

**Physiology I**  
**Introduction to Human Physiology**  
Los Angeles Mission College – Spring 2020  
Instructor: Dr. Ali Baroon

Lecture: Tuesday 6:50 - 10:00 PM (CMS 104) Section #23035  
Laboratory: Thursday 6:50 - 10:00 PM (CMS 104) Section #23036

**Office Hours:** Tuesday 6:00 – 6:40 PM (CMS 104)  
Thursday 6:00 – 6:40 PM (CMS 104)  
E-mail: [rezaeem@lamission.edu](mailto:rezaeem@lamission.edu)

Last Day to Drop without a "W"- 2/23 (internet)  
Last Day to Drop with a "W"- 5/10 (internet)

**Course Description:**

Physiology 1 is an intensive lecture and laboratory course that focuses on a variety of physiological topics including homeostasis, membrane transport, and the function of muscle, nervous, circulatory, respiratory, digestive, endocrine, and reproductive systems. Standard laboratories and computer-assisted laboratories enhance the study of this interesting subject matter.

**Articulation:** Physiology 1 is articulated with CSUN Biology 281 & 282; CSULA Biology 200A/B

**Prerequisites:** Biology 3 or 5, Anatomy 1, Chemistry 51 or 65 or 101

**Student Learning Outcome:**

1. Physiology 1 students will analyze a fundamental homeostatic process of the human body.
2. Physiology 1 students will demonstrate an understanding of the integration of functions across many levels of physiological organization, from molecules to the entire human body.

**Course Objectives**

1. To learn the fundamental concepts of human physiology for advancement to certificate programs allied health programs and bachelor degree programs at the university level.
2. To understand basic laboratory aspects of human body function working individually and in small groups, as will be expected in future course work and/or professional endeavors.

## **Books**

Required: **Human Physiology**, Stuart Ira Fox, 15<sup>th</sup> edition (ISBN 978-1-259-86462-9)  
**Human Physiology Lab Manual**, Custom Version for Mission  
See LAMC Bookstore (ISBN 978-1-2692-8824-8)

**ADDITIONAL MATERIALS:** purchase Scantron Answer Sheets for the exams, and Final Exam. (Scantron 882-e)

## **Evaluation and Grading**

### **Exams (3 X 100 = 300)**

A total of 4 exams will be administered during the semester. There will be no makeup with exception of documented emergency or official excused absences. It is the responsibility of the student to notify the instructor within 24 hours and present her with required documents. The approval to make-up the exam is at instructor's discretion or the instructor may decide to use the percentage earned on the next examination counted for that missed score. Students will not receive any points for missed and unexcused exam(s). 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. Students should arrange all personal, family, and vacation plans accordingly. These occasions are not considered as excused absences.

### **Final Examination (200 points)**

The Final Examination will be given on Thursday 8/3. It will focus on the last five weeks. **No make-up Final Exam will be given.** Students should arrange all personal, family, and vacation plans accordingly.

### **Laboratory Exercises (approximately 14 X 10 = 140 points)**

Students are required to participate and complete the Review Exercises in the Laboratory Manual and return them at the start of class on the following laboratory period. Each week of the Laboratory Exercise Assignment(s) will be worth 10 points. Incomplete and late Review Exercises will be marked down. Do not underestimate the significance of these points on the final course grade. **A student who is absent for more than two laboratories is subject to receiving a failing grade in the course.**

Note: The number of review sheets may change due to circumstances that may arise during the semester, but the total points still remain the same.

### **Paper & Presentation of a scientific topic (50+50 = 100 points)**

#### **Term Paper**

Students will be required to research and write a paper on a topic related to a human disease of interest to him/her. The paper is to be a minimum of five pages double-spaced and typed. The objectives and guidelines will be discussed in class. Students will also be required to give a brief summary of their paper to the class at the end of the semester through an oral presentation.

### **Suggested to Include in the Term Paper**

- Symptoms
- Diagnosis
- Epidemiology (numbers, groups, etc. affected)
- Etiology (underlying physiological or biological mechanism)
- Pathophysiology
- Prognosis (likely outcome for the patient)
- Treatment
- Any other information pertinent to the disease

### **Presentation**

You will work with at least two more team members (group of three students) on a topic selected by the group (or instructor) and approved by your instructor. Your group will present the topic in the lab using one compiled power point file. Each student will present one section of the topic and he/she will be evaluated and graded *individually*. However, since it is a group work the topic/presentation will be researched and organized as a group. All members of the group are required to know about the entire presented topic. You will be evaluated based on your presentation (*no written materials or notes can be used*; your projected presentation is your source to present & use loud voice!), scientific knowledge (including recent scholarly research findings), and answers to the questions. The presentation will only be 15 min; each student will have exactly 5 minutes (you will be also evaluated on the time). At the end of the 15-min presentation, another 10 minutes will be assigned to questions/discussions. If you are not on time or miss your presentation, you will receive zero. The presentation should be divided in the same format as in your term paper. You are required to use resources, such as textbook and peer-reviewed journals in [www.pubmed.gov](http://www.pubmed.gov). (When choosing your topic, please present at least three related abstracts that are published in journals found in pubmed)

### **Quizzes (20 x 1 = 20 points)**

Your participation and interaction in the classes/labs are graded. The lecture quizzes are posted on CANVAS. Check the due dates on Canvas.

### **Case studies (20 x 10 = 200 points)**

At the end of each chapter you will find “*Test Your Analytic Ability*” that you are required to know, answer in detail, and submit it in the DISCUSSION BOARD in canvas after each chapter is completed. Please Include the page number(s) where you read the answer in the book. Obviously, you are required to read and understand the chapter and reflect before answering the questions. **Please note that these maybe cases at your work in the future**

### **Participation (40 points)**

## The total number of points:

Lecture		Lab	
Exam 1	100	14 Lab Reviews (10 points each)	140
Exam 2	100	20 Case studies (10 points each)	200
Exam 3	100	Participation	40
Final	200		
Paper / Presentations	50+50		
20 Quizzes (1 pts each)	20		
<b>Lecture Total</b>	<b>620</b>	<b>Lab Total</b>	<b>380</b>

**Note: Total points for the course may change depending on circumstances during the semester.**

## Tentative Grading Scale

<u>Percentage</u>	<u>Letter Grade</u>
<b>100 - 90</b>	<b>A</b>
<b>89 - 80</b>	<b>B</b>
<b>79 - 70</b>	<b>C</b>
<b>69 - 60</b>	<b>D</b>
<b>59 - lower</b>	<b>F</b>

## OFFICE HOURS AND GETTING HELP

I will remain after class and lab to answer questions and offer individual assistance. Do not be shy. I am here to help you learn the material and it is a joy for me to help students learn physiology. Do not leave any questions you may have unanswered.

## GENERAL COMMENTS AND SUGGESTIONS

- **Read the textbook prior to attending the lecture!!** There is **no easy way**. You **MUST** study to succeed. You will not remember it all the first time through. that is why I am here, to be your cruise director and guide! That is what lecture is meant to be! (1) Read text (2) attend lecture (3) study the text and lecture notes. I cannot learn the material for you. But I can sure help make sense of it all!!!
- **Come to class prepared!** This cannot be overemphasized. It is essential for you to read the textbook **prior to lectures and the laboratories prior to the labs**. Lectures are intended to assist you in organizing and understanding material, which can be detailed and complex. Becoming familiar with the vocabulary and the concepts will make the lectures much more interesting and instructional. Reading the laboratories prior to entering the lab is a must! Laboratory time is limited, and everyone must know what is to be accomplished.
- **Do not fall behind!** This is a fast-paced course that covers a lot of material. Seek help before you begin to get in trouble. I am here to help you learn.
- **Work together!** This is not a correspondence course. We get together twice each week and, in the laboratory, so that classmates and lab partners can assist one another in learning physiology. Come to class prepared to learn and seek the assistance of others during labs. **Read all labs prior to attendance!**
- **Ask questions!** Students should not view their role as passive. Asking questions is actively encouraged.

## Three Attempt Limit

LACCD policy limits students to **three attempts per course**. Receiving a grade or a "W" for a course counts as an attempt, **regardless of when the course was taken**. Withdrawal by the deadline to avoid a "W" will not count as an attempt.

**Lecture / Lab Schedule**  
**Physiology 1- Spring 2020**  
**Los Angeles Mission College**  
**Dr. Baroon**

<b>Date</b>	<b>Lecture</b> (see textbook & lecture notes on Canvas)	<b>Laboratory</b> (see lab manual & Canvas)	<b>Reading</b>
<b>Week 1</b> 2/10-2/14	- Course Introduction, Syllabus review Homeostasis, Chemical composition of the body - Plasma Membrane, cell structure and genetic control	-Laboratory Safety & Video - <b>Lab 1: The Scientific Method</b> <b>Case Study: Stress Smoking Article – Review and Analysis</b> <b>-Choose your presentation</b>	<u><b>Ch. 1, Ch. 2</b></u> <u><b>Ch. 3</b></u>
<b>Week 2</b> 2/17-2/21	- Enzymes and energy -Interaction between cell and the extracellular environment	Cell Transport and Permeability ( <b>PhysioEx: Lab 14</b> ) <b>-Case Study: Water Can Kill Article – Review and Analysis</b>	<u><b>Ch. 4</b></u> <u><b>Ch. 6</b></u>
<b>Week 3</b> 2/24-2/28	<b>Exam #1: Ch 1-4, 6</b>	<b>Presentation #1: Cystic Fibrosis Disease</b> <b>Case Study: Going Under the Knife: Review and Analysis</b>	
<b>Week 4</b> 3/2-3/6	- Nervous System, Cells and Membrane Potentials, The Synapse, Integration and neurotransmitters	Neurophysiology of Nerve Impulses ( <b>PhysioEx: Lab 16</b> ) <b>-Presentation #2: Alzheimer’s Disease</b>	<u><b>Ch.7</b></u>
<b>Week 5</b> 3/9-3/13	- The central nervous system	<b>-Case Study: Bad Fish: A Case on Nervous Tissue - Review and analysis</b> <b>-Presentation #3: Parkinson’s Disease</b>	<u><b>Ch.8</b></u>
<b>Week 6</b> 3/16-3/20	Physiology of Autonomic Nervous System	Human Reflex Physiology ( <b>Lab 4</b> ) General Sensation ( <b>Lab 5</b> ) <b>Presentation #4: Multiple Sclerosis</b>	<u><b>Ch. 9</b></u>
<b>Week 7</b> 3/23-3/27	-Sensory physiology	Visual Tests and Experiments ( <b>Lab 6 - Vision &amp; Hearing Tests</b> )	<u><b>Ch. 10</b></u>
<b>Week 8</b> 3/30-4/3	<b>Cesar Chavez Holiday</b>	<b>Exam #2: Ch 7-10</b>	

<b>Week 9</b> 4/6-4/10	<b>Spring Break</b>	<b>Spring Break</b>	
<b>Week 10</b> 4/13-4/17	-Neural control of skeletal muscles, cardiac and smooth muscles -Blood, heart and circulation	Skeletal Muscle Physiology ( <b>PhysioEx: Lab 15</b> ) Skeletal Muscle Physiology ( <b>BIOPAC: EMG1 –</b> <b>--Presentation #5: Muscular Dystrophy</b>	<u><b>Ch. 12</b></u>
<b>Week 11</b> 4/20-4/24	- Blood, heart, Cardiac output, Blood flow and blood pressure	Cardiovascular dynamics <b>PhysioEx: (Lab 18)</b> Cardiovascular physiology <b>PhysioEx: (Lab 19)</b> <b>- Case Study: My Brother Calls Me “Bug Eyes”</b> <b>--Presentation #6: Myocardial Infarction</b>	<u><b>Ch. 13</b></u> <u><b>Ch. 14</b></u>
<b>Week 12</b> 4/27-5/1	- Blood, heart, Cardiac output, Blood flow and blood pressure	EKG ( <b>BIOPAC: ECG1 – Electrocardiography 1</b> ) <b>--Presentation #7: Congestive Heart Failure</b>	<u><b>Ch.13</b></u> <u><b>Ch.14</b></u>
<b>Week 13</b> 5/4-5/8	<b>Exam #3: Ch 12-14</b> - Physiology of Respiration I - Physiology of respiration II	Respiratory system Mechanics ( <b>PhysioEx: Lab 20</b> ) Pulmonary Function 1 ( <b>BIOPAC: Pulmonary Function 1</b> )	<u><b>Ch.16</b></u>
<b>Week 14</b> 5/11-5/15	- Physiology of Respiration I - Physiology of respiration II	<b>--Presentation #8: COPD</b>	<u><b>Ch.16</b></u>
<b>Week 15</b> 5/18-5/22	-Physiology of Urinary System	Renal System Physiology ( <b>PhysioEx: Lab 22</b> ) Acid-Base Balance ( <b>PhysioEx: Lab 23</b> ) Urinalysis ( <b>Lab 14</b> ) <b>--Presentation #9: UTI</b>	<u><b>Ch. 17</b></u>
<b>Week 16</b> 5/25-5/29	- Physiology of Digestion I	Chemical and Physical Process of Digestion ( <b>PhysioEx: Lab 21</b> ) <b>--Presentation #10: Celiac Disease</b>	<u><b>Ch. 18</b></u>
<b>Week 17</b> 6/1-6/5	-Physiology of Digestion I	<b>Review for final exam</b>	<u><b>Ch. 18</b></u>
<b>Week 18</b> 6/9	<b>Final Examination</b>	<b>June 2<sup>nd</sup> 8-10 p.m.</b>	

# 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.

## **SPECIAL ACCOMMODATIONS**

If you require special accommodations for a disability, religious holiday, or any other reason please inform your instructor(s) within the first week of the course and we will accommodate you if at all possible. For accommodations due to disability, you must consult with the Disabled Students Programs and Services Office after which we will abide by their recommendations.

## **COLLEGE RESOURCES FOR LAMC STUDENTS**

**Admissions and Records:** Students can register for classes, request transcripts, file petitions for graduation, and drop classes at this office. For more information call 818-833-3322 or visit: <http://www.lamission.edu/admissions/>

**Bookstore:** For hours of operation, book availability, buybacks, and other information call 818-364-7767 or 7768 or visit <http://eagleslanding.lamission.edu/default.asp>

**Counseling Department:** For appointments and information call 818-364-7655 or visit <http://www.lamission.edu/counseling/>

**Disabled Students Programs and Services (DSP&S):** For appointments, eligibility and information call 818-364-7732 or visit <http://www.lamission.edu/dsps/>

**Extended Opportunity Programs and Services (EOP&S):** For appointments, eligibility and information call 818-364-7645 or visit <http://www.lamission.edu/eops/>

**Library:** For information on hours, resources, workshops, and other services contact 818-364-7106 or visit <http://www.lamission.edu/library/>

**Tutoring Services in Learning Center:** CMS 101