

HONORS INTRODUCTORY ANIMAL SCIENCES (ANIM SCI H200) - AUTUMN 2009
5 Credit hrs

Lecture:

M,W,R,F: 103 Kottman Hall

Recitation:

R: 107 Plumb Hall

Laboratory:

W

Please reference attached laboratory schedule for location

Primary Instructor:

Pasha A Lyvers Peffer, PhD; salutation Dr. Peffer

Assistant Professor

201 Plumb Hall

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Office Hours: Open door policy (1:00 – 4:00), however, students are encouraged to make an appointment.

Co-Instructor:

Ann C. Ottobre, MS; salutation Mrs. Ottobre

101 Plumb Hall

Office phone: (614) 292-7135

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Teaching Assistants:

XXX; e-mail: XXX

Course Description: Introductory Animal Sciences is a Natural Science, general education, course that utilizes a biological systems based approach to equip a broad range of students with the knowledge and critical thinking skills required to address questions concerning the maintenance, reproduction, physiology, and performance of domestic animals utilized for human benefit. Introductory Animal Sciences 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 advancement of domestic animals. Students will consider how the study of animals has advanced from early scientific discoveries and explore the contribution of animals toward advancements in agriculture and medical biotechnology, as well as the local and global impacts of the application of new biotechnologies to the animal industries and the impacts of the animal industries on society and the environment. The focus will be on traditional agricultural species including: cattle, sheep, swine, poultry, and horses; as well as non-traditional species including: llamas, alpacas, and aquatics.

Course Goal: This course will foster students' understanding of the principles, theories and methods of modern science, the relationship between science and technology, and the effects of science and technology on the environment through individualized exploration of concepts central to the Animal Sciences. Intellectual growth will be targeted through performance in writing, problem-solving, critical thought and analyses, and oral presentation.

Course Objectives:

Students who complete this course will:

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

Upon completion of this course, students will:

- Be familiar with the historical, social, and biological contexts that govern the study of animals.
- Understand basic principles of genetics, breeding, reproduction, physiology, nutrition, behavior, and biotechnology.
- Appreciate the molecular, cellular, and physical underpinnings of animal form and function.
- Develop the ability to critically evaluate concepts in science as they are applied to the study of animals
- Construct innovative approaches to, and solutions of, problems encountered when maintaining animals for human benefit.
- Appreciate the agricultural and medical uses of animals and social attitudes regarding how animals are used.
- Have a broad understanding of biotechnology and it's uses toward advancing the health and well-being of animals
- Be informed about the uses of animal models for advancing scientific discovery.
- Consider positive and negative implications of applying modern technology to animal systems.
- Be able to translate their knowledge to a broader audience using written and oral communication

Texts: Introductory Animal Sciences relies on numerous resources to provide the most current, relevant information in a rapidly advancing area. Textbooks will be on reserve in the Food, Agricultural, and Environmental Sciences Library. Journal articles will be available through Carmen (see below).

Lecture Format: Student-centered learning techniques requiring active and cooperative learning among it's participants will be integrated into traditional instructor led lectures. Routinely, you will be assigned a team and asked to analyze a course related concept. As a team you will develop knowledge about the topic and execute an effective way of teaching the topic to your peers.

EXAMS, ASSIGNMENTS, and GRADING POLICY:

Exams (300 points): Three exams, each worth 100 points, will be given during the quarter. Material taught in lectures is cumulative and essential themes and concepts taught during the course may appear on any exam. Exams will mixed format, including short answer/discussion questions. Quality (spelling, legibility, etc.) and completeness of answer will be assessed in determining your grade.

Exams will not be returned. You may make an appointment to view your exam in my office. I will not verbally dispute a grading decision. If you believe an exam question has been improperly graded you may submit a written request for regrading of that question within 2

class days after the exam. If you challenge a graded item you must state your reason for the challenge and provide documentation in support of your answer. The request should be well-written and legible. If I am unable to read the request or if you fail to provide documentation in support of your answer, I will not review the request.

Scientific Evaluation (100 points): You are required to read Portrait of a Burger as a Young Calf and will evaluate the science that supports or refutes a selected passage from the book. You will gain an appreciation of how to interpret scientific data and learn to discern between fact based and sensationalized media.

To address the assignment, you will provide a critical synopsis of the research using peer reviewed text and/or journal references. A minimum of 4 references are required and the assignment is to be typed in 12 point font (Times New Roman or Arial), double spaced, with 1 inch margins.

References are to be cited using the following format:

Journal

Barker SB, Knisely JS, McCain NL, Best AM. Measuring stress and immune response in healthcare professionals following interaction with a therapy dog: a pilot study. Psychol. Rep. 2005;96:713-29.

Text

Ackerman L. The genetic connection: A guide to health problems in purebred dogs. Lakewood, CO:AAHA Press. 2005;68-9.

References are to be cited within the text as (Barker, 2005).

Visit Carmen for additional resources on conducting a literature search.

Laboratory (100 points): Laboratories are designed to familiarize you with food producing animals and equine as well as common practices used in maintaining these animals. In addition, you will apply concepts covered in lecture to hands-on-experiences. You will visit the OSU animal centers that maintain various animals of agricultural significance. During these visits you will learn of the production practices employed and participate in routine activities that are required to maintain the health and well-being of the animals. Each tour will be followed the subsequent week by a laboratory activity that will allow you to explore further the science behind our animal industries.

Participation (50 points): You are expected to be active participants in the class and laboratories. You should be prepared to contribute to group activities that will emphasize concepts learned.

Organ Systems Project (100 points): Recitation will be used to further explore concepts learned during lecture and laboratory through the Organ Systems Project. The project is designed to allow you to begin exploring resources available to pursue undergraduate research and to provide experience in a laboratory environment. The project will expand your understanding of organ system structure and cellular function using basic histological techniques. The study of cell and tissue biology as it relates to animal development and function is a foundational basis for understanding animals and proper management for food production and recreational or companion purposes. The AS 200 class focuses on biological principles applicable to production and management of these animals including, but not limited to, nutrition, reproduction, lactation, genetics, growth, behavior, and

products/work/companionship. You will gain a deeper understanding of animal and organ system function by studying the biology of tissues and cells that underly these principles.

Grading policy: Grading will consist of objective (multiple-choice, fill in the blank, etc.) or subjective (discussion, scientific evaluation) assessment. For subjective grading, the quality and completeness of the answer/assignment relative to all other answers/assignments in the class will determine your score. For example, an excellent response to a short discussion exam question worth 5 points would receive the entire 5 points; a very good response, 4 points; an acceptable (average) response, 3 points; below average, 2 points; well below average, 1 point; and unacceptable, 0 points.

Task	Total Points Possible
Examinations	300
Scientific evaluation	100
Laboratory assignments	100
Class Participation	50
Organ Systems Project	<u>100</u>
Total	675

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

Percentage		Percentage	
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	59-66.9	D
80-82.9	B-	<58.9	E
77-79.9	C+		

Academic Dishonesty: Any student suspected of any form of academic dishonesty will be handled according to the Code of Student Conduct. Please refer to http://www.studentaffairs.osu.edu/resource_csc.asp for more detailed information regarding Academic Misconduct.

Attendance Policy: Attendance to lectures and laboratories is mandatory. Students will be unable to make-up missed activities. If an emergency should warrant that a lecture or laboratory be missed, prior notification must be given to the instructor (lecture) or teaching assistant (laboratories).

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. My proper salutation is Dr. Pepper.
- 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 must be turned OFF or placed in Etiquette Mode and stored out of sight during class period. Text-messaging during class is unacceptable.

Appropriate Dress: Please note that the laboratories consist of hands-on activities with animals. Dress appropriately for such activities. Open toe shoes are highly discouraged. The instructor nor teaching assistants will be responsible for bruised or broken toes. Students may elect to bring a change of clothes for the labs.

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 292-33-7, TDD 292-0901; <http://www.ods.ohio-state.edu/>.

SECRETS TO SUCCESS

Attend class regularly
 Be an active participant in lecture and laboratory activities
 Ask if you need clarification
 Review material after class
 Prepare for exams in advance, do not wait until the last minute to study
 Seek help early in the quarter if you are having difficulty
 Get to know other students in the class; they can be your best learning tool

Don't be afraid to venture into what is not familiar.

SCHEDULE

Lecture MWRF		Lab T
Week No.	Topic	Activity*
1	<ul style="list-style-type: none"> Course requirements & expectations Overview of the importance of animals to humans: economical, social, agricultural, and medical uses. 	Animal Center Tours: Equine
2	<ul style="list-style-type: none"> Process of domestication and a historical perspective of how animal science has evolved. 	Sports Training and Skeletal Health
3	<ul style="list-style-type: none"> Introduction to the animal industries of the world: current status and perceptions of food animal and equine industries. 	Animal Center Tours: Sheep
4	<ul style="list-style-type: none"> Introduction to the animal industries of the world: current status and perceptions of food animal and equine industries. 	Comparative Analysis of Ruminant and Monogastric Digestive Physiology
5	<ul style="list-style-type: none"> Animal form and function: the role of animals in agriculture and medicine as directed by their physiology. 	Animal Center Tours: Swine
6	<ul style="list-style-type: none"> Contribution of genetics and environment toward the establishment of animal behaviors. Organization of biological systems from molecular structures to physical features: DNA as the blueprint of life. 	The Science Behind Meat to Muscle.
7	<ul style="list-style-type: none"> Genetics & application of genetics for animal breeding. Biotechnology: progress, applications and limitations. 	Animal Center Tours: Beef Cattle
8	<ul style="list-style-type: none"> Principles of reproduction and assisted reproductive technologies. 	Assisted Reproductive Technology
9	<ul style="list-style-type: none"> Nutrition: nutrient requirements, physiology, and the importance of different digestive strategies. Animals as a source of nutraceuticals. 	Animal Center Tours: Dairy
10	<ul style="list-style-type: none"> Lactation strategies: Nutritional and immunological support of the young and provision of food for humans. 	Mammary Health and Preserving the Quality of Dairy Foods

* Lab date/activities are subject to change depending on animal availability. Buses are available for transport of students to the Animal Centers. Buses will meet in front of the Animal Sciences building and will depart five minutes past the hour. All remaining labs will be held in 107 Plumb Hall.

EXAM SCHEDULE

Exam I

DATE
10/11

Exam II
FINAL EXAM

11/02
12/03 (11:30-01:18)

ON-LINE RESOURCES

Honors Introductory Animal Sciences has been developed for Carmen accessibility. To access, visit <http://carmen.osu.edu>. Log-in using your e-mail user name and password and under Autumn 2009 quarter select ANIM SCI H200.

The following information is available through ANIM SCI H200 for Carmen:

Calendar: Displays important dates including exam dates and due dates for class and lab activities

Discussion: Allows you to interact with other students enrolled in the course; post questions regarding lectures, labs, exams, papers, etc. If you know the answer to questions posted by other students, you are encouraged to respond and post your answer. The discussion board is not to be used to critique the behavior of your peers. Items posted to the discussion board will be viewable to all students enrolled in ANIM SCI H200 as well as the instructor and teaching assistant.

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

Classlist: Allows you to view other students enrolled in the course and provides their e-mail.

Content: Download and print lecture material before attending class. Lecture material available through Carmen provides an outline of material presented during lecture. Where material has been omitted it will be provided during lecture for you to complete the printouts. Also, access lab material before attending the lab. Lastly, the syllabus is also available in the contents section.

Articles: Material presented during the course draws from several sources. Articles used in development of the course are available for download.

Links: Visit the links section for web resources to explore and expand your knowledge in the animal sciences.

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