UNIVERSITY of HAWAI'I
WINDWARD COMMUNITY COLLEGE
Ke Kulanui Kaiāulu o ke Koʻolau

PHYL 141L: Human Anatomy and Physiology Lab

Fall, 2026

1 Credit CRN 62069

T 10:30-1:15 Imiloa 103

INSTRUCTOR: Ross Langston, PhD

OFFICE: Imiloa 115

OFFICE HOURS: By appointment via Star Balance

TELEPHONE: 808-429-6218 (cell) Email: langston@hawaii.edu

EFFECTIVE DATE: Fall, 2026

WINDWARD COMMUNITY COLLEGE MISSION STATEMENT

'O keia ka wā kūpono e ho'onui ai ka 'ike me ka ho'omaopopo i kō Hawai'i mau ho'oilina waiwai. Aia nō ho'i ma ke Kulanui Kaiāulu o ke Ko'olau nā papahana hou o nā 'ike 'ake akamai a me nā hana no'eau. Me ke kuleana ko'iko'i e ho'ohiki ke Kulanui e kāko'o a e ho'okumu i ala e hiki kē kōkua i ka ho'onui 'ike a nā kānaka maoli. Na mākou nō e ho'olako, kāko'o a paipai i nā Ko'olau a kō O'ahu a'e me nā hana no'eau ākea, ka ho'ona'auao 'oihana a me ka ho'onui 'ike ma ke kaiāulu— hō'a'ano a e ho'oulu i nā haumāna i ka po'okela.

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

CATALOG DESCRIPTION

PHYL 141L is the laboratory course of Human Anatomy and Physiology I and it provides a thorough introduction to the structure and function of the human body. PHYL 141L 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 through models, dissections, and physiological experimentations. Students will also apply 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 hrs. lab)

STUDENT LEARNING OUTCOMES

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

1. Identify anatomical structures at the level of the cell, tissue, organ, and organ system through the use of models, computer images, observation, and dissections.

2. Apply the scientific method to study, measure, analyze, and understand the physiological systems of the human body.

COURSE CONTENT

Concepts or Topics

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

- Anatomy and physiology of cells including: protein production, cellular respiration, mitosis, and meiosis, senescence and cell death (apoptosis).
- Identify the anatomy of cells as well as that of the skeletal, integumentary, muscular, and nervous systems.
- Discuss mechanisms for the maintenance of homeostasis in the human body.
- Use microscopes, goniometers, and other laboratory equipment to observe anatomical structures and collect physiological data
- Analyze physiological data to determine relationships between body parameters

COURSE TASKS

1) Review the laboratory manual before coming to class.
2) Attend class at scheduled times.
3) Participate in lab activities.
4) Complete weekly quizzes.
5) Complete 2 in-class practicums.

ASSESSMENT TASKS AND GRADING

QUIZZES (120 points total- 10 points for each quiz). Students will take a short quiz during each class (14 total). Each quiz will be based on the material covered in the previous lab. The lowest two quiz grades will be dropped. Students who are absent or late will receive a zero score.

LAB PRACTICUMS (200 points total-100 points for each practicum). The student will take two lab practicums (non-cumulative) to demonstrate knowledge and understanding of information presented in lab activities. These practicums will cover anatomy (e.g., organ identification and histology) and physiology of major systems covered during lab and will be similar in scope to weekly quizzes.

LAB REPORTS (60 points). Formal lab reports are required for activities indicated by an '*'. The reports will be graded for completeness, accuracy, clarity, and effort. The format for the lab reports will be discussed during the first laboratory session. Students are required to complete ONE lab report ONLY. Two drafts are required for lab reports. The first draft (10 points) will be due ONE WEEK after the lab session. Feedback will be available within 48 hrs. The second draft is due TWO WEEKS after the lab session and is worth 50 points. Both the first draft and second draft will be graded with a rubric. The second draft grade will also be based on the students ability to incorporate my suggestions and comments in their second draft.

ATTENDANCE & CLASS PARTICIPATION (30 points): Attendance and class participation are mandatory. Each student is allowed **one** absence without penalty. Each absence above one will result in a deduction of points. Students with more than two unexcused absences will receive an "F" grade in the class. Participation in lab activities will be evaluated by worksheets or in-class assessments. **Because most laboratory sessions require special equipment and preparation, make-up labs cannot be given.** For this reason, students who miss two or more lab sessions should consider dropping the class. Finally, students who leave early, do not properly clean up their lab area, do not wear required attire (including face covering), or fail to turn in class data at the end of each lab will be counted as absent.

METHOD OF GRADING

The assignment of points will follow the general schedule below. There may be more or fewer points in the course depending on the final number of assignments, however the grading scale below will be used to calculate grades based on the total available points.

Quizzes	120 points
Lab Practicums	200 points
Lab Reports	60 points
Class Participation	30 points
TOTAL	**410 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. If you miss an examination because of an illness or legitimate emergency, you must contact the instructor **within 48 hours** to arrange a time to take a make-up exam. The instructor will request that the student present evidence of the illness or emergency that caused the student to miss the exam. If the student misses an exam for any other reason, the student may be prohibited from taking a make-up exam, thus failing to receive any points for the missed exam. While make-up exams will cover the same content area as a missed exam, the exam format and specific questions may be different. **No retests will be given for any reason.**

Participation Verification

Campuses are required by federal regulations to verify the participation of students in their classes. In accordance with Executive Policy 7.209, all students in the University of Hawai'i system are required to establish "participation" to ensure that they are not dropped from their class(es). Effective fall 2021, students who fail to participate by the late registration period for a class will be administratively dropped from that class. Students may also be dropped from dependent prerequisite and/or corequisite classes if both courses do not establish participation.

Class Decorum

As your instructor, I try very hard to create an atmosphere of mutual respect. This is a college class where students are welcome and encouraged to participate in class discussions and ask questions during the lecture. My only requirements are 1) that you are respectful in your interactions with me and your fellow students and 2) that you refrain from disruptive behavior. This includes making loud noises, talking on your cell phone (if you need to take a call, please do so in the hallway), or talking while I am speaking. If you are disruptive or disrespectful, I will give you a polite warning. If you continue to do so I will ask you to leave the class for the day. If you believe I am being disrespectful to you or anyone else in the class, please let me know!

As a reminder, smoking, vaping, and consuming drugs or alcohol are not allowed on the WCC campus. Harassment or violence of any kind is also prohibited (see below). Students who engage in these activities will be asked to leave immediately and referred to the Vice Chancellor of Student Services.

If you have questions about your grades or academic progress, please see me outside of the class (e.g., during office hours or contact me by email). I cannot discuss your grades during class time or in a situation that is not private, as this violates FERPA rules.

LEARNING RESOURCES

Lab Manual: Smith, M and R. Langston. 2019. Anatomy and Physiology I Laboratory Manual (Open Access). Windward Community College

Histology Manual: Smith, M and R. Langston. 2019. Histology and Microscopy for Human Anatomy and Physiology (Open Access). Windward Community College

Laulima: https://laulima.hawaii.edu/portal Contains links to lecture outlines, lab activities, and review materials. Students will need a UH email account and access to a computer to access the Laulima site. In addition, many students find it helpful to bring a digital camera and USB flash drive to class in order to photograph anatomical specimens and exchange data and picture files.

ADDITIONAL INFORMATION

LAB ATTIRE, CONDUCT, AND HYGIENE

Because biology labs often involve working with chemicals or hazardous materials, **students MUST wear close-toed shoes**. In addition, some lab activities will require students to wear gloves and safety glasses (provided by the college). Several labs will involve body measurements (e.g., body fat), light exercise, or the placement of electrodes or sensors on the body. Students should therefore wear loose-fitting clothing that allows for a free range of movement (i.e. no tight-fitting pants or jeans). Students failing to dress appropriately for lab will not be permitted to participate in laboratory exercises and will be considered absent.
Students engaged in conduct that threatens themselves or others in the lab will be refused access to the lab for the remainder of the semester and receive and "F" grade for the course.

Lab Subject Policy

Most labs involve non-invasive clinical measurements (e.g., skin-fold measurement, reflex tests, etc). ALL students are required to participate in these activities. If you have a health condition or other reason why you should not participate you should inform the instructor. Experiments involving invasive or semi-invasive procedures (e.g., finger sticks and urinalysis) will be performed on volunteers only.

ACADEMIC DISHONESTY

In this class, students who commit academic dishonesty, cheating, or plagiarism will have the following consequence(s):

- Students will receive a failing grade for assignments or exams where cheating or plagiarism is documented.
- All cases of academic dishonesty are referred to the Vice Chancellor for Student Affairs.

Windward CC Student Conduct Information

UH System Student Conduct Policy EO 7.208

Academic Dishonesty

Academic dishonesty cannot be condoned by the University. Such dishonesty includes cheating and plagiarism (examples of which are given below), which violate the Student Conduct Code and may result in expulsion from the University.

Cheating

Includes but is not limited to giving unauthorized help during an examination, obtaining unauthorized information about an examination before it is administered, using inappropriate sources of information during an examination, altering the record of any grades, altering answers after an examination has been submitted, falsifying any official University record, and misrepresenting the facts in order to obtain exemptions from course requirements.

Plagiarism

Includes but is not limited to submitting any document to satisfy an academic requirement that has been copied in whole or part from another individual's work without identifying that individual; neglecting to identify as a quotation a documented idea that has not been assimilated into the student's language and style, or paraphrasing a passage so closely that the reader is misled as to the source; submitting the same written or oral material in more than one course without obtaining authorization from the instructors involved; or drylabbing, which includes (a) obtaining and using experimental data from other students without the express consent of the instructor, (b) utilizing experimental data and laboratory write-ups from other sections of the course or from previous terms during which the course was conducted, and (c) fabricating data to fit the expected results.

Student Responsibilities

STUDENT RESPONSIBILITIES

You are expected to attend lectures, participate in all course activities, and complete all examinations and course assignments on time. Please be considerate of other students by turning off any cell phones or beepers during class. 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 lectures 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.

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: Alakaʻi 121 (808) 235-7422

How to Seek Academic or Technical Support

Academic Support

- Windward Community College Library
- Library eResources
- Ka Piko Writing Lab
- Ka Piko Speech Lab
- Ka Piko Math Lab
- Evening and Online Learning at Windward Community College
- STAR Balance

Technical Support

- UH ITS Help Desk – email help@hawaii.edu or call 956-8883 (or 1-800-558-2669) for Lamakū and most technology support. Available 24 hours a day, 7 days a week, including holidays.
- Student Tech Support - email winhelp@hawaii.edu, call 808-235-7437, or stop by in person at Hale Laʻakea 228. Available Monday–Friday from 8:00 am–4:00 pm.

- Lamakū – Click on the Lamakū Help link in the menu bar at the top of the Lamakū homepage to fill out and submit a question and get your answer via email.
- Information Security for Students

College Policies & Support Services

Disabilities Accommodations Statement

The Windward Community College's Disability Student Services Office (WCC-DSSO) is committed to providing equal access to qualified students with disabilities.

If you have a physical, sensory, health, cognitive, or mental health disability that could limit your ability to participate fully in this class, you are encouraged to contact the Disability Specialist Counselor, Roy Inouye, to discuss reasonable accommodations that will help you succeed in this class. The Disabilities Counselor can be reached at 808-235-7448, wccdsso@hawaii.edu, or stop by the office (Hale Kakoʻo 106) for more information.

TRIO PROGRAM

The Federal TRiO Programs are educational opportunity outreach programs designed to motivate and support students from disadvantaged backgrounds. TRiO includes six outreach and support programs targeted to serve and assist low-income, first-generation college students and students with disabilities in progressing through the academic pipeline from middle school to post-baccalaureate programs. Here is their contact info:https://windward.hawaii.edu/trio/

Basic Needs

Basic needs include food and housing, childcare, mental health, financial resources, and transportation. Student basic needs security is critical for ensuring strong academic performance, persistence and graduation, and overall student well-being. If you or someone you know is experiencing basic needs insecurity, please see the UH System Basic Needs website.

Mental Health Counseling

Mental Health and Wellness at Windward Community College counseling services and activities on campus to support students' life goals as well as their academic goals. Information about services can be found at the WCC Mental Health & Wellness website.

LGBTQ+

The University of Hawaiʻi system and Windward Community College are committed to building an inclusive community that supports and advocates for all Students, Staff, and Faculty. We welcome all members of our campus community to our campuses: transgender, māhū, and people of all gender identities. All members of our campus community deserve a work and educational environment free from harassment or bullying based on their sexual orientation, gender identity, or expression. University of Hawai`i Commission on LGBTQ+ Equality at their website: http://www.hawaii.edu/offices/president/lgbtq/ Windward Community College Commissioner: Scott Sutherland, scottjks@hawaii.edu

UH Alerts

The UH Alert emergency notification system alerts the university community in the event of a natural, health or civil emergency. The information you provide will only be used in the event of an emergency that impacts the health and safety of the UH community or the closure of whole campuses. It will not be shared with others or used for routine UH communications or announcements. To sign up, visit UH Alerts website for more information.

Financial Aid

If you are receiving financial aid and are contemplating not completing the course, BEFORE you withdraw, it is highly recommended that you contact the Financial Aid Office at 808-934-2712 or email them at wccfao@hawaii.edu to discuss the impact this decision may have on your financial aid eligibility.

Student Conduct Code

Windward Community College follows the University of Hawai'i Code of Student Conduct which defines expected conduct for students and specifies those acts subject to University sanctions. Students should familiarize themselves with the Code of Student Conduct since, upon enrollment at Windward Community College, the student has placed herself/himself under the policies and regulations of the University and its duly constituted bodies. The disciplinary authority is exercised through the Office of the Vice Chancellor for Student Affairs. Copies of the Student Conduct Code are available at the Office of the Vice Chancellor for Student Affairs or online.

Title IX - Sex Discrimination And Gender-Based Violence Resources

Windward Community College is committed to providing a learning, working, and living environment that promotes personal integrity, civility, and mutual respect and is free of all forms of sex discrimination and gender-based violence, including sexual assault, sexual harassment, gender-based harassment, domestic violence, dating violence, and stalking.

If you or someone you know is experiencing any of these, WCC has staff and resources to support and assist you. To report an incident of sex discrimination or gender-based violence, as well as receive information and support, please contact one of the following:

Leslie Cabingabang, UH System Confidential Advocate
Phone/Text: (808) 348-0432 or (808) 341-4952
Email: advocate@hawaii.edu
Office: Hale Kākoʻo 107 (Wednesdays)

Mykie E. Menor Ozoa-Aglugub, J.D., Title IX Coordinator
Phone: (808) 235-7468
Email: mozoa@hawaii.edu
Office: Hale Kākoʻo 109

Desrae Kahale, Mental Health Counselor & Confidential Resource
Phone: (808) 235-7393
Email: dkahale3@hawaii.edu

Office: Hale Kākoʻo 101

Karen Cho, Deputy Title IX Coordinator
Phone: (808) 235-7404
Email: kcho@hawaii.edu
Office: Hale ʻAlakaʻi 120

As a member of the University faculty, I am required to immediately report any incident of sex discrimination or gender-based violence to the campus Title IX Coordinator. Although the Title IX Coordinator and I cannot guarantee confidentiality, you will still have options about how your case will be handled. My goal is to make sure you are aware of the range of options available to you and have access to the resources and support you need.

For more information regarding sex discrimination and gender-based violence, the University's Title IX resources, and the University's Policy, Interim EP 1.204, go to manoa.hawaii.edu/titleix/

LAB SAFETY RULES

1) YOU MUST WEAR AN APPROPRIATE FACE COVERING OVER YOUR MOUTH AND NOSE DURING EACH CLASS AND ANYTIME YOU ARE ON CAMPUS.

2) Be familiar with lab safety procedures and take appropriate precautions at all times to insure the safety of all lab students.

3) Follow all instructions carefully, especially when hazardous materials are being used.

4) Know the locations of important safety equipment: eyewash, safety shower, fire extinguisher, and first aid kit.

5) Report all injuries to the instructor immediately.

6) Dress appropriately for lab. Closed-toe shoes are required for ALL labs. Safety glasses and gloves are required for labs utilizing chemicals, bodily fluids, or hot-plates.

7) Report any hazardous conditions (e.g. chemical spills or broken glass) to the instructor immediately.

8) NO FOOD ALLOWED IN LAB

9) Chemicals used in lab may be poisonous, corrosive, or flammable. No chemicals, even those known to be safe, should be ingested or touched with un-gloved hands unless you are specifically directed to do so by your instructor.

10) Know how to safely operate all lab equipment and tools (e.g., microscopes, scalpels, and hematology supplies). Safe usage will be demonstrated by your instructor.

11) Clean all lab supplies and return them to their proper location before leaving lab.

12) Treat all organisms, living or dead, with care and respect. Use gloves when handling dissected specimens.

13) Place broken glass, sharps, and dissected specimens in the appropriate receptacles (NOT IN THE TRASH!)

14) Unless otherwise instructed, chemical wastes should NOT be disposed of down the drain.

15) Human tissues and bodily fluids (e.g., saliva and blood) must be disposed of in appropriate biohazard containers (NOT IN THE TRASH!).

16) Wash your hands immediately following each lab to reduce the possibility of contamination or infection.

Course Schedule CRN 62069 Imiloa 103 TUESDAY: 10:30-1:15

Please note this schedule is tentative & subject to change. Any changes will be announced in class or on the course website!

Week	Date	Topics	Lab Manual	Histo Manual	Assignments Due
1	8/25	Lab Intro/Orientation Student Interviews	Sylla bus		Instructor Meeting
2	9/1	Scientific Method Language of Anatomy	CH 1-3		Q0: Syllabus
3	9/8	The Microscope Cell Anatomy & Division	CH 4-5	CH 1-2	Q1: Scientific Method Language of Anatomy
4	9/15	Osmosis and Diffusion*	CH 6		Q2: Microscope Cell Anatomy & Division
5	9/22	Classification of Tissues	CH 7	CH 3	Q3: Jeopardy
6	9/29	The Integumentary System Body Composition*	CH 8	CH 4	Q4: Tissues Osmosis and Diffusion FINAL Lab Report Due
7	10/6	Bone Tissue and Axial Skeleton	CH 9-10	CH5	Q5: Integumentary System
8	10/13	Appendicular Skeleton	CH 11		Q6: Axial Skeleton Integumentary FINAL Lab Report Due
9	10/20	**Lab Practicum #1**	None		Q7: Axial and Appendicular (Online)
10	10/27	Joints and ROM*	CH 12		
11	11/3	**Election Day**			
12	11/10	MuscleTissue and Physiology*	CH 13,15	CH 6	Q8:Joints Joints Phys FINAL Lab Report Due
13	11/17	Gross Anatomy and Classification of Muscles I	CH 14		Q9: Muscle Phys
14	11/24	Gross Anatomy and Classification of Muscles II	CH 14		Q10: Muscular Sys I Muscle Phys FINAL Lab Report Due
15	12/1	Histo Nervous Tiss Gross Anatomy of the Brain & Spinal Cord	CH 16-18	CH 7	Q11: Muscular System II
16	12/8	Human Reflex Physiology* General & Special Senses	CH 19-22	CH 8	Q12: Nervous Sys
17	12/15	**Lab Practicum #2**			Q13: Practice Practicum II (Online) Reflexes FINAL Lab Report

- Last day for a full refund: September 1st
- Last day to drop without a "W" grade: September 15th
- Last day to Withdraw ("W" entered on transcript): November 2nd