

Biology for Health Science Students and Non-Majors
Biology 123-503
Spring 2017
Syllabus

Meeting time and Place:

Health Science 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 – 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.

Required Text:

Inquiry into Life by S. Mader and M. Windelspecht, 14th edition, 2014, McGraw Hill Publisher. You must make sure to purchase access to Connect website.

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.***

<http://connect.mheducation.com/class/m-chavez-unm---valencia-biology-123---503---spring-2017>

- **You have access to the eBook** – You can read the information for each chapter assigned, you can watch videos and have access to all the figures.
- **Assignment List – Two types**
 - o **LS Chapters** – When you click here you will be asked questions to see if you understand the material based on the reading. There is no time limit and you can attempt this as often as you would like. You can use this tool to help you prepare for doing the homework, take quizzes and exams.
 - o **LS Homework** – You must do these by the date indicated to get full credit. The grade earned will be part of your grade. You have TWO attempts for each homework. Each homework is worth 10 points.

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. **LS Homework.** These are to be completed at the Connect website. You will have two attempts for each homework assignment and is a way to test yourself to make sure you have mastered the topics covered.
5. **Assignments.** There will be four assignments. These will help you apply the knowledge that you have gained. There will be one due before each 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 February 3, it will not appear on their transcript. After February 3 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	110 points
Quizzes (4 out of 5)	80 points
LS Homework (9)	90 points
Assignments (4)	100 points
Attendance	30 points

The student’s total points will be divided by the total possible points (710) 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	January 17	1: Introduction to Biology
	January 19	2: Basic Chemistry (2.1-2.3)
2	January 24	2: Organic Chemistry (2.4-2.8)
	January 26	Chemistry Review Quiz 1
3	January 31	3: Cells (3.1-3.2)
	February 2	3: Cells (3.3-3.4)
4	February 7	4: Cell Membranes Quiz 2
	February 9	Assignment 1 & Review
5	February 14	Exam 1 (Chapters 1-4) <i>Must Complete LS Homeworks 1-4 by Monday, Feb. 13</i>
	February 16	6: Metabolism: Energy & Enzymes (6.1-6.3)
6	February 21	25: DNA Structure & Gene Expression (25.1-25.2)
	February 23	No Class today – Attending conference
7	February 28	25: DNA Structure & Gene Expression (25.3-25.5) Quiz 3
	March 2	5: Cell Division (5.1-5.3)
8	March 7	5: Cell Division (5.4-5.6)
	March 9	Assignment 2 & Review
9	March 14	Spring Break – No classes
	March 16	Spring Break – No classes
10	March 21	Exam 2 (Chapters 6, 25, 5) <i>Must Complete LS Homeworks 5 & 6 by Monday, March 20</i>
	March 23	7: Cellular Respiration (7.1-7.4)

11	March 28	23: Pattern of Gene Inheritance (23.3-23.4)
	March 30	23: Pattern of Gene Inheritance (23.1-23.2)
12	April 4	24: Chromosomal Basis of Inheritance (24.1-24.2) Quiz 4
	April 6	24: Chromosomal Basis of Inheritance (24.3-24.4)
13	April 11	Assignment 3
	April 13	Review for Exam
14	April 18	Exam 3 (Chapters 7, 23, 24) <i>Must Complete LS Homeworks 7 & 8 by Monday, April 17</i>
	April 20	11: Human Organization (11.1-11.5)
15	April 25	12: Cardiovascular System (12.1-12.5)
	April 27	13: Immune System (13.2-13.4)
16	May 2	14: Digestive System (14.1-14.3) Quiz 5
	May 4	Assignment 4 Review for Final Exam
	Thursday, May 11	Final Exam at 9:00 a.m. <i>Must Complete LS Homework 9 by Tuesday, May 9</i>

** I reserve the right to make necessary changes