

Biology for Health Science Students and Non-Majors
Biology 123-502
Fall 2017
Syllabus

Meeting time and Place:

Health Sciences Building, Room 101
Tuesday & Thursday 9:00 – 10:15 a.m.

Instructor: Dr. Miriam J. Chávez
Office: Room 100B, Health Science Building
Office Hours: Monday – Thursday 8:00 - 9:00 a.m.
Monday & Tuesday 10:30 to Noon

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Course Description:

Introductory biology class covering cell biology, genetics and organismic biology. Credit not allowed for both biology 123 and 110. Credit is not applicable toward biology major.

Student Learning Objectives:

The course is divided into 5 modules and at the completion of this course, student will be able to:

1. Introduction to biology
 - a. Explain the nature and process of science
 - b. Analyze data, construct and interpret graphs
 - c. Critically evaluate scientific information and develop a testable hypothesis to explain phenomena of the natural world
2. Introduction to chemistry
 - a. Describe the atomic structure of an atom
 - b. Compare and contrast chemical bonding.
 - c. Explain the importance of water
 - d. Identify macromolecules of life and explain how their structures relate to their functions in cells
3. Cells
 - a. Describe how cellular structures and functions are related, including organelles, membranes, and the cytoskeleton
 - b. Use the laws of thermodynamics to explain energy transformation and describe the various metabolic energy-transformation pathways in eukaryotic cells.

4. Genetics
 - a. Explain the structure and functions of DNA in cells and the mechanisms for replication and regulation of gene expression.
 - b. Explain the goals and mechanisms of nuclear division by mitosis and its role in the cell cycle. Explain the significance of meiosis, sexual reproduction, and the generation of genetic diversity and its relation to patterns of inheritance.
5. Human physiology
 - a. Explain basic concepts of anatomy and physiology
 - b. Explain the relationship of tissue, organ, and organ systems; including their structure and function.

The overall goal of the course is to help you become literate in these scientific concepts and be able to apply them in your life as you move forward in reaching your educational goal.

Required Text:

Inquiry into Life by S. Mader and M. Windelspecht, 15th edition, 2017, McGraw Hill Publisher. The bookstore has a special edition of the book - Biology for Health-Related Sciences or Non-Majors Course, Biology 123, University of New Mexico Valencia Campus, ISBN-9781307044010.

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 & changes to the syllabus posted on the webpage.***

Course Requirements:

1. **Attendance.** Attendance is necessary for you to participate in class as well as to fully understand the material presented. You are responsible for “signing-in” to document your attendance. This means getting to class on time, remaining for the **entire** class period, & actively participating. If you are missing more than 15 min. of class, it will count as an absence. Unless otherwise advised, after four absences you can be dropped from the class. The student will be held responsible for all material and information regardless of whether the student was in class.
2. **Make-up Exams.** Make-up exams (essay format) will be given to students with a documented emergency. You must notify the instructor the day of the missed exam.
3. **Quizzes.** Make-up quizzes will be given to students with a valid excuse.
4. **Homework.** These will be assigned weekly and there to help you master the concepts presented.
5. **Review Assignments.** There will be three assignments. These will help you apply the knowledge that you have gained. There will be one due before each regular exam.

6. **Late assignment/homework.** Late assignments/homework 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.
7. **Withdrawal.** If a student drops the course before September 8, it will not appear on their transcript. After September 8 a “W” will be issued.
8. **Cell phones.** As a courtesy to the class, please turn off any cell phones or pagers. PLEASE DO NOT TEXT MESSAGE DURING CLASS. Any sight of a cell phone during exams or quizzes will result in an automatic fail for that assignment.
9. **Disruptive behavior.** Please avoid any disruptive behaviors in the classroom. This includes going in and out of the class, texting, talking.
10. **Plagiarism.** Only submit work that is yours. Always cite any work used using APA format.
11. **Study habits.** To be an effective professional, information must be learned and retained efficiently. Studies have shown that information which is “experienced” a number of times within a short period of time frequently goes into long-term memory. To that end, students are strongly advised to try the following formula:
 - Look and read the chapter outline before coming to lecture.
 - Read the chapter. It will take you **more than one** reading to understand the material presented.
 - Learn the vocabulary.
 - Take good notes in class.
 - Keep up with the lecture.
 - Give yourself plenty of time to study for a quiz or exam.

Special Needs:

Qualified students with disabilities needing appropriate academic adjustments should contact the instructor by the end of the 1st week of the semester to ensure that your needs are met in a timely manner.

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). For more information on the campus policy regarding sexual misconduct, see: <https://policy.unm.edu/university-policies/2000/2740.html>.

Grading Criteria for Assigning Final Course Grade:

Exams (3)	300 points
Final Exam	125 points
Quizzes (4 out of 5)	80 points
Homework (9)	90 points
Assignments (3)	75 points
Attendance	30 points

The student’s total points will be divided by the total possible points (700) and the grade earned will be based on the following percentage:

100 or higher – A+	77-79 – C+
94-99 – A	73-76 – C
90-93 – A-	70-72 – C-
87-89 – B+	60-69 – D
83-86 – B	below 60 – F
80-82 – B	

Course Outline

Week	Date	Chapter - Topic
1	August 22	Overview of Biology 1: Study of Life
	August 24	2: Basic Chemistry <i>Homework 1 due</i>
2	August 29	2: Molecules of Life Quiz 1
	August 31	2: Organic Chemistry <i>Homework 2 due</i>
3	September 5	3: Cells Biology
	September 7	3: Cells Structure <i>Homework 3 due</i>
4	September 12	4: Cell Membranes Quiz 2
	September 14	Assignment 1 & Review
5	September 19	Exam 1 (Chapters 1-4)
	September 21	5: Energy & Enzymes
6	September 26	6: DNA Structure & Function
	September 28	6: Gene Expression <i>Homework 4 due</i>
7	October 3	7: Cell Cycle Quiz 3
	October 5	7: Cell Division <i>Homework 5 due</i>
8	October 10	Assignment 2 & Review
	October 12	Fall Break – No classes
9	October 17	Exam 2 (Chapters 5-7)
	October 19	8: Cellular Respiration I
10	October 24	8: Cellular Respiration II

	October 26	9: Genetic Inheritance I <i>Homework 6 due</i>
11	October 31	9: Genetic Inheritance II Quiz 4
	November 2	10: Chromosomal Inheritance I <i>Homework 7 due</i>
12	November 7	10: Chromosomal Inheritance II
	November 9	Assignment 3 & Review
13	November 14	Exam 3 (Chapters 8-10)
	November 16	11: Human Organization
14	November 21	12: Cardiovascular System I
	November 23	Thanksgiving Break – No classes
15	November 28	12: Cardiovascular System I <i>Homework 8 due</i>
	November 30	13: Digestive System Quiz 5
16	December 5	14: Respiratory System <i>Homework 9 due</i>
	December 7	Review for Final Exam
	Tuesday, December 12	Final Exam at 8:30 a.m.

** I reserve the right to make necessary changes