

PHYL 141: Human Anatomy and Physiology I

3 credits (CRN 63119)

Asynchronous, ONLINE

INSTRUCTOR:	Ken Longenecker, PhD
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EFFECTIVE DATE:	Fall, 2022

WINDWARD COMMUNITY COLLEGE MISSION STATEMENT

Windward Community College offers innovative programs in the arts and sciences and opportunities to gain knowledge and understanding of Hawai'i and its unique heritage. With a special commitment to support the access and educational needs of Native Hawaiians, we provide O'ahu's Ko'olau region and beyond with liberal arts, career and lifelong learning in a supportive and challenging environment — inspiring students to excellence.

CATALOG DESCRIPTION

PHYL 141 is the first semester of a comprehensive two-semester course which provides a thorough introduction to the structure and function of the human body. PHYL 141 covers the gross anatomy, histology, and physiology of the integumentary, skeletal, muscular, and nervous systems. Students will be expected to learn details of anatomy and physiology as well as applying those details in the broader context of whole-body function and homeostasis. The covered topics include body orientation, chemical level, cellular level, tissue level, integumentary system, bone tissue, skeletal system, joints, muscular tissue, muscular system, nervous tissue, spinal cord and spinal nerves, brain and cranial nerves, autonomic nervous system, and special senses. (3 hours lecture)

STUDENT LEARNING OUTCOMES

Upon successful completion of PHYL 141, the student should be able to:

1. Identify required anatomical structures of the covered systems
2. Identify required physiological functions of the covered systems
3. Describe metabolic processes of covered systems and relate them to everyday activities such as eating, sleeping, and exercise
4. Explain the concepts of positive/negative feedback and homeostasis and relate them to physiological processes covered in the course

COURSE CONTENT

Concepts or Topics

The student will describe and integrate basic biological principles and define basic biological terms presented in lecture, required texts, and other instructional materials. These principles include the following areas:

- Philosophy and characteristics of science and the scientific method.
- The difference between hypotheses, theories and laws.
- Hierarchical architecture of the human body (cells, tissues, organs, and organ systems);
- The chemical composition of the human body and the functions of the major groups of biological molecules.
- Anatomy and physiology of cells, including: protein production, cellular respiration, mitosis, and meiosis, senescence and cell death (apoptosis).
- Anatomy and physiology of the systems that make up the human body, including skeletal, integumentary, muscular, and nervous systems.
- Mechanisms for maintenance of homeostasis in the human body.

COURSE TASKS

- 1) Complete assigned readings prior to lecture.
- 2) View online lectures and take detailed notes.
- 3) Complete weekly online quizzes.
- 4) Complete three class examinations at the WCC testing center (ID required).
- 5) Complete three discussion board assignments.

SPECIAL DISTANCE-LEARNING CONSIDERATIONS

The only way to contact me is via e-mail; however, be aware that it may take up to 24 business hours for me to read and respond to your message. Please plan accordingly.

This course has a minimum pace at which you must complete discussions, quizzes, reviews, and exams. The **deadline** for each is listed on the last page of this syllabus. Note that work is due every Friday, including holidays. However, please be aware that you can work at an accelerated pace. If you wish to preserve your holidays, complete work early (or, if you wish, you can finish the course this week!).

ASSESSMENT TASKS AND GRADING

EXAMINATIONS (600 points total-200 points for each exam). The student will take THREE exams (non-cumulative) to demonstrate knowledge and understanding of information presented in the lectures, lecture outlines, text readings, and study guide activities. **Exams must taken at a UH testing center (e.g., the WCC Testing Center) by the published deadline (4 pm because of Testing Center hours). You must make an appointment to take an exam (<https://windward.hawaii.edu/services-for-students/testing-center/>).** You will be required to show a school- or government-issued ID at before beginning of the exam. You will also need to know your Laulima username and password. Exams will be timed (typically one minute/question) and may consist of multiple-choice, short answer, or essay questions. You will be allowed to take the exam one time only. Make-up exams will not be given for any reason.

QUIZZES (130 points- 10 points for each quiz). The student will take 15 online quizzes which will cover material from the lecture and reading. **Quizzes may be taken from home, but they MUST be taken by the indicated deadline (11:00 PM each Friday).** Each quiz can be taken up to FIVE times; only the highest score will be saved. Please note that quizzes cannot be made

up for any reason, including network problems or personal emergencies. The lowest TWO quiz grades will be dropped at the end of the semester. As with exams, quizzes will be timed (typically 30 s to 1 min per question, depending on difficulty). Quizzes may be taken open-book, but be warned that if you do not study beforehand you will not be able to complete the quiz before the deadline lapses.

CLASS DISCUSSIONS (60 points total- 20 points for each activity). Each student will complete three discussion board assignments on selected topics. The purpose of these assignments is to facilitate open discussion of course topics between students in the class. For discussion boards, you will be required to post a response based on the guidelines posted by your instructor. You will also be required to read and post responses to at least TWO of the posts from your fellow students. Both your initial post and your responses **MUST** be completed by the deadline. Your posts and responses will be graded based on effort, clarity, and accuracy. The topics and guidelines for each discussion board will be posted on the course website under “Announcements”.

Exam Reviews (30 points). Students will complete a practice exam prior to each unit exam. The practice exam will consist of exam questions from previous semester and quiz bank questions. Students are allowed to take the exam review two times and only the highest grade will be saved.

METHOD OF GRADING

The assignment of points will follow the schedule below.

Exams	600 points
Quizzes	130 points
Discussions	60 points
Exam Reviews	30 points
TOTAL	820 points

GRADING SCALE

Percentage Points	Grade
90-100	A
80-89	B
70-79	C
60-69	D
0- 59	F

Please note that “N” grades are not given for this course.

Grades may be curved at the instructor’s discretion; however, the student should use the above grading scale to evaluate their performance throughout the class. Exams may be taken any time until the deadline, therefore **no make-up exams will be given for any reason.** I highly recommend taking exams early.

ACADEMIC DISHONESTY

Students involved in academic dishonesty will receive an "F" grade for the course.

Academic dishonesty includes cheating on exams and plagiarism. See p. 15 of the 2018-2019 [course catalog](#) for a description of the College’s policies concerning academic dishonesty.

LEARNING RESOURCES

Textbooks: OpenStax College. (2013). Anatomy & physiology. Houston, TX: OpenStax CNX. Retrieved from <http://cnx.org/content/col11496/latest/>

Lecture Outlines: PowerPoint outlines for course lectures are available on the course website.

Laulima: Your instructor has created a [laulima website](#) to accompany this course. This website contains links to lecture outlines, lab activities, and review materials. All students enrolled in the class are automatically granted access to the course website. You will need a UH email account to access the Laulima site.

Adobe Reader: You will need to download a recent copy of adobe reader to view the lecture files. A copy is available at: <http://get.adobe.com/reader/>

Additional Information

STUDENT RESPONSIBILITIES

You are expected to attend lectures, participate in all course activities, and complete all examinations and course assignments on time. Any changes in the course schedule, such as examination dates, deadlines, etc., will be announced ahead of time. It is your responsibility to be informed of these changes. It is also your responsibility to be informed about deadlines critical to making registration changes (e.g., last day for making an official withdrawal).

HOW TO SUCCEED IN THIS CLASS

Although you will be given lecture outlines, you will not succeed in this class without attending lecture and taking detailed notes on the corresponding material in the textbook. Merely reading the chapter will not suffice. Science courses at WCC generally require a minimum of two to three hours of independent study time for each hour in class. It is your responsibility to allocate the appropriate amount of time needed for study and be realistic about all personal and professional commitments that may infringe on your study time.

As part of your studies, you will need to understand a veritable *mountain* of medical and anatomical terms, most of which will probably be foreign to you. Many students find it helpful to enroll in HLTH 125 (Survey of Medical Terminology) at the same time as PHYL 141, as there is some repetition in the material covered. In this course, most important vocabulary words appear in **boldface** throughout your textbook. One way to learn these vocabulary words is to make flash cards to quiz yourself. Answering the matching and fill-in-the-blank questions located in the back of each text chapter can also be a helpful way to learn new terms. Be warned: Merely knowing the *definitions* of vocabulary words will be of little use if you do not know how the anatomy of the structures they represent.

In addition to vocabulary, you will be expected to have a detailed understanding of the mechanisms regulating human body systems. In many cases, these systems are regulated by negative feedback loops. **Knowledge of negative feedback mechanisms is absolutely crucial to understanding how the human body maintains homeostasis.** For example, you should know how the body maintains optimal blood calcium levels (see chapter 6). To answer this type of question effectively, you will need to develop an intuitive understanding of how the body monitors blood calcium and what actions it takes when blood calcium is too low or too high. One way to do this is to make a diagram of how the feedback loop works. Most negative feedback loops have 3 parts: 1) a **receptor**, which monitors the condition (in this case, blood calcium levels), 2) a **control center** which “decides” when the condition has exceeded optimal set point values, and 3) an **effector** which modifies the values of a controlled condition as directed by the control center. Once you have created your diagram (and labeled the above parts) you should ask yourself what types of **stimuli** may cause the

controlled condition to drop below or exceed the setpoint and then trace the steps necessary to bring the controlled condition back into homeostasis (back to the setpoint).

My #1 Suggestion for success in this class: Take weekly quizzes EARLY, even if you have not had a chance to properly study for the quiz. This will prevent you from receiving a “zero” score should you forget to take the quiz by the deadline. It will also help you to better direct your studying so you can do better on future attempts for the same quiz. Remember, only your HIGHEST score is saved for each quiz. You will only be able to take each exam once. This means you should study diligently before going to the testing center to take the exam. **NO RETESTS WILL BE GIVEN!**

MySuccess Student Support System

At Windward community college we want every student to be successful. MySuccess is a system wide effort that seeks to support students early in the semester when they first begin experiencing difficulty in class. If I feel that you're having difficulty in my class within the first few weeks of the semester (*e.g.*, missing class, missing assignments, or low test scores) and working together to address your challenges shows that you would really benefit from being connected to resources outside of the classroom, I may refer you to your assigned counselor. Once referred, MySuccess will:

- Call you and send an email to your hawaii.edu account to let you know about my referral.
- Have a Counselor follow up with you by phone or by email to find out what kinds of help you might need and connect you with the necessary resources to help you devise a strategy for success.

If I do refer you, know that I am doing so in an effort to connect you with all of the help you may need to do well this semester; your success is important to me.

DISABILITIES ACCOMMODATIONS

If you have a physical, sensory, health, cognitive, or mental health disability that could limit your ability to fully participate in this class, you are encouraged to contact the Disability Specialist Counselor to discuss reasonable accommodations that will help you succeed in this class. Ann Lemke can be reached at 235-7448, lemke@hawaii.edu, or you may stop by Hale ‘Ākoakoa 213 for more information.

TITLE IX

Title IX prohibits discrimination on the basis of sex in education programs and activities that receive federal financial assistance. Specifically, Title IX prohibits sex discrimination; sexual harassment and gender-based harassment, including harassment based on actual or perceived sex, gender, sexual orientation, gender identity, or gender expression; sexual assault; sexual exploitation; domestic violence; dating violence; and stalking. For more information regarding your rights under Title IX, please visit: https://windward.hawaii.edu/Title_IX/.

Windward Community College is committed to the pursuit of equal education. If you or someone you know has experienced sex discrimination or gender-based violence, WCC has resources to support you. To speak with someone confidentially, contact the Mental Health & Wellness Office at 808-235- 7393 or Kaahu Alo, Designated Confidential Advocate for Students, at 808-235-7354 or kaahualo@hawaii.edu. To make a formal report, contact the Title IX Coordinator, Karla K. Silva-Park, at 808-235-7468 or karlas@hawaii.edu.

ALTERNATE CONTACT INFORMATION

If you are unable to contact the instructor, have questions that your instructor cannot answer, or for any other issues, please contact the Academic Affairs Office: Alakai 121 PH: 808-235-7422

PHYSIOLOGY 141
Schedule of Topics

Week	Date	Topics	Text	Assignment Due FRIDAY
1	8/22-8/26	Course Intro/Orientation to A&P	CH 1	8/26 @ 11 pm: Chapter 1 Quiz
2	8/29-9/2	Chemistry Biological Macromolecules	CH 2: 41-63 CH2: 64-86	9/2 @ 11 pm: Chapter 2 Quiz, Discussion Board #1
3	9/5-9/9	Intro to the Cell & Membrane Trans Cellular Organelles & Cell Division	CH3	9/9 @ 11 pm: Chapter 3 Quiz
4	9/12-9/16	Tissue Level of Organization	CH4	9/16 @ 11 pm: Chapter 4 Quiz
5	9/19-9/23	The Integumentary System Exam #1 Review	CH5	9/23 @ 11 pm: Chapter 5 Quiz, Exam 1 Review
6	9/26-9/30	Bones & Skeletal Tissue Axial Skeleton	CH6 CH7	9/30 @ 4 pm: EXAM 1 (CH 1-5)
7	10/3-10/7	Appendicular Skeleton Joints & Joint Movements	CH8 CH9	10/7 @ 11 pm: Chapter 6 Quiz
8	10/10-10/14	Muscle Tissue & Phys	CH 10	10/14 @ 11 pm: Chapter 7 & 8 Quiz
9	10/17-10/21	Muscular System	CH 11	10/21 @ 11 pm: Ch 9 Quiz, Ch 10 Quiz
10	10/24-10/28	Exam #2 Review		10/28 @ 11 pm: CH 11 Quiz, Exam 2 Review, Discussion Board #2
11	10/31-11/4	Fundamentals of the Nervous System & Nervous Tissue	CH 12	11/4 @ 4 pm: EXAM 2 (CH 6-11)
12	11/7-11/11	CNS I: The Brain CNS II: Spinal Cord	CH 13: 549-576	11/11 @ 11 pm: Chapter 12 Quiz
13	11/14-11/18	Cranial Nerves Peripheral/Somatic Nervous System	CH 13: 581-583 CH 14: 599-602	11/18 @ 11 pm: Chapter 13 Quiz
14	11/21-11/25	Special Senses	CH 14: 602-620	11/25 @ 11 pm: CH 13 & 14 Quiz
15	11/28-12/2	Autonomic Nervous System	CH 15	12/2 @ 11 pm: Chapter 14 Quiz, Discussion Board #3
16	12/5-12/9	Exam #3 Review		12/9 @ 11 pm: Chapter 15 Quiz, Exam #3 Review
17	12/12-12/16			12/16 @ 4 pm: EXAM 3 (CH 12-15)

- Last day to drop without “W” grade: September 13th
- Last day to Withdraw (“W” entered on transcript): October 31st
- **Final Exam:** Due by Friday, Dec 16th at 4:00 PM