

ANSC 142
Anatomy and Physiology of Domestic Animals

MWF 10:30-11:20AM
‘Imiloa 133

INSTRUCTOR: Ross Langston, PhD
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EFFECTIVE DATE: Fall, 2009

WINDWARD COMMUNITY COLLEGE MISSION STATEMENT

Windward Community College is committed to excellence in the liberal arts and career development; we support and challenge individuals to develop skills, fulfill their potential, enrich their lives, and become contributing, culturally aware members of our community.

CATALOG DESCRIPTION

Introduction to the anatomy and physiology of domestic animals. Compares the anatomy and function of major body systems for the cat, dog and horse, with lesser emphasis on birds, reptiles and amphibians. This course is intended for students entering veterinary technology, veterinary assisting or other animal-related fields (3 hrs. lect).

Prerequisite: Credit for or registration in ANSC 142L.

Activities Required at Scheduled Times Other Than Class Times: None

STUDENT LEARNING OUTCOMES

Upon successful completion of ANSC 142, the student should be able to:

- 1) Discuss the chemical building blocks of major biological molecules.
- 2) Describe the link between cells, tissues, organs, and organ systems.
- 3) Contrast the structure and function of major body systems (e.g., skeletal, circulatory, respiratory, and reproductive) among companion animals and selected livestock species.
- 4) Explain how disease and disorders disrupt the homeostasis of each of the above body systems and discuss how common veterinary medical treatments are used to restore homeostasis.

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:

The scientific method

Chemistry of living organisms

Biological macromolecules

Cellular basis of life

Membrane transport

Cell division

Tissues

Homeostasis

Integumentary System: Skin, hair, nails and hooves

Skeletal system: Bones, joints, and joint movements

Muscular system: Origins, insertions, and actions

Nervous System: Major divisions

Endocrine System: Major hormones and their effects

Circulatory System: The Heart, Blood, and Blood Vessels

Respiratory System: Anatomy and Physiology of Respiration

Digestive System and Metabolism

Urinary System

Reproductive system

Pregnancy and parturition

COURSE TASKS

- 1) Attend class at scheduled times.
- 2) Complete assigned readings prior to lecture.
- 3) Participate in class discussions
- 4) Complete 4 in-class exam reviews.
- 5) Complete 4 examinations.

ASSESSMENT TASKS AND GRADING

EXAMINATIONS (400 points total-100 points for each exam). The student will take four exams (non-cumulative) to demonstrate knowledge and understanding of information presented in the lectures, lecture outlines, text readings, and study guide activities.

EXAM REVIEWS: Students are expected to complete in-class exam reviews (20 points) prior to each exam. The format for these reviews will be discussed in class.

ATTENDANCE (20 points): Attendance is mandatory. Each student is allowed two absences without penalty. Each unexcused absence above two will result in a deduction of points from the student's attendance score. Students who miss guest lectures will receive a double deduction.

METHOD OF GRADING

The assignment of points will be according to the following:

Exams	400 points
Reviews	20 points
Attendance	20 points
TOTAL	440 points

GRADING SCALE

Total Points	Percentage Points	Grade
394-440	90-100	A
350-393	80-89	B
306-349	70-79	C
262-305	60-69	D
<262	0- 59	F

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 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.**

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 2007-2008 course catalog for a description of the University's policies concerning academic dishonesty.

LEARNING RESOURCES

Textbook: Colville, T. and J.M. Bassert. 2008. Clinical anatomy and physiology for veterinary technicians. Mosby Inc. St. Louis, MO. ISBN: 978-0-323-04685-5

Lecture Outlines: Powerpoint outlines will be given out at the beginning of each lecture.

Laulima: Your instructor has created a Laulima website to accompany this course. This website contains lecture outlines, copies of course forms and syllabi, and links to on-line learning resources. Students enrolled in ANSC 142 or ANSC 142L are automatically enrolled in the ANSC 142 Laulima website. To access, go to <https://laulima.hawaii.edu/portal>. Login using your UH username and password and click on ANSC 142/142L.

Additional Information

STUDENT RESPONSIBILITIES

The student is expected to attend lectures, participate in all course activities, and complete all examinations and course assignments on time. Please be considerate to 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 on the course website. 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 for making an official withdrawal).

HOW TO SUCCEED IN THIS CLASS

Although you can download all lecture outlines and course materials, 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 cut into 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. Most important vocabulary words appear in **boldface** throughout your textbook. One way to learn these vocabulary words is to make flash cards so you can quiz yourself. Answering the “Test Yourself” questions located throughout the chapter can also be a helpful way to learn new vocabulary and evaluate your comprehension of important concepts.

In addition to vocabulary, you will be expected to have a detailed understanding of the *mechanisms* regulating the homeostasis of major body systems. In many cases, these systems are regulated by negative feedback loops. Your instructor will outline the most important feedback loops for each body system. You should be familiar with the components of these loops and be able to predict what will happen if one or more of the components are modified or removed.

ACCOMODATION FOR STUDENTS WITH DISABLITIES

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 ‘Akoakoa 213 for more information.

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Week	Date	Topics	Reading
1	8/24	Course Introduction	Syllabus
	8/26	Levels of Biological Organization	CH 1: 1-8
	8/28	Chemical Basis for Life	CH 2: 10-24
2	8/31	Organic Macromolecules	CH 2: 25-38
	9/2	Cell Anatomy	CH 3: 39-62
	9/4	Cell Anatomy (Cont'd)	CH 3: 39-62
3	9/7	Holiday: Labor Day	
	9/9	Cellular Physiology	CH 3: 63-83
	9/11	Review	
4	9/14	Exam #1	
	9/16	Epithelial Tissues	CH 4: 90-106
	9/18	Connective Tissues	CH 4: 107-124
5	9/21	Muscle & Nervous Tissue + Tissue Repair	CH 4: 125-130
	9/23	Integumentary System	CH 5: 131-140
	9/25	Related Structures: Hair, horns and hooves	CH 5: 140-152
6	9/28	Bone Tissue and Bone Structures	CH 6: 153-161
	9/30	Axial Skeleton	CH 6: 161-174
	10/2	Appendicular Skeleton	CH 6: 174-184
7	10/5	Joints and Body Movements	CH 6: 184-190
	10/7	Muscular System	CH 7: 191-204
	10/9	Muscular System (Cont'd)	CH 7: 191-204
8	10/12	Review	
	10/14	Exam # 2	
	10/16	Blood (Dr. Arlene Buchholz)	CH 9: 220-238
9	10/19	Lymph and Immunity	CH 9: 239-246
	10/21	Cardiac Structure & Circulation	CH 8: 205-219
	10/23	TBA	
10	10/26	Respiratory Anatomy and Physiology	CH 10: 248-263
	10/28	Digestive System	CH 11: 264-282
	10/30	Nutrition	CH 12: 283-296
11	11/2	Metabolism	CH 12: 297-313
	11/4	Nervous System	CH 13: 314-336
	11/6	General Senses	CH 14: 337-342
12	11/9	Special Senses	CH 14: 342-357
	11/11	Holiday: Veteran's Day	
	11/13	Review	
13	11/16	Exam # 3	
	11/18	Endocrine System (Dr. Arlene Buchholz)	CH 15: 358-373
	11/20	Endocrine System (Cont'd)	CH 15: 358-373
14	11/23	Urinary Anatomy and Physiology	CH 16: 374-386
	11/25	Meiosis and Male Reproductive System	CH 17: 387-398
	11/27	Holiday: Thanksgiving	
15	11/30	Female Reproductive Anatomy	CH 17: 399-404
	12/2	Pregnancy, Development, and Parturition	CH 18: 405-413
	12/4	Avian Anatomy and Physiology (Dr. Arlene Buchholz)	CH 19: 414-454
16	12/7	Avian Anatomy and Physiology (Cont'd)	CH 19: 414-454
	12/9	Review	

- Last day to drop without "W" grade: 9/14
- Last day to Withdraw ("W" entered on transcript): 10/27
- Final Exam: Wednesday 12/16 10:30-12:20