exam dates are also posted online, as well as listed in the Course Schedule below. *It is the student's responsibility to check Canvas regularly for announcements and information pertaining to the course.*

Note to prospective students: Please check with the OSU Beaver Store for up-to-date information for the term you enroll ([OSU Beaver Store website](#) or 800-595-0357). If you purchase course materials from other sources, be very careful to obtain the correct ISBN.

Course Website

This course will be delivered via the Canvas learning management system, where you will interact with your classmates and with your instructor. Within the course Canvas site, you will access the learning materials, such as the syllabus, class discussions, assignments, projects, and quizzes. You will find information in the Start Here module in Canvas. In addition, you can preview the Ecampus Course demo, which shows how an online course works. And if you have technical issues, use the information in Start Here for Ecampus Technical Help.

Course Learning Goals

1. Correctly use scientific vocabulary to demonstrate core knowledge of the systems and processes in the cell.
2. Explain how structure dictates function at all levels of cell biology.
3. Integrate the concepts of cell and molecular biology to assess specific situations and problems and propose explanations/solutions.
4. Interpret current primary literature in cell biology and communicate key findings of a current primary research article.
5. Participate and actively contribute to a community of learning, by posting weekly on the discussion board.

Evaluation of Student Performance

The course grade is based upon the following activities and assignments:

- Midterms – 25%
- Final Exam – 35%
- Content Review Quizzes – 6%
- Choice Project Assignment – 10% (your score on this assignment will replace 10% of your lowest exam grade). If you choose not to do it, either your midterm or final exam (the highest exam grade) will represent 35% or 45%, respectively of your course grade.
- Homework – 12%
- Discussions – 12%
- **Total – 100%**

****Note** the other portions of the grade will not factor in if you do not pass (>50%) on the exam portion. This means that to pass the class, you must be able to pass the exams.

These components are explained in detail in the sections below.

Letter Grade

Grade	Percent Range
A	85-100
A-	80-85
B+	77-79
B	73-76
B-	70-72
C+	67-69
C	63-66
C-	60-62
D+	57-59
D	53-56
D-	50-52
F	<50

Exams

Exams will not require a proctor. There are two exams throughout the term, one midterm and a final. The details of the exam format remains to be determined but will be primarily short answer style questions and rely on your ability to articulate what you know and emphasize linking topics and concepts from throughout the term together. Some questions will require you to be able to analyze data and make conclusions based on techniques we learn in the class. In addition, there may be one essay outline question. All types of questions will be modeled in your homework. The final exam will be primarily concerning the material from the midterm exam onward, but it is considered comprehensive and will incorporate questions from all aspects of the course.

Makeup Exams

Makeup exams will be given only for missed exams excused in advance by the instructor. Excused absences will not be given for airline reservations, routine illness (colds, flu, stomach aches), or other common ailments. Excused absences will generally not be given after the absence has occurred, except under very unusual circumstances.

Exam Time Limits

Exams in this class are timed and the system keeps track of the time. **Please note that Canvas will automatically submit your exam when time is up.**

Content Review Quizzes

There are eight content review quizzes throughout the term that are open book and have no time limit. The purpose of the quiz is to help students to ensure understanding of the readings and lectures. The questions are not intended to be a comprehensive list of topics covered in the materials. *Students may take each quiz twice*, with the highest score used in computing their quiz grade. This allows students to identify the things that they did not know the first time and review the material again before a second attempt.

Homework

Homework assignments are required for each unit. Instructions for completing the assignment and the due date are provided with the assignment. Only assignments completed according to the instructions and submitted to Canvas by the due date are eligible for points. Assignments will be accepted up to 3 days late with a penalty of 10% per day after the listed deadline for submission. Internet connection failures or computer problems are not an acceptable excuse for failing to submit assignments. Because you are taking an online course, you must make sure that you have a reliable internet connection for your work. I will take the best 7 out of 8 assignments to calculate your overall grade. This will allow you to miss one for any reason without penalty.

Choice Project Assignment

This assignment is purposefully vague so that you are able to find a way to demonstrate your understanding of cell biology in a way that suits you. There are some stipulations. The topic you choose must directly relate to one of the units in the course. In your project proposal this link should be made clear. The project proposal will be included in the final work. You must demonstrate an understanding of the topics presented in the class.

There should be some amount of a creative component and not just a summary of a topic. Consider the audience you would like to address. For the purposes of this assignment, there are two essential parts of the story you're trying to tell. The story of the science involved, making sure to specifically highlight the cell biology, as it relates to our course. The story of the people or events that are associated with the science, that make it relevant to our theme (i.e. the intersection between science, society and diversity). Your score on this assignment will replace 10% of your lowest exam grade.

Discussion Participation

The discussion board has two distinct parts. The Q & A forum is for asking questions that are of a logistical nature, e.g., when exam grades will be available. Posts on this part of the discussion board would, naturally, only be necessary when you have such questions, and these posts do not count for your grade.

The other discussion board activities relate to course content. You will receive more detailed instructions on what your participation in this part should look like (check the Unit 1 discussion assignment). Participation in this discussion segment is **required and graded**. Students are expected to participate in all graded discussions on a regular basis. While there is great flexibility in online courses, this is not a self-paced course. You will need to participate in our discussions on **at least two** different times for each unit. You are, of course, welcome to post more often than this, but two posts are the minimum requirement per unit.

Course Content, Schedule and Due Dates

Unit	Topics	Learning Activities & Assignments
1	Introduction and Microscopy	Diagnostic Quiz – Due 10/02 Introduce Yourself Discussion – Due 10/02 Unit 1 Individual HW – Due 10/02 Unit 1 Group HW – Due 10/04 Unit 1 Knowledge Board Discussion – <u>Two posts</u> Due by 10/04 Unit 1 Content Review Quiz – Due 10/05
2	Membranes and Lipids	Unit 2 Individual HW – Due 10/07 Unit 2 Group HW – Due 10/11 Unit 2 Knowledge Board Discussion – Due 10/07, 10/11 Unit 2 Content Review Quiz – Due 10/12
3	Nuclear Structure and Function	Unit 3 Individual HW – Due 10/14 Unit 3 Group HW – Due 10/18 Unit 3 Knowledge Board Discussion – Due 10/14,10/18 Unit 3 Content Review Quiz – Due 10/19
4	Endomembrane System	Unit 4 Individual HW – Due 10/21 Unit 4 Group HW – Due 10/25 Unit 4 Knowledge Board Discussion – Due 10/21, 10/25 Unit 4 Content Review Quiz – Due 10/26
Midterm		Midterm Exam – Oct 31 – Nov 3
5	Mitochondria and Chloroplasts	Unit 5 Individual HW – Due 11/06 Unit 5 Group HW – Due 11/08 Unit 5 Knowledge Board Discussion – Due 11/06, 11/08 Unit 5 Content Review Quiz – 11/09
6	Cytoskeleton	Unit 6 Individual HW – Due 11/11 Unit 6 Group HW – Due 11/15 Unit 6 Knowledge Board Discussion – Due 11/11, 11/15 Unit 6 Content Review Quiz – Due 11/16 Optional Choice Project Proposal – Due 11/16
7	Cell Signaling	Unit 7 Individual HW – Due 11/18 Unit 7 Group HW – Due 11/22 Unit 7 Knowledge Board Discussion – Due 11/18, 11/22 Unit 7 Content Review Quiz – Due 11/23 Optional Choice Project Assignment – Due 11/30
8	Cell Division	Unit 8 Individual HW – Due 11/25 Unit 8 Group HW – Due 12/02 Unit 8 Knowledge Board Discussion – Due 11/25, 12/02

Unit	Topics	Learning Activities & Assignments
		Unit 8 Content Review Quiz – Due 12/03
Final		Comprehensive exam with focus on second half material Final Exam – December 5-8

Additional Course Policies

Late Work Policy

Late work is accepted with a 10% penalty per day late up to 3 days late.

Incompletes

Incomplete (I) grades will be granted only in emergency cases (usually only for a death in the family, major illness or injury, or birth of your child), and if the student has turned in 80% of the points possible (in other words, usually everything but the final exam). If you are having any difficulty that might prevent you completing the coursework, please don't wait until the end of the term; let me know right away.

Guidelines for a Productive and Effective Online Classroom

Students are expected to conduct themselves in the course (e.g., on discussion boards, email) in compliance with the university's regulations regarding civility. Civility is an essential ingredient for academic discourse. All communications for this course should be conducted constructively, civilly, and respectfully. Differences in beliefs, opinions, and approaches are to be expected. In all you say and do for this course, be professional. Please bring any communications you believe to be in violation of this class policy to the attention of your instructor.

Active interaction with peers and your instructor is essential to success in this online course, paying particular attention to the following:

- Unless indicated otherwise, please complete the readings and view other instructional materials for each week before participating in the discussion board.
- Read your posts carefully before submitting them.
- Be respectful of others and their opinions, valuing diversity in backgrounds, abilities, and experiences.
- Challenging the ideas held by others is an integral aspect of critical thinking and the academic process. Please word your responses carefully, and recognize that others are expected to challenge your ideas. A positive atmosphere of healthy debate is encouraged.

Statement Regarding Students with Disabilities

Accommodations for students with disabilities are determined and approved by Disability Access Services (DAS). If you, as a student, believe you are eligible for accommodations but have not obtained approval, please contact DAS immediately at 541-737-4098 or at <http://ds.oregonstate.edu>. DAS notifies students and faculty members of approved academic accommodations and coordinates implementation of those accommodations. While not required, students and faculty members are encouraged to discuss details of the implementation of individual accommodations.

Accessibility of Course Materials

All materials used in this course are accessible. If you require accommodations please contact [Disability Access Services \(DAS\)](#).

Additionally, Canvas, the learning management system through which this course is offered, provides a [vendor statement](#) certifying how the platform is accessible to students with disabilities.

Expectations for Student Conduct

Student conduct is governed by the university's policies, as explained in the [Student Conduct Code](#). Students are expected to conduct themselves in the course (e.g., on discussion boards, email postings) in compliance with the university's regulations regarding civility.

Academic Integrity

Students are expected to comply with all regulations pertaining to academic honesty. For further information, visit [Student Conduct and Community Standards](#), or contact the office of Student Conduct and Mediation at 541-737-3656.

OAR 576-015-0020 (2) Academic or Scholarly Dishonesty:

- a) Academic or Scholarly Dishonesty is defined as an act of deception in which a Student seeks to claim credit for the work or effort of another person, or uses unauthorized materials or fabricated information in any academic work or research, either through the Student's own efforts or the efforts of another.
- b) It includes:
 - i) CHEATING - use or attempted use of unauthorized materials, information or study aids, or an act of deceit by which a Student attempts to misrepresent mastery of academic effort or information. This includes but is not limited to unauthorized copying or collaboration on a test or assignment, using prohibited materials and texts, any misuse of an electronic device, or using any deceptive means to gain academic credit.
 - ii) FABRICATION - falsification or invention of any information including but not limited to falsifying research, inventing or exaggerating data, or listing incorrect or fictitious references.
 - iii) ASSISTING - helping another commit an act of academic dishonesty. This includes but is not limited to paying or bribing someone to acquire a test or assignment, changing someone's grades or academic records, taking a test/doing an assignment for someone else by any means, including misuse of an electronic device. It is a violation of Oregon state law to create and offer to sell part or all of an educational assignment to another person (ORS 165.114).
 - iv) TAMPERING - altering or interfering with evaluation instruments or documents.
 - v) PLAGIARISM - representing the words or ideas of another person or presenting someone else's words, ideas, artistry or data as one's own, or using one's own previously submitted work. Plagiarism includes but is not limited to copying another person's work (including unpublished material) without appropriate referencing, presenting someone else's opinions and theories as one's own, or working jointly on a project and then submitting it as one's own.

- c) Academic Dishonesty cases are handled initially by the academic units, following the process outlined in the University's Academic Dishonesty Report Form, and will also be referred to SCCS for action under these rules.

Tutoring and Writing Assistance

[NetTutor](#) is a leading provider of online tutoring and learner support services fully staffed by experienced, trained and monitored tutors. Students connect to live tutors from any computer that has Internet access. NetTutor provides a virtual whiteboard that allows tutors and students to work on problems in a real time environment. They also have an online writing suite where tutors critique and return essays within 24 to 48 hours. Access NetTutor from within your Canvas class by clicking on the Tools button in your course menu.

The Oregon State [Online Writing Suite](#) is also available for students enrolled in Ecampus courses.

TurnItIn

Your instructor may ask you to submit one or more of your writings to Turnitin, a plagiarism prevention service. Your assignment content will be checked for potential plagiarism against Internet sources, academic journal articles, and the papers of other OSU students, for common or borrowed content. Turnitin generates a report that highlights any potentially unoriginal text in your paper. The report may be submitted directly to your instructor or your instructor may elect to have you submit initial drafts through Turnitin, and you will receive the report allowing you the opportunity to make adjustments and ensure that all source material has been properly cited. Papers you submit through Turnitin for this or any class will be added to the OSU Turnitin database and may be checked against other OSU paper submissions. You will retain all rights to your written work. For further information, visit [Academic Integrity for Students: Turnitin – What is it?](#)

Student Evaluation of Courses

The online Student Evaluation of Teaching system opens to students during the week before finals and closes the Monday following the end of finals. Students receive notification, instructions and the link through their ONID. They may also log into the system via Online Services. Course evaluation results are extremely important and used to help improve courses and the online learning experience for future students. Responses are anonymous (unless a student chooses to "sign" their comments, agreeing to relinquish anonymity) and unavailable to instructors until after grades have been posted. The results of scaled questions and signed comments go to both the instructor and their unit head/supervisor. Anonymous (unsigned) comments go to the instructor only.