

Biology 1140L: 502  
Biology for Health-Related Sciences Lab  
100% Face to Face  
Room number: VAAS-135



## UNM Valencia Campus

**Semester:** Fall

**Year:** 2021

**CRN #:** 64392 section 502 Tuesday 10:30am-1:15pm, VAAS-135

**Credits:** 1 credit hour

**Course Description:** This course is a laboratory that complements the concepts learned in the theory course. Students will learn skills involved in scientific measurement, microscopy, and mathematical analysis. Students will also perform experiments and data analysis related to cell structure and function, chemistry, enzyme activity, and genetics. *Credit is not applicable toward a biology major or minor.*

**Instructor:** Dr. Tammi Duncan

### Instructor's Information:

*Office:* Rm 132, Arts & Sciences Building

*Phone:* 505.925.8726

*Email:* [tammid31@unm.edu](mailto:tammid31@unm.edu)

*Drop-in hours (Office hours):* Face2Face: Mon. 10am-12pm, Tues. 2-3:30pm, Wed. 2-3:30pm, Thurs. 10:30am-11:30am.

*Zoom:* Fri. Available by appointment.

*Zoom Drop-In link:*

<https://unm.zoom.us/j/5736149969?pwd=QkY0eGdv dVJqTm puMGxQQmx0Zzd3Zz09>

*Zoom Meeting ID:* 573 614 9969

*Zoom Password:* 5h8C25

Aside from my office hours and immediately before and after class, email is the best way to contact me.

### Student Learning Outcomes:

At the completions of this course, students will be able to:

1. Explain the scientific method and use it to develop and test a hypothesis.
2. Analyze and interpret graphical data.
3. Demonstrate use of laboratory equipment to perform scientific measurements.
4. Demonstrate skills used in microscopy.

5. Distinguish between eukaryotic and prokaryotic cells, including their structures and functions.
6. Describe selective permeability of membranes and movement of water and molecules across membranes by diffusion and osmosis.
7. Describe the structure and function of enzymes.
8. Describe the structure of DNA and the flow of genetic material in a cell from DNA to RNA to protein.
9. Describe the process of mitosis and meiosis.
10. Predict the inheritance of genetic traits.

### Required Learning Resources:

**Course Book:** There is **No** lab manual for this class. However, the labs you will be conducting will be provided to you in advance on the course webpage: [learn.unm.edu](http://learn.unm.edu) in the "lab exercises" section. It is **your responsibility** to print these labs out before class and have them ready at class time. You are **required** to do so for each lab (with the exception of the first lab and the exam weeks).

**Course Webpage:** <http://learn.unm.edu>. The webpage contains resources you need to succeed in the course. Login using your UNM username and password. *You are responsible for all announcements, assignments, tests, and/or any changes to the syllabus will be posted on the webpage.*



### **Respondus LockDown Browser:**

<https://download.respondus.com/lockdown/download.php?id=356714141>

. Using this browser, **are responsible for taking required midterm and final exam by the deadline**. A **Webcam** through your laptop or separately purchase is required.



**Technology & Computer:** In this course, you will need the following technology and computer requirements: Dependable computer, Reliable internet connection, Computer speakers, **Webcam**, Reliable web browser, Microsoft Suite (Word).

### Tips for Success:

**Attendance: Attendance is Required for all classes. Labs cannot be made up.** Students may be dropped from the class after 3 absences.

Attendance will be taken via a daily sign-in sheet. Excessive tardiness (greater than 10 minutes) will be counted as an absence.

**Drop-in Hours:** I am available to help you succeed in the class; visit me in my Zoom Drop-in hours that are listed under Instructor information.

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

**Missed quiz policy:** Missed quizzes cannot be made up. Due to the practical nature of these, they can only be set up once.

### Things to Keep in Mind

*~Honesty is the best policy. -Benjamin Franklin*

**Accommodations:** If you have a documented disability and you need a reasonable accommodation made for you in this course, please consult with me immediately or the campus tutoring center as soon as possible so we can meet your needs suitably and quickly.

**Academic Dishonesty:** Each student is expected to maintain the highest standards of honesty and integrity in academic and professional matters. The University reserves the right to take disciplinary action, up to and including dismissal, against any student who is found guilty of academic dishonesty or otherwise fails to meet the standards. Any student judged to have engaged in academic dishonesty in course work may receive a reduced or failing grade for the work in question and/or for the course. Academic dishonesty includes, but not limited to, dishonesty in quizzes, tests, or assignments; claiming credit for work not done or done by others, hindering the academic work of other students; misrepresenting academic or professional qualifications within or without the University; and nondisclosure or misrepresentation in filling out applications or other University records.

**Equal Opportunity and Non-discrimination** 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 page 15--[offices/list/ocr/docs/qa-201404-title-ix.pdf](#)). 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: <https://oeo.unm.edu/title-ix/index.html>

## **COVID-19**

### **UNM Administrative Mandate on Required Vaccinations**

All students, staff, and instructors are required by [UNM Administrative Mandate on Required Vaccinations](#) 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 [UNM vaccination verification site](#). Students seeking medical exemption from the vaccination policy must submit a request to the [UNM verification site](#) for review by the UNM Accessibility Resource Center. Students seeking religious exemption from the vaccination policy must submit a request for reasonable accommodation to the [UNM verification site](#) for review by the [Compliance, Ethics, and Equal Opportunity Office](#). For further information on the requirement and on limited exemptions and exemptions, see the [UNM Administrative Mandate on Required Vaccinations](#).

**UNM Requirement on Masking in Indoor Spaces:** All students, staff, and instructors are required to wear face masks in indoor classes, labs, studios and meetings on UNM campuses, see masking requirement. 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. Students and employees who do not wear a mask in classrooms and other indoor public spaces on UNM campuses are subject to disciplinary actions. UNM will periodically evaluate and update the mask policy relative to public health concerns.

**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 <https://bringbackthepack.unm.edu> 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.

## **Grading Criteria**

*~Develop good study habits. Don't wait until the last minute. Give yourself plenty of time to complete the assignments. -author unknown*

**Intro. to Online Exam:** You will complete by second week of classes in order to test knowledge on the course syllabus and using Respondus LockDown Browser.

**Quizzes:** 5 quizzes will be given throughout the term. These will be worth 25 points each. They will cover recent lab activities and be a mixture of practical and written elements. The lowest quiz grade will be dropped.

**Exams:** 2 practical exams will be administered during the term. They will be a mixture of both practical and written questions. Exam study guides will be provided for both. The final will not be cumulative.

**Laboratory Policies:**

1. No food or drink is allowed in the lab at any time.
2. No chewing gum in the lab.
3. Absolutely no horseplay will be tolerated.
4. Come on time and prepared for the lab activity and quiz for that day.
5. Treat all lab equipment carefully and with respect

	Points per assignment:	Total Points:	Percentage of overall grade:
Attendance (12)	1 pts	12 pts	~3%
Pre-lab questions (11 of 11)	3 pts	33 pts	~8%
Lab Exercises (10 of 11)	8 pts	80 pts	~19%
Online Quiz Practice (1)	5 pts	5 pts	~1%
Quizzes (4 of 5)	25 pts	100 pts	~23%
Midterm Exam	100 pts	100pt	~23%
Final (not Cumulative)	100 pts	100 pts	~23%
<b>TOTAL</b>		430 pts	100%

**Course Grading Policy:** Lab 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.

## Course Schedule

<b>Week</b>	<b>Tues:502 10:30am-1:15pm</b>	<b>Lab Activity:</b>
1	Aug. 24	Course Introduction/Scientific Data
2	Aug. 31	Scientific Method/Epidemiology
3	Sept. 7	Biological Molecules <b>Online Quiz Practice</b>
4	Sept. 14	Microscopy and Cell Biology <b>Quiz 1 (Scientific Data, Scientific Method)</b>
5	Sept. 21	Diffusion and Osmosis <b>Quiz 2 (Biological Molecules, Microscopy and Cell Biology)</b>
6	Sept. 28	Enzymes-Catalase <b>Quiz 3 (Diffusion and Osmosis)</b>
7	Oct. 5	Make up/ Review Week
8	<b>Oct. 12</b>	<b>Midterm Practical Exam (Topics from beginning of semester)</b>
9	Oct. 19	Cellular Respiration
10	Oct. 26	Genetics I/Aseptic Technique
11	Nov. 2	Genetics II <b>Quiz 4 (Cellular Respiration, Genetics I)</b>
12	Nov. 9	Mitosis
13	Nov. 16	Fetal Pig <b>Quiz 5 (Genetics II, Mitosis)</b>
14	Nov. 23	Make up/Review Week
15	<b>Nov. 30</b>	<b>Final Practical Exam (Topics from Midterm)</b>

\* I reserve the right to make necessary changes.

*In summary, there is no extra credit. Every point counts. The due dates are firm. Communicate. Be on time. Study every day. Ask questions. Try your best. -Dr. T*