

Windward Community College  
**Outline of Course Objectives**

**ZOOL 141 Human Anatomy & Physiology I**

Fall 2015

Sec 60041 MW 11:30-12:45 Imiloa 123

'Aug 24-Dec 10

**INSTRUCTOR: Michelle Smith**

**OFFICE:** Imiloa 136

**OFFICE HOURS:** TR 11-11:30

**EMAIL:** miliefsk@hawaii.edu

**CREDITS:** 3

**INSTRUCTOR'S WEB PAGE FOR Lab Activities:**

<http://www.wcc.hawaii.edu/facstaff/miliefsky-m/>

### 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

The first semester of a two-semester course in human anatomy and physiology which includes a study of human embryology, gross anatomy, microanatomy, physiology, pathology, and homeostatic relationships. This course is intended for students entering health care or medically related fields such as nursing, physical therapy and medical technology. (3 hours lecture)

Pre-Requisite(s): High school chemistry or equivalent preparation or consent of instructor.

Recommended Preparation: High school biology, BIOL 100, BIOL 101 or ZOOL 101; registration in ZOOL 141L.

**Credits:** 3 class hours

### LEARNING RESOURCES

#### Required Instructional Materials:

- **Text:** Marieb, E. & Hoehn, K. (2016) *Human Anatomy & Physiology* with Mastering 9/e (10<sup>th</sup> ed.). NY: Pearson Pub.

#### Options:

Purchase Text with Mastering at bookstore or at Pearson Publishers  
(<http://www.mypearsonstore.com/index.asp>)

The text comes in other forms, as an etext with a 2-year subscription or ala cart (3-ring binder edition) available at Pearson Pub. (go to [mypearsonstore.com](http://mypearsonstore.com)).

You can also purchase an etext version that you could download to a computer, laptop or ipad from kno.com. However, for an ipad, you need a flash enabler for purchase at itunes or other sites.

Purchase Mastering Anatomy & Physiology 9/e separately at:  
<http://www.masteringaandp.com/>. This site is also where you register for Mastering.

## **STUDENT LEARNING OUTCOMES**

- Discuss the major chemical elements found in the human body and describe the different ways in which these elements combine to form molecules and compounds.
- Understand the functions of cellular organelles, and be able to trace the path of protein manufacture in the cell.
- Compare and contrast the physical, chemical, and biological factors governing the transport of materials across the cell membrane.
- Discuss the link between cells and tissues and describe how tissue structure determines its suitability for secretion, absorption, support, or protection.
- Use standard medical terminology to describe body positions and the orientations.
- Describe the anatomy and function of the integumentary, skeletal, muscular, and nervous systems, and discuss how these systems maintain homeostasis in the human body.
- Discuss how negative feedback maintains homeostasis in each of the above body systems. Also, be able to explain how disease and disorders disrupt the homeostasis of each of the above body systems and discuss how common medical treatments and drugs are used to restore homeostasis.
- Write a research paper on a disease affecting one of the body systems using primary and secondary scientific literature.

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## **TEACHING PROCEDURES**

Coordination of lecture and laboratory experiences are the primary modes of instruction. The lecture generally emphasizes major concepts and physiological processes. The laboratory generally emphasizes anatomy from the gross to the microscopic level and associated structure-function correlations.

Students are encouraged to take responsibility for increasing their own comprehension and recall both by careful reading of assigned materials and by: taking advantage of opportunities for asking questions for clarification, answering questions posed in the text and supplementary sources (for which answer keys are provided participating in small study groups, review sessions, faculty office hours, and seeking out peer tutoring if necessary utilizing resources available in the academic learning computer center and learning resources center).

The primary purpose of the lecture will not be to give you blackboards full of detailed notes to be copied into a notebook. Rather, the primary purpose of the lecture

will be to facilitate your learning of information already available in the text or in other sources available to you. You are expected to read the assigned readings before the lecture on that material. However, do not become discouraged if some of the material seems at first beyond your ability to master alone. This difficulty is expected. That is why the lecture exists-- to help you understand and find ways to recall the information. But the lectures will be most useful to those who have already struggled with the material as presented in the text and have a sense of where they most need help.

### MODE OF INSTRUCTION

#### Lecture Approach will include:

*Verbal presentation:* The lecture format is provided using PowerPoint slides. The slides are available for printing or saving to your hard drive. They can be downloaded from: [www.wcc.hawaii.edu/facstaff/miliefsky-m/](http://www.wcc.hawaii.edu/facstaff/miliefsky-m/). Select the ZOOL 141 or 142 folder. Prior to attending class, it is recommended that you print out the corresponding PowerPoint lecture. You may choose to print 3 or 6 slides per page, leaving enough room to take notes. You will find it easier to follow along if you bring the printouts to class with you.

#### Please Ask Questions:

Questions by students for clarification of the material under discussion will be welcomed in lecture.

Questions of clinical practice are best saved for the appropriate clinical course.

Questions posed by the professor to the class will also be used to guide your thinking about the material and to check current understanding and recall.

#### Instructional Objectives:

This course is designed to help students build a comprehensive picture of the most important aspects of structure and function from the chemical level through the integration of organ systems into a healthy living human body. This course strives to establish a firm foundation of knowledge and study skills for students going on to more specialized course work in human biology, including courses in health related fields which focus on how disease processes represent deviations from the norm.

All of the major systems of the human body are studied. Vocabulary (as well as concept mastery) is stresses on the assumption that this will be of considerable value to these students. References are made frequently to medical applications of the course content to help students see why the level of detailed required of them is valuable to the understanding of disease processes and treatment approaches.

Students should refer to the objectives stated in the text and lab manual; these will be modified and clarified as each topic is taken up in lecture-- often by handouts as each topic is discussed.

### ASSESSMENT TASKS AND GRADING

#### Grading:

|   |      |
|---|------|
| <b>Exams (4):</b>                           | 60%  |
| <b>Reaction Paper/Class Discussion (2):</b> | 20%  |
| <b>Homework</b>                             | 10%  |
| <b>Attendance:</b>                          | 10%  |
| <b>Final Grade:</b>                         | 100% |

#### Grading Scale:

| Total Points | Grade |
|--------------|-------|
| 100-90%      | A     |

|        |   |
|--------|---|
| 89-80% | B |
| 79-70% | C |
| 69-60% | D |
| 59- 0% | F |

**Exam** (60% points): Four exams will be given throughout the semester. Each exam is worth **15%** of your final grade. Exams are closed book, but the student is allowed a 1-sided 3x5" note card. Note cards that are double-sided will be thrown out and those larger than 3x5 will be cut down to size.

If the student misses an examination because of an illness or legitimate emergency, the student must contact the instructor as soon as possible to arrange a time to take a make-up exam. The instructor may 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.

**Homework** (10%):

Homework will be assigned for each chapter through Mastering A&P 9/e. You will have needed to register at: <http://www.masteringaandp.com/>. If you did not purchase Mastering A&P you can do so at the above website.

**Attendance** (10%): Attendance is mandatory. However, if a student is unable to attend class, he or she should contact the instructor in advance to give notification of the absence and make necessary arrangements. Attendance is worth **10%** toward your final grade. Each unexcused absence will result in a deduction of **1%**.

For those students who receive financial aid and fail to attend the first week of classes without making arrangements with the instructor, the instructor will submit the student's name to the Financial Aid Office. The student will be denied financial aid for the class he/she is not attending. In addition, it is solely the student's responsibility to withdraw from the class or attend the class and pay the tuition.

**Article-based Reaction papers** (20%): Two article-based reaction papers will be given at various times throughout the semester. They are each worth **10%** toward your final grade and include a brief discussion in class. Participation is required to receive full credit.

Review an article of your choice related to each one of the topics listed below. The article should come from a legitimate journal (e.g., JAMA, Discover magazine, National Geographic, local paper...), not a website. Internet journals are O.K. to use.

The report should be minimum of 2 full pages in length (2-3 pages is good). When you type your paper, please use size 12 font, Arial or Times New Roman, and double space it. Attach the article to your paper (photocopy or cut it out). Please don't mail me the web site because you ran out of paper.

**TOPIC 1: Stem Cells—**

Stem cells have the potential to develop into various tissues in our body. Research in this area suggests that stem cells may be useful in curing various disorders. However,

the use of embryonic stem cells is controversial. Find an article related to the uses and benefits of stem cells, the ethical concerns, or funding provided by the federal government. Here is a web site you may find useful for background information: <http://stemcells.nih.gov/index.asp>.

### TOPIC 2: Nervous System—

Alzheimer's, Parkinson's, Huntington's, Schizophrenia, Epilepsy, Cerebrovascular Disease (CVA) and Multiple Sclerosis, among others, are brain diseases that effect a great many of our population. Find an article related to one of these diseases listed, or choose one related to the nervous system. Be sure to describe the part of the nervous systems that is affected, its symptoms, how it affects the individual, and the latest treatment.

**Late Assignments:** Late assignments will be accepted up to one week following the due date, but with an automatic point penalty assessed on top of the score received (**5 point deduction** per day late). Essay assignments received more than one week following the due date will not be accepted for grading.

## STUDENT RESPONSIBILITIES

Students are expected to be prepared in advance when they arrive to class. Being prepared includes the following: having already read text materials (e.g., textbook readings and handouts) assigned for that day's activities; and bringing required work materials (e.g., textbook, handouts, writing supplies, etc.).

Any changes in the course schedule, such as examination dates, deadlines, etc., will be announced ahead of time in class. It is the student's responsibility to be informed of these changes.

It is the student's responsibility to be informed about deadlines critical to making registration changes (e.g., last day of erase period and last day for making an official withdrawal).

Please be considerate to other students by turning off any Cell Phone devices or Beepers during class. If yours does go off, be prepared to make amends to the entire class. The instructor will explain in more detail.

## HOW TO SUCCEED IN THIS CLASS

Understanding biological science involves understanding many difficult concepts and vocabulary, not just knowing facts. The student should know that the details to these concepts are important. In addition, the student will be introduced to hundreds of new words. In some cases, words that are familiar in a context other than biology will be introduced in the context of biology. The student will need to understand and use these terms in a biological science context.

While the student will have lecture outlines, the student will not succeed in this class without taking careful **lecture notes** and **reading** the corresponding material in the textbook before and after the lecture. The student should carefully **review** these lecture notes as often as possible. In addition, the students' study activities should include: **drawing** labeled diagrams or graphs that illustrate important biological phenomena (e.g., the internal structure of the cell, the stages of cell division, or the anatomy of the heart), reviewing all of the **internet** resource materials provided, and making **flashcards** for each new vocabulary word presented (refer to lecture outlines for a lists of required terms). On one side of the card, write the word. On the other side, write the appropriate biological science definition for the word. The student should use these card for self-testing as often as possible.

The textbook includes useful **study questions**. The student should try to answer all of these questions as though they were required assignments.

Students are recommended to establish **study groups** and study together. The students in these groups may test each other's knowledge and understanding of the information. They may also take turns teaching each other.

The student should **ask** the instructor to explain the things that the student does not understand.

## **MATH & SCIENCE DEPARTMENT ON WITHDRAWALS AND INCOMPLETE**

1. **WITHDRAWALS (W GRADES) – After the “last day of withdrawals” Oct. 30, the instructor will sign withdrawals only in cases of extreme or unusual circumstances. Grade related excuses are unacceptable.**

**Examples of extreme or unusual circumstances are:**

1. a certified medical reason
2. a death in the immediate family

**Students who no longer attend class and who DO NOT OFFICIALLY WITHDRAW from the course will receive “F” grades.**

2. **INCOMPLETE (I GRADE) – Students must present the “Request for Incomplete” form prior to the last day of instruction. “I” grades will be given only to students who are achieving passing grades and are very close to completing the course. In addition, the student must have a very good reason for not being able to complete all the work on time.**

**Examples of good reasons are the same as those listed under the withdrawal policy above.**

## **WINDWARD COMMUNITY COLLEGE POLICY**

1. Windward Community College is an Equal Opportunity/ Affirmative Action Institution.
2. Extended time in a distraction-free environment is an appropriate accommodation based on a student's disability. If you do have a disability and have not voluntarily disclosed the nature of your disability and the support you need, you are invited to contact Ann Lemke at 235-7448, [lemke@hawaii.edu](mailto:lemke@hawaii.edu), or you may stop by Hale 'Akoakoa 213 for more information.
3. Students are expected to attend all classes for which they are registered. If a student is unable to attend class, he or she should contact the instructor in advance to give notification of the absence and make necessary arrangements.

For those students who receive financial aid and fail to attend the first week of classes without making arrangements with the instructor, the instructor will submit the student's name to the Financial Aid Office. The student will be denied financial aid for the class he/she is not attending. In addition, it is solely the student's responsibility to withdraw from the class or attend the class and pay the tuition.

## **ACADEMIC DISHONESTY**

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

Academic dishonesty includes cheating on exams and plagiarism. See page 16 of the 2006-2007 course catalog for a description of the University's policies concerning academic dishonesty

### **ACCOMODATION FOR STUDENTS WITH DISABLIITIES**

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](mailto:lemke@hawaii.edu), or you may stop by Hale 'Akoakoa 213 for more information.

### **TWO-WAY COMMUNICATION DEVICES**

These devices are not allowed in the classroom. Please see to it that these devices are turned off while in class.

### **UH POLICY ON EMAIL COMMUNICATION**

The electronic communications policy adopted in December 2005 establishes the University of Hawai'i Internet service as an official medium for communication among students, faculty, and staff. Every member of the system has a hawaii.edu address, and the associated username and password provide access to essential Web announcements and email. You are hereby informed of the need to regularly log in to UH email and Web services for announcements and personal mail. Failing to do so will mean missing critical information from academic and program advisors, instructors, registration and business office staff, classmates, student organizations, and others.