

ANIM SCI 2200.01: Introductory Animal Sciences
Fall Semester, 2012

Lecture: Monday, Wednesday and Friday; 11:30-12:25am, 103 Kottman Hall

Instructor: XXXXX, Department of Animal Sciences
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Office hours: Open door policy, XXXX; however, appointments are encouraged.

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Prerequisites:

Text: Required: ANIMAL SCIENCES, Peffer and Day. Kendall Hunt Publishing; Dubuque, IA:2009; ISBN: 9780757563171.

Goals and Objectives: Introductory Animal Sciences is a Natural Science, general education, course that promotes an understanding of modern science through a biological systems based approach. Students learn of the relationship between science and technology, consider the implications of scientific discoveries, and acquire the knowledge and critical thinking skills required to evaluate the potential of science and technology to address problems from a global arena as they pertain to domestic animals used for human benefit.

Learning Objectives:

1. Students understand whole animal structure, form and function; growth and development of systems from the cellular level.
2. Students learn key concepts in genetics, nutrition, and reproduction as it applies to animal managements systems and the contributions of animals to humans.
3. Students contribute to respectful management of animals and the environment.
4. Students respect and appreciate diversity.
5. Students develop national and global awareness.
6. Students continue the pursuit of knowledge.
7. Communicate effectively, both orally and in writing.
8. Students identify and solve problems by integrating reliable knowledge, logic and experiences.
9. Students form and maintain working relationships and accept constructive criticism.
10. Students transform desires into rewarding opportunities.

How students meet objectives through this course: The course embodies fundamental concepts in areas of genetics, reproduction, nutrition, behavior, and biotechnology; and students are introduced to the molecular and cellular mechanisms that underscore the function of biological systems and how knowledge in this area is applicable toward appropriate management of domesticated animals. Students will consider how the study of animals has advanced from early scientific discoveries and through the study of animal systems from the local to global arena, students will appreciate the use of animals and their contributions across diverse populations and understand the local and global impacts of the application of new technologies to the animal industries.

Course Description: A study of the basic principles of genetics, breeding, reproduction, nutrition, behavior, and biotechnology as it applies to the molecular, cellular, and physical underpinnings of domesticated animal form and function.

Goals and Objectives of the GE Natural Science Category: Courses in natural sciences foster an understanding of the principles, theories and methods of modern sciences, the relationship between science and technology, and the effects of science and technology on the environment.

1. Students understand the basic facts, principles, theories and methods of modern science.
2. Students learn key events in the history of science.
3. Students provide examples of the inter-dependence of scientific and technological developments.
4. Students discuss social and philosophical implications of scientific discoveries and understand the potential of science and technology to address problems of the contemporary world

How students meet the GE Natural Science objectives through this course: Students will learn how systematic observations of the natural world have helped define current concepts of science and the role of controlled experimentation in support of early scientific theories through discussions of behavior. An understanding of the foundations of modern science will be acquired through discussions of cell theory, heredity, physiological ecology, energy transfer, and evolutionary strategies of today's domesticated species. Students will gain an appreciation of how human intervention has shaped animal form and function throughout history and the role of technology; addressing the implications of biotechnologies current and future applications.

Animal Sciences 2200.01 Learning Outcomes:

Successful students will:

1. Be familiar with the historical, social, and biological contexts that govern the study of animals.
2. Understand basic principles of genetics, breeding, reproduction, nutrition, behavior, and biotechnology.
3. Appreciate the molecular, cellular, and physical underpinnings of animal form and function.
4. Develop the ability to critically evaluate concepts in science as they are applied to the study of animals.
5. Construct innovative approaches to, and solutions of, problems encountered when maintaining animals for human benefit.
6. Appreciate the uses of animals and social attitudes regarding how animals are used.
7. Have a broad understanding of biotechnology and its uses toward advancing the health and well-being of animals
8. Consider positive and negative implications of applying modern technology to animal systems.

Lecture and Reading Schedule

Week	Topic	Text
1	Process of domestication and a historical perspective of how animal sciences has evolved.	Chapter 1
2	Animal Behavior and Welfare	Chapter 2 and 15
3	Nutrition: nutrient requirements, physiology, and the importance of different digestive strategies.	Chapter 3
4	Organization of biological systems from molecular structures to physical features.	Chapter 4
5	Genetics & application of genetics for animal breeding: natural versus artificial selection.	Chapter 4
6	Biotechnology: progress, applications and limitations.	Chapter 4
7	Principles of reproduction and assisted reproductive technologies.	Chapter 5
8	Lactation strategies: Nutritional and immunological support of the young.	Chapter 6

9	Animal form and function: Ruminants	Chapter 7 and 8
10	Animal form and function: Small Ruminants & Pseudo-ruminants	Chapter 9 and 13
11	Animal form and function: Hind-gut fermenters	Chapter 12
12	Animal form and function: Simple nonruminants & Avians	Chapter 10 and 11
13	Animal form and function: Aquatics	Chapter 14
14	Global status of the animal industries	
	Final Exam	

Evaluation

Three exams will be given during the semester. Two lecture midterms worth 100 points each and a lecture final worth 150 points. Exams will be non-comprehensive and consist of mixed format questions. A total of four group mini-discussions will be prompted during the semester by introducing students to hypothetical scenarios and/or case studies that challenge learned concepts or require students to think critically about the application of science technology. In addition, students will reflect on previous course content by submitting weekly question(s)/comment(s).

Evaluation	POINTS
Exam I	100
Exam II	100
FINAL EXAM	150
Class discussion	50
Total	500

Exams will not be returned. You will be given an opportunity to review your exam in class or may make an appointment to view your exam in the instructor's office.

Grade Scale: Grades will be based on the total points earned as a percentage of total points possible and letter grades assigned as follows:

Percentage	Letter Grade	Percentage	Letter Grade
93-100	A	73-76.9	C
90-92.9	A-	70-72.9	C-
87-89.9	B+	67-69.9	D+
83-86.9	B	60-66.9	D
80-82.9	B-	<60	E
77-79.9	C+		

Course Management System

This course uses Carmen (<http://carmen.osu.edu>) to manage course content and grades. Students are expected to check this site frequently to receive updates regarding the course. The following course information is available through Carmen:

Grades: Access grades as well as the class mean and standard deviation for completed assignments.

Content: Download and print a copy of the Power Point slides prior to attending class. Note that these slides do not contain a full copy of the lecture notes – but an abridged version to facilitate note taking by students during lectures. Students must attend lectures to obtain the material required to complement these slides.

Links: This section contains links to broader categories of information concerning the study of animals. Students are encouraged to explore these resources, however, the content of these websites is not endorsed by the course instructor.

Glossary: Includes a comprehensive list of commonly used class terms and their definition.

Course Policies

Attendance Policy: Attendance to lectures is *mandatory*. Students will be unable to make-up missed activities. If an emergency should warrant that a lecture be missed, prior notification must be given to the instructor. In case of illness, the instructor must be contacted the day of the absence. You must be seen by and receive written documentation from a professional health care provider on the day of the absence in order to not be penalized for the absence.

E-Mail Etiquette: The use of e-mail has made the classroom professor more approachable and accessible to the student. However, students should realize that e-mail should not always be used as a casual form of communication and professional relationships should be maintained when using e-mail for a class. Below I have included guidelines you should follow when drafting your e-mail. I will not respond to e-mails that I consider inappropriate. I will respond to appropriate emails in a timely manner, do not expect an immediate reply. If you require an immediate response consider visiting with me in person.

DO

- Include a descriptive statement in the subject line.
- Use proper salutations when beginning an e-mail.
- Be concise in the body of the e-mail, use complete sentences and proper grammar.
- Use an appropriate closure at the end of each e-mail followed by your first and last name.
- If replying to an e-mail, reference the original e-mail and its content.
- Be selective of your choice of words. Emotions are difficult to convey in text and without the benefit of facial expressions your sentiment can be lost in the words you choose to write.

DON'T

- Use all capital letters; this conveys a tone of ANGER.
- Use e-mail as a format to criticize other individuals.
- Ask for your grade via e-mail. Grades will not be discussed by e-mail. If you need to discuss a graded item make an appointment to do so in my office.
- E-mail to inquire when grades will be posted. We will work toward submitting grades promptly, however, recognize that grading assignments and exams requires considerable time to ensure uniformity and fairness.
- Send an e-mail out of frustration or anger. Learn to save the e-mail as a draft and review at a later time when emotions are not directing the content.

Punctuality: Punctuality is a necessity as tardiness is disruptive to the entire class. Students who are repeatedly tardy are subject to a reduction in total points assessed toward the final grade.

Technology Devices: Interruptions are distractive to learning. All cell phones and related devices must be turned **OFF** or placed in **Etiquette Mode** and stored out of sight during class period. Text-messaging during class is unacceptable.

University Policies

Disability Services: Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated, and should inform the instructor as soon as possible of their needs. The Office for Disability Services is located in 150 Pomerene Hall, 1760 Neil Avenue; telephone 292-3307, TDD 292-0901; <http://www.ods.ohio-state.edu/>.

Academic Misconduct: It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term “academic misconduct” includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct (http://www.studentaffairs.osu.edu/info_for_students/csc.asp).