

# Biology 3 - Introductory Biology (0136 & 0137)

Los Angeles Mission College – Spring 2013

Lecture: T/Th 7:15-8:40 AM (CMS004); Lab: T or Th 8:55-12:00 PM (CMS110)

**Instructor: Dr. Par Mohammadian**

**Office Hours: T and Th: 12:00 – 1:30 PM (Life Science Dept. CMS # 221)**

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Website: <http://missiononline.pbworks.com/w/page/62211582/Etudes-Spring2013>

- Please check the drop dates with the admissions office or online  
<http://www.lamission.edu/students/calendar.aspx>

**Hours :** Lecture - 3 Carnegie hrs/wk, Laboratory - 3 Carnegie hrs/wk; 4 semester units

**Advisory:** English 28 or ESL 8

**Articulation:** CSUN Biology 101; CSULA Biology 155 & 156; UCLA Life Science 15; UCR Biology 2

Biology 3 is a comprehensive course designed to allow students to identify and describe the major concepts of modern and classical biological sciences including: the fundamental physical and chemical principles underlying the life sciences; the basics of cell structure and function; the underlying principles of heredity, reproduction, and development; and the intimate interplay between organisms and their environment. The relationship between STRUCTURE and FUNCTION, from atoms to ecosystems, provides a unifying theme for the course. Concepts will be reinforced by active participation in laboratory exercises, lectures, discussions, readings, and written assignments, constructed specifically to allow students to learn about the scientific process and its effect on our daily lives.

## Course Objectives

- (1) To learn the language and fundamental concepts of modern biological sciences.
- (2) To grow as a student of science, by integrating lectures, discussions, laboratories, home-study, and small-group study into a holistic approach to learning.
- (3) To work as a member of a laboratory team, taking responsibility for one's own success, but learning to adapt, share, and learn with others during laboratory meetings.
- (4) To become a critically thinking member of our democratic society, being able to read and discuss issues raised by modern advances in the life sciences, in order to make informed decisions for oneself, family, friends, and community.

## Student learning outcomes (SLOs)

Biology 3 students will work together as a laboratory team to answer questions, in writing, on laboratory techniques learned in the course and will design a simple experiment using those methods.

**Books required:** Biology: Concepts and Connections, Campbell, Mitchell, Reece; Pearson-Benjamin Cummings - 7<sup>th</sup> edition 2011-ISBN for the bundle is 978-1256302407. Please be sure to purchase the book before the start of the semester from the LAMC bookstore! You are required to purchase the **code** for mastering biology as well. E-text is also available with the code.

**Lab Manual:** You are **required** to purchase the fall 2012 (not the older versions) lab manual from the bookstore before the semester begins. OR download: <http://www.lamission.edu/lifesciences/Biology3Laboratories.aspx> before the semester begins.

## Evaluation and Grading

- (1) **Quizzes** (3 x 60 = 180 points)

A short quiz will be administered on 4 different occasions during the semester. The quizzes are administered in the beginning of the class and if a student is tardy, she/he will not be allowed to take the quiz. Each quiz will take approximately twenty minutes and will emphasize material covered during previous labs and lectures. The quizzes are intended to stress the importance of staying up with the material. At the end of the semester, the lowest quiz score will be dropped. **Quizzes cannot be made up.** Students should arrange all personal, family, and vacation plans accordingly. Pop quizzes may also be given throughout the semester.

(2) **Laboratory Exercise Sheets and Lab/class Participation** (14 x 10 = 140 points)

Students are required to complete all questions, including tables, charts, and graphs, for all laboratory exercises. *Laboratory Sheets* must be returned on the same day. Late reports are not accepted. The sheets for each of the 14 laboratory meetings will be worth 10 points each. **Do not underestimate the value of these points!** Every semester some students lose a whole grade because of absences, tardiness, failure to participate, or failure to hand-in lab sheets complete and on time. If you are tardy or leave early, you will not receive full points. A student, who **misses three class/laboratory sessions or is tardy three times/leaves early, excused or unexcused**, is subject to receiving a Failing Grade or may be dropped. The fieldtrip to the zoo is part of your lab assignment. The details on the fieldtrip will be given to you by your instructor close to the date.

(3) **Midterm Examinations** (3 x 120 = 360 points)

There will be 3 objective midterm exams as scheduled in the course outline. The exams are administered in the beginning of the class and if a student is tardy, she/he will not be allowed to take the exam. **No make-up midterm examinations will be given.** A student who has an excused absence from one midterm only will have the percentage earned on the next examination counted for that missed score. The excuse for the absence must be reported to the instructor within 24 hours and accompanied with proper documentations. Students should arrange all personal, family, and vacation plans accordingly. These occasions are not considered as excused absences.

(4) **Case Study poster** (1 x 30)

Written communication and critical thinking are essential components of science. Students will be asked to read and respond to a controversial issue in modern biological sciences. Students will be required to write a coherent essay in which he/she will argue the merits of their analysis of the issue. **Details on the topics and the format will be posted on my website about two weeks before the poster is due.** Late submissions are not accepted.

(5) **Homework/Participation** (40 points)

Assignments are given throughout the semester, announced or unannounced. Your participation and interaction is also graded.

(6) **Final Laboratory Practical Examination** (80 points)

The Final Laboratory Practical Examination will cover all material from all laboratory exercises throughout the semester and will include “hands-on” experimentation that will be accomplished by the lab groups. You can use your lab reports. No make-up Exam will be given.

(7) **Final Objective Examination** (170 points)

The Final Objective Examination will include material from throughout the course. No make-up Final Exam will be given. Students should arrange all personal, family, and vacation plans accordingly.

<u>Evaluation</u>	<u>Number</u>	x	<u>Points</u>	=	<u>Total</u>	<u>Percentage</u>
Quizzes	3		60		180	18%
Lab Exercise Sheets	14		10		140	14%
Case Study	1		30		30	3%
Homework/Participation					40	4%
Midterm Exams	3		120		360	36%
Final Practical Exam 1			80		80	8%
Final Objective Exam 1			170		<u>170</u>	<u>17%</u>
					<b>1000</b>	<b>100%</b>

**TENTATIVE GRADING SCALE** (final point total may be subject to change)

<u>Point Total</u>	<u>Percentage</u>	<u>Letter Grade</u>
900-1000	100 - 90%	A
800-899	89 - 80%	B
700-799	79 - 70%	C
600-699	69 - 60%	D
599- lower	59 - lower	F

**Lecture Notes are Available on my Etudes website.** The notes may be downloaded and saved as a Powerpoint or HTML file. You will also find links to animations related to the topics that we will review in the class. For copy right purposes the images are removed from the lecture notes. These images are taken from your textbook. The website of the publisher is an excellent resource to find chapter reviews and quizzes: [www.masteringbiology.com](http://www.masteringbiology.com). Course ID: BIO3DrParSpring2013

***Plan to study at least 6hours per week for this class (3 hours of class time x 2 = 6 hrs study time at home)!*** If you need assistance, visit the Science Success Center (SSC) at the LRC, located on the 1st floor of the Library building. Free tutoring will also be available Mon-Th from 11AM-7PM. Enroll in a study group. Check out the schedule for Science related workshops. For details visit SSC webpage at <http://lamission.edu/learningcenter/ssc.aspx> or call (818)364-7628 or email: [lamcssc@gmail.com](mailto:lamcssc@gmail.com)".

### **Additional Materials**

Each student should **purchase at least 10 ScanTron** Answer Sheets for the Quizzes, Midterms, and Final Exam.

### **Cheating**

Cheating and plagiarism in any form will result in an automatic F and dismissal from the course.

### **Students with Disabilities:**

Students with disabilities are encouraged to contact Disabled Student Programs & Services (DSPS) to find out what services and accommodations are available. In general, recording of the lectures are not allowed unless the student can provide a letter from the DSPS office indicating the need for recording the lectures.

## Lecture/Laboratory Schedule

Biology 3 – Spring 2013

Dr. Par Mohammadian

<u>Date</u>	<u>Lecture/ Laboratory</u>	<u>Reading</u>
<b><u>Week 1</u></b>		
T 2/5	Course Intro; Introduction - Study of Life <i>Scientific Method – part 1</i>	Chapter 1
Th 2/7	The Chemical Basis of Life <i>Scientific Method - part 1</i>	Chapter 2
<b><u>Week 2</u></b>		
T 2/12	The Chemical Basis of Life <i>Metric System – part 2</i>	Chapter 2
Th 2/14	The Molecules of Cells <i>Metric System – part 2</i>	Chapter 3
<b><u>Week 3</u></b>		
T 2/19	<b>Quiz 1 (ch 1-2);</b> The Molecules of Cells <i>Mol., Water &amp; pH</i>	Chapter 3
Th 2/21	A Tour of the Cell <i>Mol., Water &amp; pH</i>	Chapter 4
<b><u>Week 4</u></b>		
T 2/26	A Tour of the Cell <i>Microscopy &amp; Cell</i>	Chapter 4
Th 2/28	The Working Cell <i>Microscopy &amp; Cell</i>	Chapter 5
<b><u>Week 5</u></b>		
T 3/5	<b>Examination #1 - Ch 1-4</b> <i>Macromolecules</i>	
Th 3/7	The Working Cell <i>Macromolecules</i>	Chapter 5
<b><u>Week 6</u></b>		
T 3/12	How Cells Harvest Chemical Energy <i>Enzymes</i>	Chapter 6
Th 3/14	How Cells Harvest Chemical Energy <i>Enzymes</i>	Chapter 6
<b><u>Week 7</u></b>		
T 3/19	<b>Quiz 2</b> (ch 5-6); Using Light to Make Sugars: Photosynthesis <i>Respiration</i>	Chapter 7
Th 3/21	Using Light to Make Sugars: Photosynthesis <i>Respiration</i>	Chapter 7
<b><u>Week 8</u></b>		
T 3/26	<b>Examination #2 - Ch 5-7</b> <i>Photosynthesis</i>	
Th 3/28	<b>NON-Instructional Day</b>	

<u>Date</u>	<u>Lecture/ Laboratory</u>	<u>Reading</u>	
<b><u>Week 9</u></b>			
Tue 4/2	Spring Break		
Th 4/4	Spring Break		
<b><u>Week 10</u></b>			
T 4/9	Cellular Basis of Repr. & Patterns of Inheritance <i>Mitosis &amp; Meiosis</i>	Chapters 8 & 9	
Th 4/11	Patterns of Inheritance <i>Mitosis &amp; Meiosis &amp; Photosynthesis</i>	Chapter 9	
<b><u>Week 11</u></b>			
T 4/16	<b>Quiz 3 (ch 8-9);</b> Molecular Biology of the Gene <i>Genetics</i>	Chapter 10	
Th 4/18	Molecular Biology of the Gene <i>Genetics</i>	Chapter 10	
<b><u>Week 12</u></b>			
T 4/23	How populations evolve <i>DNA &amp; Gene Expression</i>	Chapter 13	
Th 4/25	<b>Examination #3 - Ch 8-10</b> <i>DNA &amp; Gene Expression</i>		
<b><u>Week 13</u></b>			
T 4/30	Animal Structure and Function <i>Natural Selection</i>	Chapter 20	<b>Case Study poster due</b>
Th 5/2	Circulation <i>Natural Selection</i>	Chapter 23	<b>Case Study poster due</b>
<i>Sat 05/04: Field trip to the LA zoo at 9:20 am</i>			
<b><u>Week 14</u></b>			
T 5/7	Circulation <i>Cardio &amp; Heart</i>	Chapter 23	<b>Zoo fieldtrip form due</b> <i>Posters to be sent to LRC</i>
Th 5/9	Digestion & Nutrition <i>Cardio &amp; Heart</i>	Chapter 21	
<b><u>Week 15</u></b>			
T 5/14	Digestion & Nutrition <b><u>Final Lab Practical Examination</u></b>	Chapter 21	<i>Posters to be sent to LRC</i>
Th 5/16	Reproduction and Development <b><u>Final Lab Practical Examination</u></b>	Chapter 27	<i>Posters to be sent to LRC</i>
<b><u>Week 16</u></b>			
T 5/21	<b>Quiz 4 (ch 13, 20, 21 23);</b> Reproduction and Development <i>No lab – Replaced by the field trip</i>	Chapter 27	<i>(Present your poster)</i>
Th 5/23	Review <i>No lab – Replaced by the field trip</i>		<i>(Poster contest winners announced)</i>
<b><u>Week 17</u></b>			
T 5/28	<b>FINAL EXAMINATION</b> (7:30 – 8:55 AM)		

**Code of Honor and Integrity**  
Los Angeles Mission College  
Department of Life Sciences

Students at Los Angeles Mission College, because they are members of an academic community dedicated to the achievement of excellence and the pursuit of honor, are expected to meet high standards of personal, ethical, and moral conduct. These standards require personal integrity and a commitment to honesty without compromise. Without the ability to trust in these principles, an academic community and a civil society cannot exist. Los Angeles Mission College students and faculty are as committed to the development of students with honesty and integrity as they are to the academic and professional success of its students.

The **Code of Honor and Integrity** is an undertaking of the students, first and foremost, both individually and collectively, that they will:

1. not give or receive dishonorable aid during exams, quizzes or assignments
2. do their share and take an active part in seeing to it that fellow students, as well as themselves, uphold the spirit and letter of the Code of Honor and Integrity.

Some examples of conduct that are regarded as being in violation of the Honor Code include:

- Copying from another's examination or quiz, or allowing another to copy from one's own papers
- Using any unpermitted source of information, human or other, during an exam, quiz or assignment that influences the grade; this includes the use of technological devices
- Any student-to-student collaboration that is unpermitted
- [Plagiarism](#) (plagiarism is defined as the use, without giving reasonable and appropriate credit to, or acknowledging the author or source, of another person's original work)
- Representing as one's own work as the work of another
- Giving or receiving aid on an academic assignment under circumstances in which a reasonable person should have known that such aid is not permitted

As a part of the effort to promote an environment of honesty and integrity during quizzes and examinations, the following guidelines will apply for any courses in the Department of Life Sciences:

1. Students will leave all books and all other non-essential items (e.g. paper, electronic devices) on the floor so that they are not useable nor block the sight line between professor and student. No electronic devices will be in reach.
2. Students will not communicate in any way that will dishonorably assist themselves or another student.
3. Students will leave the room during an exam only if permitted by the professor's policy. If permitted, only one student may leave the room at any time and be gone for only the average length of time needed for the stated purpose. Students will leave all purses, bags, books, phones, jackets, etc., in the classroom during the absence.
4. Students will promote the spirit and letter of the **Code of Honesty and Integrity** by dissuading fellow students from dishonest activity and, when such casual persuasion does not work, informing the professor of the possible dishonest activity, either anonymously, or otherwise.
5. Students will make every effort to avoid even the appearance of dishonesty or lack of integrity

Violation of this policy will not be tolerated and violators will be subject to severe penalties. The success of the **Code of Honor and Integrity** is based upon the collective desire of students, faculty and the community to live in an environment that embraces respect for that which is right – both in the college and in society as a whole.