

Introduction to Human Physiology - Physiology 1 (0424 & 0425)

Los Angeles Mission College – Spring 2013

Instructor: *Dr. Par Mohammadian*

Lecture: MW 8:55 – 10:20 am (CMS 105)

Lab (CMS 104): **Monday** Lab (#0424) or **Wednesday** lab (#0425) 10:30 am -1:40 pm

Office Hours: MW 1:40 – 2:55 pm (Life Science Dept. CMS #221)

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Website: <http://etudes.org/gateway/login-lamc.html>



- Please check the drop dates with the admissions office (click on the calendar)



Prerequisites: Biology 3 and Anatomy 1

Advisory: English 28 or ESL 8 – College-level reading, writing and study skills

Student Learning Outcome: *Physiology 1 students will explain and describe fundamental homeostatic processes of the human body and how they are controlled by the endocrine and nervous systems.*

Articulation: Physiology 1 articulates with CSUN Biology 281 (Human Physiology) & 282 (Human Physiology lab); together with Anatomy 1 articulates with CSULA Biology 200A and 200B (combined Anatomy and Physiology with labs). You are also encouraged to view articulation agreements at <http://www.assist.org>.

Physiology 1 is an intensive lecture and laboratory course that focuses on the function of organ systems of the human body. The lectures correspond closely with weekly laboratories allowing the student several modalities to learn the fundamental concepts of physiology 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.

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.
3. To learn to organize, process, and think critically about complex scientific processes in such a way as to become an independent learner, able to continue to grow as a student of science.

Required Books

Human Anatomy and Physiology, Elaine N. Marieb and Katja Hoehn (8th Edition, 2010) with the code for the [mastering A&P](#). Class code: DRPARPHYSIO13

- ✓ **Continuing students:** Human Anatomy and Physiology Lab Manual (Cat Version w/ PAL 3.0 and PhysioEx 9.0 CD), Marieb, et. al. (10th Edition, 2012); **New Students:** New custom made physiology lab manual (see LAMC Bookstore)
- ✓ Physiology Lecture Notes: Online on my etudes website

Evaluation and Grading

1. Exams (520+200=720 points):

There will be 4 exams each worth 130 points (total = 520) and a comprehensive final examination (200 points). There will be no make up 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

Physiology 1; Dr. Par Mohammadian - rev Jan. 15, 2013 - policies & course outline maybe revised with prior notice!

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.

2) Lab reports (216 points): There are 12 lab reports each worth 18 points (total= 216 points). Labs cannot be made up and absences will result in receiving zero. Most lab reports are due right after the experiment by completing the lab sheets; however, EEG, ECG, EMG, and respiratory labs require **written scientific reports**, which require introduction, methods, results and discussion sections. The instructions and evaluation of the reports are posted in detail on the website. Make sure that you study your lab notes, as they may be included in your exams. For any plagiarized lab report you will receive an F and will also be reported to the Dean's office. **Do not underestimate the value of the lab 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.

-- **Lab safety:** You will be shown the safety facilities around the lab. If any accidents or injury should occur, use common sense and inform you instructor immediately. Reckless endangerment of your classmates or yourself will end with your exclusion from this course.

3. Presentation of a scientific topic (40 points):

You will work with at least two more team members (group of three students) on a topic selected by the group and confirmed with your instructor. Your group will present the topic in the lab using one complied power point file (see the website for a sample presentation). 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 research findings on pubmed.gov), and answers to the questions (see the website for details). The presentation will only be 30 min; each student will have exactly 10 minutes (you will be also evaluated on the time). At the end of the 30-min presentation, 30 minutes will be assigned to questions/discussions. If you are not on time or miss your presentation, you will be given zero. The presentation should be divided as follows: *1) physiology/pathology, 2) symptoms, diagnosis, and 3) treatment (e.g. medications, procedures, and nutrition).* You are required to use resources, such as textbook, peer-reviewed journals, and www.pubmed.gov.

4. Assignments/Participation (24 points): Assignments are given throughout the semester, announced or unannounced. Your participation and interaction is also graded.

<u>Evaluation</u>	<u>Number</u>	x	<u>Points</u>	=	<u>Total</u>	<u>Percentage</u>
Exams	4		130		520	52%
Labs	12		18		216	21.6%
Assignments/Participation			24		24	2.4%
Presentation	1		40		40	4%
Final Exam	1		200		<u>200</u>	<u>20%</u>
					1000	100%

Grading Scale: A: 90-100% (900-1000 points)

B: 80-89% (800-899 points)

C: 70-79% (700-799)

D: 60-69% (600-699 points)

F: <60% (<600 points)

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.

ATTENDANCE:

You are responsible for all information and instructions given in class. Attendance will be taken at the beginning and the end of the class. 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. Stop coming to the class does not mean that you are automatically dropped. It is your responsibility to officially withdraw from the class if you decide to do so.

Additional Materials

Each student should purchase ScanTron Answer Sheets for the Midterms, and Final Exam.



Additional materials posted on the website:

- Sample PowerPoint presentation
- Sample scientific lab report of an enzyme experiment
- A form/rubric that describes how the lab reports are evaluated
- A form/rubric that describes how the presentations are evaluated

General Comments and Suggestions

- There is no easy way – you must study to succeed. If you are not prepared to study this semester, that is OK. Just wait until you have enough time to devote to this course.
- **You must read the textbook in this class.** You will not remember it all the first time through. That is what lecture is meant to be! (1) Read text (2) attend lecture (3) study the text and lecture notes.

Do not fall behind! This is a fast-paced course that covers a lot of material with relatively few class meetings. Seek help before you begin to get in trouble.

- **Come to class prepared!** This cannot be overemphasized. Casually reading the text before the lecture can help. Lectures are intended to assist you in organizing and understanding material that can be detailed and complex. Becoming familiar with the vocabulary and the concepts will make the lectures much more interesting and instructional. Laboratory time is limited and everyone must know what is to be accomplished.
- **Work together!** Form study group! 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.
- **Ask questions!** There is no such thing as a stupid question. The chances are that if you do not understand something, 80% of the class is sitting there as ignorant as you and is waiting for someone to ask. We have all been confused at some point, so speak up!

Lecture/Laboratory Schedule

Physiology 1 – Spring 2013
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Date	Lecture	Laboratory & Presentations	Assignments
Week 1 Mon 2/4	Introduction – Ch 1 (pg 1-11) Chemistry – Ch 2	Lab 1) The Scientific Method (preface: xiv-xx) Choose a topic for presentation	Online activities
Wed 2/6	Chemistry – Ch 2 Cell – Ch 3	Lab 1) The Scientific Method (preface: xiv-xx) Choose a topic for presentation	<i>Unless specified, lab reports are due right after the experiments are completed.</i>
Week 2 Mon 2/11	Cell – Ch 3	Lab 2) Ex 5: Transport & Permeability PhysioEx 9.0: Ex 1	
Wed 2/13	Cell – Ch 3	Lab 2) Ex 5: Transport & Permeability PhysioEx 9.0: Ex 1	Online activities
Week 3 Mon 2/18	President's Day		
Wed 2/20	Nervous System – Ch 11	Presentation #1: Tay-Sachs Disease Presentation #2: Parkinson's Dz	Quiz 1 & online activities
Week 4 Mon 2/25	Nervous System – Ch 11	Lab 3) PhysioEx 9.0: Ex 3 Presentation #1: Tay-Sachs Disease	Online activities
Wed 2/27	Exam #1 (Ch 1-3, 11)	Lab 3) PhysioEx 9.0: Ex 3	
Week 5 Mon 3/4	CNS – Ch 12	Lab 4) EEG Lab 20 Presentation #2: Parkinson's Dz	Online activities
Wed 3/6	ANS – Ch 14 Muscle Physiology – Ch 9-10	Lab 4) EEG Lab 20 Presentation #3: Epilepsy	
Week 6 Mon 3/11	Muscle Physiology – Ch 9-10	Lab 5) EMG Lab 16 PhysioEx 9.0: Ex 2 Presentation #3: Muscular Dystrophy	Quiz 2 & online activities
Wed 3/13	Muscle Physiology – Ch 9-10	Lab 5) EMG Lab 16 PhysioEx 9.0: Ex 2 Presentation #4: Multiple Sclerosis	EEG lab report due
Week 7 Mon 3/18	Sensory Physiology – Ch 13	Lab 6) Reflexes Lab 22 & Receptors Lab 23	Quiz 3 & online activities
Wed 3/20	Special Senses – Ch 15	Lab 6) Reflexes Lab 22 & Receptors Lab 23	EMG lab report due
Week 8 Mon 3/25	Endocrinology (Ch 16)	Lab 7) Vision Lab 24 & Hearing Lab 25	Online activities
Wed 3/27	Exam #2 (Ch 9, 13-15)	Lab 7) Vision Lab 24 & Hearing Lab 25	
Week 9 Mon 4/1	Spring Break		
Wed 4/3	Spring Break		
Week 10 Mon 4/8	Endocrinology (Ch 16)	Presentation #4: Cushing's Dz Presentation #5: Hyperthyroidism	Online activities
Wed 4/10	Cardiovascular Physiology (Ch 17, 18, 19)	Presentation #5: Addison's Dz Presentation #6: Hyperthyroidism	

Week 11 Mon 4/15	Cardiovascular Physiology (Ch 17, 18, 19)	Lab 8) ECG Lab 31 Presentation #6: Hypertension	Quiz 4 & online activities
Wed 4/17	Cardiovascular Physiology (Ch 17, 18, 19)	Lab 8) ECG Lab 31	
Week 12 Mon 4/22	Respiratory system (Ch 22)	Lab 9) Blood pressure Lab 33 PhysioEx 9.0: Ex 5 PhysioEx 9.0: Ex 6	Online activities ECG lab report due
Wed 4/24	Exam #3 (Ch 16-19)	Lab 9) Blood pressure Lab 33 PhysioEx 9.0: Ex 5 PhysioEx 9.0: Ex 6	
Week 13 Mon 4/29	Respiratory system (Ch 22)	Lab 10) Respiratory Lab 37 PhysioEx 9.0: Ex 7 Presentation #7: COPD	Online activities
Wed 5/1	Digestive System (Ch 23)	Lab 10) Respiratory Lab 37 PhysioEx 9.0: Ex 7 Presentation #7: Asthma	
Week 14 Mon 5/6	Digestive System (Ch 23)	Lab 11) Digestive Lab 39 PhysioEx 9.0: Ex 8 Presentation #8: Celiac Dz	Quiz 5 & online activities Respiratory lab report due
Wed 5/8	Urinary System (Ch 25-26)	Lab 11) Digestive Lab 39 PhysioEx 9.0: Ex 8 Presentation #8: GERD	
Week 15 Mon 5/13	Urinary System (Ch 25-26)	Lab 12) Renal Lab 41 PhysioEx 9.0: Ex 9 PhysioEx 9.0: Ex 10 (maybe next week) Presentation #9: Acute Kidney failure	Online activities
Wed 5/15	Reproductive System (Ch 27)	Lab 12) Renal Lab 41 PhysioEx 9.0: Ex 9 PhysioEx 9.0: Ex 10 (maybe next week) Presentation #9: Chronic Kidney failure	
Week 16 Mon 5/20	Exam #4 (Ch 20, 22, 23, 25)	Review for final exam Demo: Sea Urchin	Online activities
Wed 5/22	Reproductive System (Ch 27) Immune System (Ch 21)	Review for final exam Demo: Sea Urchin	
Week 17 Mon 5/27	Memorial Day		
Wed 5/29	Final Exam 8:55 – 10:20 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.