



VALENCIA

Fall 2019

# Biology 1110L—502 Syllabus

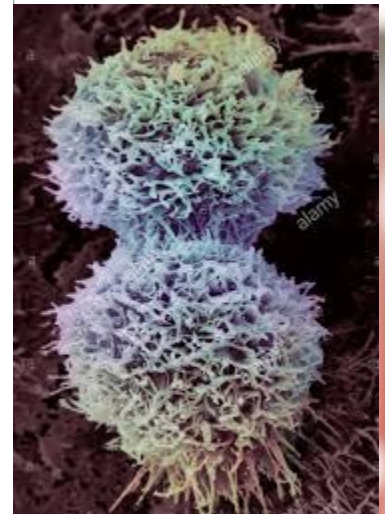
## COURSE INFORMATION

This laboratory course for non-science majors compliments the concepts covered in the associated general biology lecture course. Students will learn quantitative skills involved in scientific measurement and data analysis. Students will also perform experiments related to topics such as biochemistry, cell structure and function, molecular biology, evolution, taxonomic classification and phylogeny, biodiversity, and ecology.

## MIRIAM’S COURSE DESCRIPTION

I love teaching Biology – the study of life. In this class we will start by learning about the molecules that are part of all cells. Yes – your cells and everything we eat are composed of molecules. Most of the semester we will spend learning about the cell – such wonderful little machines that do all the work within an organism. First we will have to learn about all the cell components – think of them as little organs (organelles). Then, we will have to learn about how our cells obtain energy from food we eat. Next we will discuss DNA – our chromosomes; they are the ones that determine what we look like and everything about us. Have you ever thought about cell division? Why do cells divide? Why do we need to make more cells? These questions will be answered during our discussion on Mitosis and Meiosis. We also will discuss how traits are passed from generation to generation. Look at your family and see what traits you share. The last part of the semester we will spend time talking about how we are just one of many amazing organisms living in the planet – we will discuss other organisms, how we have changed over time, and how all organisms interact with the environment. Now you know why I love teaching Biology – we learn about our body, other organisms, and the environment around us.

Bring the knowledge that you have and take the journey with me as you continue with your educational goals.



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# Instructor's Information

## Miriam Chávez, Ph.D.

**Office:** Rm 100B, Health Science Building

**Phone:** 925-8613

**E-mail:** mjchavez@unm.edu

**Office Hours:** Mon—Thurs 8:00—9:00 a.m.  
Tues & Thurs 10:30 to 11:30 a.m.



*I have been teaching for 29 years at UNM—Valencia. I am originally from Bolivia and currently live in Los Lunas.*

## STUDENT LEARNING OUTCOMES

At the completion of this course, student will be able to:

### Introduction to biology

- Employ critical thinking skills
- Analyze data/information and draw conclusions
- Communicate effectively about scientific ideas and topics

### Chemistry

- Identify macromolecules of life and explain how their structures relate to their functions in cells

### Cells

- Describe how cellular structures and functions are related

### Genetics

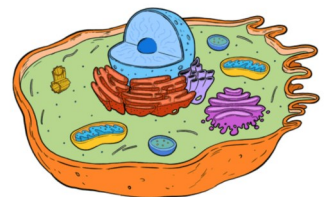
- Explain the basic mechanisms of inheritance from the molecular to organismal level

### Biodiversity

- Develop an understanding about biodiversity

### Ecology and evolution

- Define biological evolution by natural selection.
- Explain the basic principles of ecology and ecosystems.



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## REQUIRED LEARNING RESOURCES



**1. NO TEXT NEEDED** – You will either be doing some experiments in your home, analyzing case studies, or virtual labs at various websites.

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

**3. Technology & Computer:** In this course, you will need the following technology and computer requirements:

- Dependable computer
- Reliable internet connection
- Computer speakers
- Reliable web browser
- Microsoft Suite (Word)



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*“If you can dream it, you can do it” — Walt Disney*

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## TIPS FOR SUCCESS

If you are feeling lost or overwhelmed .....

**Labs.** Most labs will require between one to two hours to complete. Make sure that you have the required time to record results and submit your work.



**Office hours.** I am available to help you succeed in the class; stop by my office and I can clarify information or help you with homework.

**Email netiquette.** Include an informative subject line (class and concern -- Bio 112L, lab mitosis); include a salutation and closing (sign your name); do not use IM or TXT spelling, but instead use standard English.

## COURSE POLICIES

**Assignments.** All Assignments are to be completed and submitted through Blackboard Learn by Friday of the week.

**Late assignments.** Late assignments will only be accepted within the first week following the due date. There will be a 50% reduction in grade. I will not accept assignments after the first week.

**Exams.** Midterm and Final exam will be available through Blackboard learn.

**Withdrawal.** If a student drops the course before September 6, it will not appear on their transcript. After September 6 a “W” will be issued.

**Drop policy.** If the student has missed three assignments, he/she will be dropped from the class

## THINGS TO KEEP IN MIND

### Accommodations:

If you have a documented disability and you need a reasonable accommodation made for you in this course, please consult with me immediately at the outset of the course so we can design a solution that will help you be successful in the class.

### Academic Dishonesty:

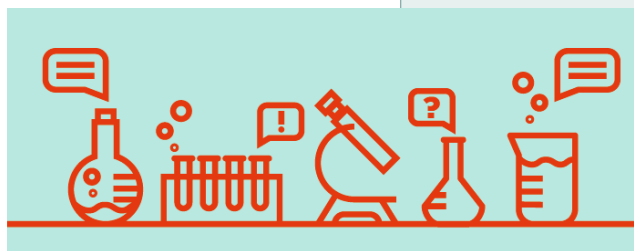
Each student is expected to maintain the highest standards of honesty and integrity in academic and professional matters. The University reserves the right to take disciplinary action, up to and including dismissal, against any student who is found guilty of academic dishonesty or otherwise fails to 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 is 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 - <http://www2.ed.gov/about/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](http://oeo.unm.edu)). For more information on the campus policy regarding sexual misconduct, see: <https://policy.unm.edu/university-policies/2000/2740.html>.

*Honesty is the best  
policy — Benjamin  
Franklin*

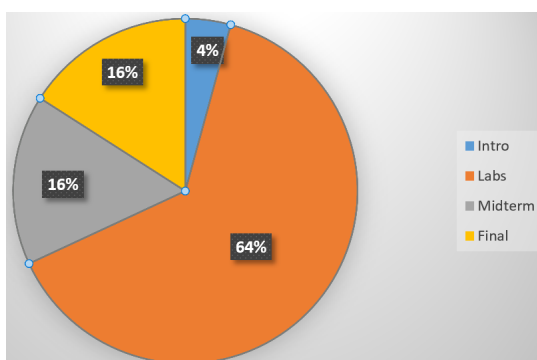
*Develop good study habits. Don't wait until the last minute. Give yourself plenty of time to complete assignment.*



## GRADING CRITERIA—

The course grade will be determined as follows:

|                  |            |
|------------------|------------|
| Intro to Course  | 20 points  |
| Weekly Labs (12) | 300 points |
| Midterm Exam     | 75 points  |
| Final Exam       | 75 points  |



There is a total of 470 possible points. The students earned points will be divided by the total points and grades earned will be based on percentage as follows:

|                     |               |
|---------------------|---------------|
| 100 or higher -- A+ | 90-99 -- A    |
| 80-89 -- B          | 70-79 -- C    |
| 60-69 -- D          | below 60 -- F |

**NOTE – *If a student fails to log into Blackboard Learn or does not purchase access to Lab Exercises by the end of the second week in the semester, the student will be dropped from the class.***

# COURSE OUTLINE

| <b>Week</b> | <b>Week of</b> | <b>Lab Assignment</b>                      |
|-------------|----------------|--|
| 1           | August 19      | Introduction                               |
| 2           | August 26      | Scientific Method – Metric System          |
| 3           | September 2    | Chemistry                                  |
| 4           | September 9    | The Cells                                  |
| 5           | September 16   | Cellular Transport                         |
| 6           | September 23   | Cellular Respiration                       |
| 7           | September 30   | DNA Biology<br>Review for Midterm          |
| 8           | October 7      | <i>Fall Break – No Labs Due</i>            |
| 9           | October 14     | <b>Midterm Exam</b>                        |
| 10          | October 20     | Mitosis & Meiosis                          |
| 11          | October 28     | Genetics                                   |
| 12          | November 4     | Biodiversity                               |
| 13          | November 11    | Evidence of Evolution                      |
| 14          | November 18    | Natural Selection<br>Review for Final Exam |
| 15          | November 25    | <i>Thanksgiving Break—No Lab due</i>       |
| 16          | December 2     | <b>Final Exam</b>                          |