

Physiology 1
Introduction to Human Physiology
Los Angeles Mission College – Fall 2019

Instructor: Rasheeda Hawk, PhD
Lecture: TTH 8:55-10:20 am (#14503) CMS 005
Lab: Tuesday 10:50 -2:00 pm (14508) or Thursday 10:50-2:00 pm (19204)
Office Hours (CMS department lobby) TTH 8:00 am–8:45 am and Tue 2:00-2:50pm or by appointment

e-mail: hawkr@lamission.edu or hawkr@faculty.laccd.edu
Life Science Web Address: www.lamission.edu/lifesciences

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

Last day to add without permission number – August 25

Last day to add with permission number – September 8

Last day to drop class without receiving a W and with refund (online only) – September 8

Last day to drop with a W – November 17

NOTE: Students are only allowed three attempts at a course within the LACCD. The awarding of a “W” counts as one attempt at the course.

Student Learning Outcomes

- Physiology 1 students will analyze a fundamental homeostatic process of the human body.
- 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.

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.
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

required: Human Physiology – LAMC Looseleaf – Stuart Ira Fox – 14th Edition – 2017 – McGraw Hill Education - ISBN 978-1-260-26195-0

Human Physiology Lab Manual - LAMC – Mohammadian - Custom Version for Mission College (at bookstore) ISBN 978-1-323-86663-4 (Note:

1. As a lab table you will go to the website <https://www.physioex.com/login.html>
2. You will see a button that says “Buy Access”
3. You can follow the instructions and purchase access to the website for \$29.99
4. You only need to purchase one username and password for your lab table
5. You will create a username and password for your table during the registration process

Physiology Lecture Notes Online on Canvas

Evaluation and Grading

- (1) Quizzes (6 x 20 = 120) A total of 7 quizzes will be administered during the semester. Each quiz will start at the beginning of class and will take approximately fifteen minutes. Quizzes will emphasize lecture material covered in previous class meetings. The quizzes are intended to test you on the material to see if you are staying up with the material. Each quiz will be worth 20 points. At the end of the semester, the lowest quiz score will be dropped and the highest score will be counted twice. **Quizzes cannot be made up.** Students will be given a scantron for the exam
- (2) Laboratories (approximately 14 X 10 points each = 140 points) - Laboratories are **NOT** optional. All students must attend each week. Students are required to complete the data collection and questions for every assigned exercise on the same day of lab unless otherwise instructed. Each of the Laboratory Exercise Assignments will be worth 10 points. Incomplete and late Review Exercises will be marked down by 30%. Do not underestimate the significance of these points on the final course grade. These exercises are a very good way to review important concepts from the lecture and lab. Every semester there is at least one student who loses an entire letter grade by failing to turn in all of the laboratories complete and on time. Do not be this student! If you are absent from a lab, you will not be allowed to turn in the lab assignment. **A student who is absent two or more laboratories is subject to receiving a failing grade in the course.**
- (3) Research Paper and Oral Presentation (30 Points) - Each student will be required to research and write a paper on a topic related to a *human disease* of interest to him/her. This is a way to introduce you to Evidence Based Practice, a practice that uses the latest clinical research for patient treatments. The paper is to be a minimum of four pages double-spaced and typed with at least four references. 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 8-10 minute oral presentation. Think about learning something and sharing it with the professor and your fellow classmates!! Deadlines will be:

Tuesday 10/3	Topic Selection Submitted in Writing
Thursday 10/10	Four Different Sources for the Paper
Weeks 10-15 (Oct 29 –December 5th)	Oral Presentations of Student Paper Topics in the Laboratory
- (4) Midterm Exams (2 x 120 = 240 points) There will be 2 midterm examinations. Students will be required to write short essays as part of the exam. Examinations will cover material presented in the textbook reading assignments, the lectures and each of the laboratories. **No make-up examinations will be given.** A student who has an **excused** absence from one midterm examination only will have the percentage earned on the next exam counted for that missed score.
- (5) Final Exam (150 points) The Final Examination will be given on Monday, December 9 from 5:30 – 7:30 PM. A significant portion of the final exam will be written. Students will be provided ahead of time with a list of 20 possible essay questions on topics from throughout the semester. The

instructor will use this list to establish two groups with five questions in each group. The student will be required to respond to 3 questions from each group of 5. **No make-up Final Exam will be given.** Therefore, schedule all future personal, family, and vacation plans accordingly.

Grading Scale

Quizzes	120 pts.
Midterms	240 pts.
Lab Assignments	120 pts.
Research paper and presentation	30 pts.
Final Exam	150 pts.
Total	660 pts.

<u>Percentage of Total Points</u>	<u>Letter Grade</u>
100 – 90.00	A
89.99 – 80.00	B
79.99 – 70.00	C
69.99 – 60.00	D
59.99 - lower	not passing (F)

(NOTE: the syllabus may change depending on circumstances during the semester.)

Canvas – A Class Management System

In order to receive e-mails from the instructor and to view the updated grade sheet you will need to login to your LACCD District **Canvas** account. To do this, you must go to the following website: **ilearn.laccd.edu**. Follow the instructions to log into the system using the information that is requested.

Be sure to change your desired e-mail address to which instructor e-mails and announcements will be sent. To do this, follow these instructions:

- Go to Account in Canvas
- Click on Settings
- Add the desired e-mail address
- You will receive a confirmation e-mail sent to the e-mail account you just entered
- In that e-mail, confirm that this is the e-mail account to which you want e-mails and announcements to be sent
- Go back to Account in Canvas
- Once again, click on Settings
- Select the new desired e-mail address so that there is a “star” next to it. This star indicates that this e-mail address will be the default e-mail address to which instructor e-mails and announcements will be sent.

Office Hours and Getting Help

I will remain after class to answer questions and offer individual assistance. Appointments to meet at other times may be arranged and are strongly encouraged. 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.

Student Resources Available

Bookstore: For hours of operation, book availability, buybacks, and other information call 818-364-7767 or 7768 or visit <http://www.lamissionbookstore.com/>

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 (EOPS): For appointments, eligibility and information call 818-364-7645 or visit <http://www.lamission.edu/eops/>

Financial Aid: For information and applications call 818-364-7648 or visit <http://www.lamission.edu/financialaid/>

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: Laboratories for Learning, Writing, Math & Science. Walk-in and appointment services offered. Call 818-364-7754 or visit www.lamission.edu/learningcenter/

General Comments and Suggestions

NO FOOD or DRINK allowed in the laboratory.

- 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 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. 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.
- **Students must work together in lab, especially on PhysioEx CD-ROM Exercises** – The laboratory is to be a collaborative effort, working with classmates to solve problems and to learn Physiology. Students who are absent from the lab are subject to receiving a failing grade for the course.
- **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. I am here to help you learn.
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- **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.
- **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!

Additional Materials

I will provide an answer sheet for the quizzes and exams most of the time. If you are required to purchase a scantron I will let you know.

Items Suggested to Include in the Term Paper

(to be discussed in class)

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

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.

Lecture/Laboratory Schedule

Physiology 1 – Fall 2019
 Los Angeles Mission College
 Instructor: R. Hawk, PhD

DATE	Lecture	Laboratory	Reading
Week 1 T 8/27 H 8/29	Course Introduction Organ Systems	Laboratory safety video	Chap 1 pgs. 4-20
Week 2 T 9/3 H 9/5	The Cell and Transport Organ Systems/Primary Tissue <i>Case study: Water can kill</i>	PhysioEx: Cell Transport and Permeability	Chap 6: 6.2 Chap 1: 1.2 and 1.4
Week 3 T 9/10 H 9/12 Quiz 1	Skeletal Muscle and contraction Energy requirement Smooth and Cardiac muscle <i>Clinical Investigation chap 12 pg. 360</i>	Lab 2 Biopac: EMG 1-Electromyography 1 Lab 2 Demonstrating Muscle Fatigue in Humans Lab 15 PhysioEx: Skeletal Muscle Physiology	Chap 12
Week 4 T 9/17	Nerve impulse, synapse and	Lab 16 Neurophysiology of nerve impulses	Chapter 7

H 9/19	neurotransmitters Neurotransmitters, reflex physiology Clinical Investigation page 163		
Week 5 T 9/24	Physiology of the Autonomic NS	Lab 4 Human Reflex Physiology	Chapter 9
H 9/26 Quiz 2	Midterm I		
Week 6 T 10/1	The senses, Vision and Hearing	Lab 5 General Sensation Lab 6 Special Senses: Vision	Chapter 10
H 10/3	The senses, Hearing, touch, and taste <i>Clinical investigation page 267</i>		
Week 7 T 10/8	Composition of Blood	Lab 8 Blood Lab 24 PhysioEx Blood analysis Lab 25 Serological Testing	Chap 13 405-418
H 10/10 Quiz 3	Blood: Homeostatic Mechanisms and Diagnosis Clinical Investigation page 405		
Week 8 T 10/15	Heart Anatomy and Physiology I	Lab 10 Human Cardiovascular Physiology	
H 10/17	Heart Physiology II		
Week 9 T 10/22	Physiology of Circulation I	Lab 18 PhysioEx Cardiovascular Dynamics Lab 19 PhysioEx Cardiovascular Physiology	Chap 14
H 10/24 Quiz 4	Physiology of Circulation II <i>Clinical Investigation page 451</i>		
Week 10 T 10/29	Physiology of Respiration I	Lab 20 PhysioEx; Respiratory System Mechanics	Chap 16
H 10/31 Quiz 5	Physiology of Respiration II <i>Clinical Investigation page 533</i>		
Week 10 T 10/29	Physiology of Respiration I	Lab 20 PhysioEx; Respiratory System Mechanics	Chap 16
H 10/31 Quiz 5	Physiology of Respiration II <i>Clinical Investigation page 533</i>		
Week 11 T 11/5	Midterm Exam 2	Lab 11 Biopac: Pulmonary Function I	
H 11/7	Physiology of Digestion		Chap 18
Week 12 T 11/12	Physiology of Digestion II Accessory organs	Lab 21 PhysioEx: Chemical and physical processes of digestion	Chap 18
H 11/14	Physiology of the Urinary System	Lab 22 PhysioEx: Renal System Physiology	Chap 17 581-604
Week 13			

T 11/19	Fluid, Electrolyte, and Acid-Base Balance	Lab 23 PhysioEx: Acid-Base balance	Chap 17
H 11/21 Quiz 6	The Endocrine System: Hormonal Control <i>Clinical Investigation page 582</i>	Lab 17 PhysioEx: Endocrine System Physiology	Chap 11
<u>Week 14</u>			
T 11/26	Reproductive Physiology <i>Clinical Investigation page 702</i>	Individual Presentations	Chap 20
H 11/28	Thanksgiving No Class		
<u>Week 15</u>			
T 12/4	Immune System: Mechanism of T cell and B cell response	Individual Presentations	Chap 15
H 12/6 Quiz 7	Immune System: Mechanism of T cell and B cell response <i>Clinical Investigation page 494</i>		
<u>Week 16</u>			
T 12/10	Final Exam Dec. 10th 10:00 am- 12 noon		