# Biology 2110c: Molecular and Cell Biology

# **UNM Valencia Campus**

Semester: Fall

**Year:** 2021

CRN #: 66765 Section 501. Tuesdays & Thursdays 9:00-10:15 in A133.

Credits: 4 credit hours

Course Description: This class covers introductory concepts vital for science majors as well as relevant topics to molecular and cellular biology including; the scientific method, the role of water in cell biology, carbon and molecular diversity, macromolecules, introduction to metabolism, a tour of cell structures and functions, membrane structure and function, cellular respiration, photosynthesis, cell communication, and the cell cycle

Instructor: Dr. Ben Flicker

Contact Information: My office is HS 100B. My phone number on campus is 505-925-8726. My email address is benflicker@unm.edu. Email is the best way to contact me.

**Student drop-in hours:** Mondays 2:00-3:00, Tuesdays 10:30-12:00, 1:00-2:30, Wednesdays 3:00-4:00, or by appointment.

**Textbook:** Biological Science, Scott Freeman, Kim Quillin, Lizabeth Allison, Michael Black, Greg Podgorski, Emily Taylor & Jeff Carmichael, 2017. 6th edition, Pearson Higher Education.

UNM Learn: Course materials will be posted on the course website (<a href="https://learn.unm.edu">https://learn.unm.edu</a>) This includes the syllabus, all assignments and announcements, as well as links to email the instructor and other students in the course. You are responsible for all such communication on the learn course page, so please check regularly.

BIOL 2110c: Molecular and Cellular Biology

# **Student Learning Objectives:**

- 1.) Students will display an understanding of the logic of scientific research (Chapter 1).
- 2.) Students will show comprehension of natural selection as the unifying theory of biology.
- 3.) Students will exhibit familiarity with basic biological chemistry including the importance of water and the principles of metabolic reactions and pathways.
- 4.) Students will demonstrate knowledge of cell structure including organelles, membranes, and cel-cell communication.
- 5.) Students will understand basic concepts of nuclear division by mitosis.
- -The goal of this class is to help you become literate in these scientific concepts and be able to apply them in biology as you move forward.

Attendance: Students are responsible for getting information presented in any class missed. If you need to stay home for whatever reason, please do so. Zoom links will be available for all class periods, so if able, please attend that way to not miss out on class participation.

#### COVID-19 SYLLABUS LANGUAGE

### <u>UNM Administrative Mandate on Required Vaccinations</u>

All students, staff, and instructors are required by <u>UNM Administrative Mandate on Required Vaccinations</u> to be fully vaccinated for COVID-19 as soon as possible, but no later than September 30, 2021, and must provide proof of vaccination or of a UNM validated limited exemption or exemption no later than September 30, 2021 to the <u>UNM vaccination verification site</u>. Students seeking medical exemption from the vaccination policy must submit a request to the <u>UNM verification site</u> for review by the UNM <u>Accessibility Resource Center</u>. Students seeking religious exemption from the vaccination policy must submit a request for reasonable accommodation to the <u>UNM verification site</u> for review by the <u>Compliance, Ethics, and Equal Opportunity Office</u>. For further information on the requirement and on limited exemptions and exemptions, see the <u>UNM Administrative Mandate on Required Vaccinations</u>.

## <u>UNM Requirement on Masking in Indoor Spaces</u>

All students, staff, and instructors are required to wear face masks in indoor classes, labs, studios and meetings on UNM campuses, see masking requirement. Vaccinated and unvaccinated instructors teaching in classrooms must wear a mask when entering and leaving the classroom and when moving around the room. Students who do not wear a mask indoors on UNM campuses can expect to be asked to leave the classroom and to be dropped from a class if failure to wear a mask occurs more than once in that class. With the exception of the limited cases described above, students and employees who do not wear a mask in classrooms and other indoor public spaces on UNM campuses are subject to disciplinary actions.

Communication on change in modality: The university may direct that classes move to remote delivery at any time to preserve the health and safety of the students, instructor and community. Please check your email and your UNM Learn site regularly for updates about our class, and please check <a href="https://bringbackthepack.unm.edu">https://bringbackthepack.unm.edu</a> regularly for general UNM updates about COVID-19 and the health of our community.

Acceptable masks and mask wearing in class: A two-layer mask that covers the nose and mouth and that is cleaned regularly is acceptable, as are disposable medical masks, KN95, KF94, FFP1 and FFP2 masks. A face shield is not sufficient protection. It is vital that you wear your mask correctly, covering your nose and mouth. Removing your mask for an extended period to eat or drink in class violates the university mask requirement and endangers others.

Consequences of not wearing a mask properly: If you don't wear a mask, or if you do not wear a mask properly by covering your nose and mouth, you will be asked to leave class. If you fail to wear a mask properly on more than one occasion, you can expect to be dropped from the class. If you insist on remaining in the classroom while not wearing a mask, class will be dismissed for the day to protect others and you will be dropped from the class immediately.

The instructor will try to have a few disposable masks available in the classroom on a first-come, first-served basis.

Withdrawal: If you drop the course after the drop deadline, you will receive a grade of 'W'.

Title IX: In an effort to meet obligations under Title IX, UNM faculty, Teaching Assistants, and Graduate Assistants are considered "responsible employees" by the department of Education (see pg 15 - <a href="http://www2.ed.gov/about/offices/list/ocr/docs/qa-201404-title-ix.pdf">http://www2.ed.gov/about/offices/list/ocr/docs/qa-201404-title-ix.pdf</a>). This designation requires that any report of gender discrimination which includes sexual harassment, sexual misconduct, and sexual violence made to a faculty member, TA, or GA must be reported to the Title IX coordinator at the Office of Equal Opportunity (Oeo.unm.edu) For more information on the campus policy regarding sexual misconduct, see: <a href="https://policy.unm.edu/university-policies/2000/2740.html">https://policy.unm.edu/university-policies/2000/2740.html</a>

**Students with disabilities:** Qualified Students with disabilities should see me or the campus testing center as soon as possible so we can meet your needs suitably and quickly.

**Homework:** Weekly homework assignments will be given. These will serve as chapter summaries to prepare you for each chapter's quiz and exam.

**Exams:** 4 exams will be given. The first 3 will be worth 100 points each. The final exam will be cumulative, comprised of new material covered since the third midterm as well as all previous material. The final exam will be worth 150 points.

Quizzes: 9 quizzes will be given during the semester. Quizzes will be given The class period following the completion if a chapter. Each quiz will be worth 10 points. Your lowest quiz grade will be dropped.

Class Participation: Class participation; both in whole-class discussions and group work are essential to this course. As such, 70 of your 800 points possible in the course will come from class participation. These points will be allotted based on: Regular attendance, being engaged in classwork, actively taking notes in class, and completion of group activities.

**Course Grading Policy:** Lecture grades will be based on the percentage of points earned (100% or higher = A+, 99-91% = A, 90% = A-. 88-89% = B+, 87-81% = B, 80% = B-, 79-78% = C+, 77-71% = C, 70% = C-, 69-68% = D+, 67-61% = D, 60% = D-, < 60% = F.

- 100 points: Homework assignments (10 assignments @ 10 points each)
- 70 points: In class activities/class participation

• 80 points: Quizzes (8 quizzes @ 10 points each)

• 300 points: Exams (3 exams @ 100 points each)

• 150 points: Cumulative final exam

• 100 points: Lab Activities & Participation

• = 800 Total points

Week	Subjects covered	Homework/ Quizzes
8/24/21	Course Introduction/Chapter 1	Hwk 1
8/26/21	Chapter 2: Chemical Bonds & Reactions	
8/31/21	Chapter 2: Chemical bonds & Reactions	
9/02/21	Chapter 2: The chemistry of water	Hwk 2
9/07/21	Chapter 3: Proteins	
9/09/21	Chapter 3: Proteins	
9/14/21	Chapter 3: Proteins	Hwk 3
9/16/21	Exam Review	
9/21/21	Exam 1 (Chapters 1-3)	
9/23/21	Chapter 4: Nucleic Acids	
9/28/21	Chapter 4: Nucleic Acids	Hwk 4
9/30/21	Chapter 5: Carbohydrates	
10/05/21	Chapter 5: Carbohydrates	Hwk 5
10/07/21	Chapter 6: Lipids	
10/12/21	Chapter 6: Lipids	
10/14/21	No Class: Fall Break	

10/19/21	Chapter 6: Lipids	Hwk 6
10/21/21	Exam 2 Review	
10/26/21	Exam 2: Chapters 4-6	
10/28/21	Cha[ter 7: Cell Structure	
11/02/21	Chapter 7: Cell Structure	Hwk 7
11/04/21	Chapter 8: Energy and Enzymes	
11/09/21	Chapter 8: Energy and Enzymes	Hwk 8
11/11/21	Chapter 9: Cellular Respiration	
11/16/21	Chapter 9: Cellular Respiration	Hwk 9
11/18/21	Lecture Review	
11/23/21	Exam 3: Chapters 7-9	
11/25/21	No Class: Thanksgiving	
11/30/21	Chapter 10: Photosynthesis	Hwk 10
12/02/21	Chapter 10: Photosynthesis	
12/07/21	Chapter 10: Photosynthesis	
12/09/21	Lecture Review	
12/14/2021	Cumulative Final Exam	

<sup>\*</sup> Instructor reserves the right to alter course schedule as the semester progresses. Students will be given advance notice (at least 1 week) of any change in dates of quizzes, homework assignments, or midterm exams.

Thank you for registering for Biology 201L at UNM-VC. I am very excited to be here to help you continue your education and achieve your goals.