

Currently An Sci 375 3 cr I level

**Animal Science/Dairy Science 373
Animal Physiology
Spring 2014 Syllabus**

Instructors: Laura Hernandez, Ph.D.

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Office Hours: By appointment

Milo Wiltbank, Ph.D.

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Office Hours: By appointment

Lecture: 9:30-10:45 am, Tuesday and Thursday; 209 Animal Sciences

Pre-requisites: Biology 151/152; Zoology 101

References:

Textbook: Functional Anatomy and Physiology of Domestic Animals (4th Edition), William O. Reece;

Lecture Power Points

Course Objectives:

- Understand the physiological processes that regulate the body
- Be able to describe interactions between different organ systems (homeostasis)
- Know the anatomy of different physiological systems and their specific functions
- Understand how changes in one system may impact a different system
- Describe physiological differences between species for different systems
- Understand the regulation of an organ system from the molecular all the way to the whole animal level
- Be able to apply knowledge of a physiological mechanism to explaining how a whole animal physiological process occurs

Grading:

Exams: 2 exams-100 points each; Final Exam: Comprehensive-150 points

Topic Presentation: 50 points; Final Group Presentation: 100 points

Total Points: 500 points

Grading Scale:

A-90-100%; AB-88-89%; B-80-87%; BC-78-79%; C-70-78%; D-60-69%; F<60%

Topic Group Presentation: 50 points

Each group will make a 20-minute video presentation explaining a physiological system. The instructors will assign the lecture and the students will choose the concept to be explained with approval from the instructors.

Final Group Presentation: 100 points

Each group will integrate several physiological systems to explain a physiological/pathological process. They will produce a written paper and a 25-minute group presentation at the end of the semester.

COURSE SCHEDULE:

January 22:	Course Introduction/Basics of Structure and Function - Hernandez
January 27:	Nervous System-Action Potentials-Wiltbank
January 29:	Nervous System-Neurons and Neuro-muscular junction- Wiltbank/Hernandez
February 3:	Muscle-Excitable Tissue-Hernandez
February 5:	Sensory Organs-Hernandez
February 10:	Nervous System – Brain-Wiltbank
February 12:	Endocrine System-Hernandez
February 17:	Endocrine System-Hernandez
February 19:	Reproduction: Ovarian Cycles-Wiltbank
February 24:	Reproduction: Pregnancy-Wiltbank
February 26:	Reproduction: Lactation-Hernandez
March 3:	Digestion and Absorption-Hernandez
March 5:	Digestion and Absorption-Hernandez
March 10:	Review and Student Presentations
March 12:	EXAM 1
March 17, 19:	SPRING Break
March 24:	Introduction to homeostasis: Urinary System-Wiltbank
March 26:	Urinary System-Wiltbank
March 31:	Cardiovascular System-Heart-Wiltbank
April 2:	Cardiovascular System-Blood Vessels and blood flow regulation- Wiltbank
April 7:	Cardiovascular System-Blood and capillary exchange-Wiltbank
April 9:	Respiratory System- Lungs-Wiltbank
April 14:	Respiratory System-Oxygen & Carbon dioxide concentrations- Wiltbank
April 16:	Immune System-Overview and Innate Immune system-Hernandez
April 21:	Immune System-Acquired Immune System-Hernandez
April 23:	Bone, Joints and Synovial Fluid-Hernandez

April 28: Body Heat and Temperature Regulation-Hernandez
April 30: **Exam 2**
May 5: **Final Group Presentations**
May 7: **Final Group Presentations**