



UNIVERSITY of HAWAII®  
**WINDWARD**  
COMMUNITY COLLEGE

## **PHYL 141L: Human Anatomy and Physiology Lab**

1 Credit, Imiloa 103

T 11:30-2:15 (64077) or R 11:30-2:15 (64076)

**INSTRUCTOR:** Ross Langston, PhD

**OFFICE:** Imiloa 115

**OFFICE HOURS:** TR 9:00-09:45 AM and by appointment via [Star Balance](#)

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

**EFFECTIVE DATE:** Fall, 2024

### **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 the Ko'olau region of O'ahu and beyond with liberal arts, career and lifelong learning in a supportive and challenging environment — inspiring students to excellence.*

### **CATALOG DESCRIPTION**

Laboratory to accompany PHYL 141. Reinforces major concepts of human anatomy and physiology through dissections, examination of models, laboratory experiments, and other hands- on activities. This course is intended for students entering health care or other medically related fields such as nursing, physical therapy, and medical technology. (3 hrs. lab)

### **STUDENT LEARNING OUTCOMES**

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

1. Use the scientific method to design and conduct a clinical research study.
2. Describe the anatomy of the integumentary, skeletal, muscular, and nervous systems from prepared slides, skeleton models, and real and virtual animal dissections.
3. Use basic laboratory equipment (microscopes, slides, and dissecting tools) to observe and characterize human tissues.
4. Use critical thinking to analyze and interpret clinical data.
5. Prepare an oral presentation and written summary of lab activities using the scientific method.

## 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 one formal lab report.
- 5) Complete weekly quizzes.
- 6) Complete 2 in-class practicums.

## ASSESSMENT TASKS AND GRADING

**QUIZZES** (120 points total- 10 points for each quiz). Students will take a short quiz prior to or during each class (13 total). Each quiz will be based on the material covered in the previous lab. The lowest quiz grade will be dropped. Students who fail to take the quiz prior to lab will receive a zero on the quiz. **(NO EXCEPTIONS!)**.

**LAB REPORTS** (50 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. Reports are due 1-2 weeks after the lab activity. I will subtract 10 points a day for late reports. Lab reports must be uploaded to the course assignments by 11:00 AM on the due date.

**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 content and scope to the lab quizzes.

**ATTENDANCE & CLASS PARTICIPATION** (50 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.

**MEETINGS WITH THE INSTRUCTOR** (30 points). Students enrolled in the class are required to meet with the instructor twice during the semester. The first meeting will be within the first three weeks of class. The second meeting will be during the last four weeks of class. You may sign up for your meeting using this [link](#). Students who do not meet with the instructor will lose 30 points (equivalent to ).

### 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.

Quizzes	120 points
Lab Report	50 points
Lab Practicums	200 points
Class Participation	50 points
<u>Meetings w/Instructor</u>	<u>30 points</u>
<b>TOTAL</b>	<b>450 points</b>

### 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.**

## 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 an “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

Students involved in academic dishonesty will receive an "F" grade for the course. Academic dishonesty includes cheating on exams and plagiarism. See the most recent course catalog for a description of the College's policies concerning academic dishonesty.

## 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 Accessibility Counselor to discuss reasonable accommodations that will help you succeed in this class. Jodi Asato, Disabilities Counselor, can be reached at (808) 235-7472, [jodiaka@hawaii.edu](mailto:jodiaka@hawaii.edu), or you may stop by Hale Kāko‘o 105 for more information.

## SEX DISCRIMINATION AND GENDER-BASED VIOLENCE RESOURCES (TITLE IX)

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) 341-0952  
 Email: [advocate@hawaii.edu](mailto:advocate@hawaii.edu)  
 Office: Hale Kāko‘o 107 (Wednesdays)

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

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/](http://manoa.hawaii.edu/titleix/)

## **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: Alaka'i 121 (808) 235-7422

## 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 bio-hazard containers (NOT IN THE TRASH!).
- 16) Wash your hands immediately following each lab to reduce the possibility of contamination or infection.

## Course Schedule CRN 64077 TUESDAY: 11:30-2:15

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	8/27	Lab Intro/Orientation Student Interviews	Syllabus		Instructor Meeting 1
2	9/3	Scientific Method Language of Anatomy Scientific Method	CH 1-3		Q0: Syllabus
3	9/10	The Microscope Cell Anatomy & Division	CH 4-5	CH 1-2	Q1: Scientific Method Language of Anatomy
4	9/17	Cell Membrane Transport*	CH 6		Q2: Microscope Cell Anatomy & Division
5	9/24	Classification of Tissues	CH 7	CH 3	Q3: Anatomy Jeopardy
6	10/1	The Integumentary System Body Composition*	CH 8	CH 4	Q4: Tissues Cell Transport Lab Report
7	10/8	Bone Tissue and Axial Skeleton	CH 9-10	CH5	Q5: Integumentary System
8	10/15	Appendicular Skeleton	CH 11		Q6: Axial Skeleton Integumentary Lab Report
9	10/22	<b>Lab Practicum #1</b>	None		Q7: Axial and Appendicular (Online)
10	10/29	Joints and ROM*	CH 12		<u>Deadline for Instructor Meeting 2</u>
11	11/5	<b>Holiday: Election Day</b>			
12	11/12	Muscle Tissue and Physiology*	CH 13,15	CH 6	Q8: Joints Joints Lab Report
13	11/19	Gross Anatomy and Classification of Muscles	CH 14		Q9: Muscle Tissue & Phys
14	11/26	Histo Nervous Tiss Gross Anatomy of the Brain & Spinal Cord	CH 16-18	CH 7	Q10: Muscular System
15	12/3	Human Reflex Physiology* General & Special Senses	CH 19-22	CH 8	Q11: Nervous Sys Muscle Phys Lab Report
16	12/10	<b>Lab Practicum #2</b>			Q12: Practice Practicum II (Online) Reflex Phys Lab Report

- Last day for a full refund: September 3rd
- Last day to drop without a “W” grade: September 17th
- Last day to Withdraw (“W” entered on transcript): November 4th
- **Final Exam:** Lab Practicum II will be held on 12/10 during normal class time



## Course Schedule CRN 64076 THURSDAY: 11:30-2:15

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	8/29	Lab Intro/Orientation Student Interviews	Syllabus		Instructor Meeting 1
2	9/5	Scientific Method Language of Anatomy Scientific Method	CH 1-3		Q0: Syllabus
3	9/12	The Microscope Cell Anatomy & Division	CH 4-5	CH 1-2	Q1: Scientific Method Language of Anatomy
4	9/19	Cell Membrane Transport*	CH 6		Q2: Microscope Cell Anatomy & Division
5	9/26	Classification of Tissues	CH 7	CH 3	Q3: Anatomy Jeopardy
6	10/3	The Integumentary System Body Composition*	CH 8	CH 4	Q4: Tissues Cell Transport Lab Report
7	10/10	Bone Tissue and Axial Skeleton	CH 9-10	CH5	Q5: Integumentary System
8	10/17	Appendicular Skeleton	CH 11		Q6: Axial Skeleton Integumentary Lab Report
9	10/24	<b>Lab Practicum #1</b>	None		Q7: Axial and Appendicular (Online)
10	10/31	Joints and ROM*	CH 12		<u>Deadline for Instructor Meeting 2</u>
11	11/7	Muscle Tissue and Physiology*	CH 13,15	CH 6	Q8: Joints Joints Lab Report
12	11/14	Gross Anatomy and Classification of Muscles	CH 14		Q9: Muscle Tissue & Phys
13	11/21	Histo Nervous Tiss Gross Anatomy of the Brain & Spinal Cord	CH 16-18	CH 7	Q10: Muscular System
14	11/28	<b>Holiday: Thanksgiving</b>			
15	12/5	Human Reflex Physiology* General & Special Senses	CH 19-22	CH 8	Q11: Nervous Sys Muscle Phys Lab Report
16	12/12	<b>Lab Practicum #2</b>			Q12: Practice Practicum II (Online) Reflex Phys Lab Report

- Last day for a full refund: September 3rd
- Last day to drop without a “W” grade: September 17th
- Last day to Withdraw (“W” entered on transcript): November 4th
- **Final Exam:** Practicum 2 will be held on Thursday, 12/12 during normal class time