ANFS 445
COMPARATIVE PHYSIOLOGY OF DOMESTIC ANIMALS
Course Syllabus

Course Description
Comparative Physiology of Domestic Animals (ANFS 445) is required for students majoring in Pre-Veterinary Medicine and Animal Biosciences. Enrollment is restricted to Seniors. This course is not intended for students completing the Animal and Food Sciences or Food Science degrees.

This advanced undergraduate course is designed to provide Pre-Veterinary Medicine and Animal Biosciences majors with a comprehensive understanding of the principles of animal physiology and the underlying homeostatic mechanisms which control the function of the major body systems (Circulatory-Blood, Autonomic Nervous, Cardiovascular, Respiratory, Renal, Thermoregulatory, Gastrointestinal, Muscular-Skeletal, and Endocrine Systems) in domestic animals. This course has a traditional lecture-based format, supplemented with reading assignments in textbooks and scientific literature, and a fully-narrated, animated tutorial learning system on CD-ROM (Interactive Physiology). To fully understand the physiological concepts taught in this course, the student must have a basic knowledge of biology, biochemistry, nutrition and physics.

Course Prerequisites: Functional Anatomy (ANFS 140), Nutrition (ANFS 251), Biology (BISC 207-208), Biochemistry (CHEM 527), and Physics (PHYS 201-202) are required for enrollment in this class. The completion of a general physiology course in biology (BISC 306) is highly recommended.

Course Objectives
This course will provide Pre-Veterinary Medicine and Animal Biosciences majors with an in-depth knowledge of the physical, biological and chemical principles that underlie life processes at all levels of organization: molecular, cellular, organ, system and the whole organism. Successful completion of this course will prepare students for professional careers in animal agriculture or for more advanced courses in physiology, cell biology, endocrinology and systems biology offered in veterinary, medical and graduate schools.

Program Learning Goals
1. To engage students in the topic of "Animal Physiology", with an emphasis on the homeostatic and negative feed-back systems that control most bodily functions in humans and domestic animals. This course should integrate knowledge gained from other courses in animal science, biology, chemistry and physics to understand and appreciate the complexity of physiological systems and the impact of genetics and environmental factors on productivity of domestic animals.

   UD General Education Goals: "Engaging students in a topic that will lead to lifelong learning" and "integrating academic knowledge with real experiences outside the classroom".

   ANFS Learning Goals: "Critical thinking” and “knowledge of core concepts in Animal & Food Sciences”.

2. To encourage independent thought and learning through attending lectures, reading assignments in textbooks and review papers, and completion of learning modules and self-
evaluation quizzes in the Interactive Physiology CD-ROM. Students who earn a good grade in this physiology course will be able to use their knowledge of physiology to solve new and unfamiliar problems encountered in the classroom, at work and in their personal life.

*UD General Education Goals:* "Critical thinking to solve problems" and "work/learn independently".

*ANFS Learning Goals:* "Critical thinking".

**NOTE:** The University of Delaware's (UD) General Education goals can be found at [http://www2.udel.edu/gened/](http://www2.udel.edu/gened/). The Department of Animal & Food Sciences (ANFS) assessment learning program can be found at [http://ag.udel.ed/anfs/anfs_undergrad.html](http://ag.udel.ed/anfs/anfs_undergrad.html).

### Examinations/Quizzes/Exercises

A total of three examinations, each worth 25% of the final grade, will be given during the semester. There will be two in-class examinations, lasting 50 min each, and one final exam (see Lecture Outline for the exact dates). The format for the in-class exams will be 33 multiple-choice questions; each question counts as 3.03 points. The final examination will be given during the examination period at the end of the semester. The format for the final exam will be 50 multiple-choice questions; each question counts as 2 points. You will be given two hours to complete the final examination.

Unannounced quizzes will be given in class throughout the semester at two-week intervals. The format for each quiz will be 10 multiple-choice questions; each question counts as 10 points. An unexcused absence from a quiz will result in 0 points for that quiz. Students who have perfect attendance or near-perfect attendance (i.e., have only 2 unexcused absences) will earn the right to have the lowest quiz grade dropped at the end of the semester before the final quiz grade is calculated. The final quiz grade is worth 15% of the course grade.

Students are required to complete weekly exercises based on reading assignments and completion of ten learning modules in the InterActive Physiology (IP) CD tutorial system. The trademarked logo on the CD boldly indicates IP is: “The Best Way to Learn the Hardest Part of Anatomy and Physiology (A&P)”. “Interactive Physiology is a highly effective program that provides you with the tools you need to advance beyond simple memorization to a genuine understanding of the most difficult concepts in A&P” [© 2009 Pearson Education]. The purpose of the Interactive and Comparative Physiology Exercises is to encourage student to learn physiological concepts from reading assignments and completion of the IP learning modules based on ten physiological systems. The weekly Interactive and Comparative Physiology Exercises must be downloaded, completed as a WORD document, and then posted as a PDF file on the Sakai course website before mid-night on the due date. Students must do their own work. Any duplicate assignments will not be graded and will be treated as academic dishonesty.

Students who have questions about the Interactive and Comparative Physiology Exercise or those requiring help with completion of the weekly assignments are encouraged to contact the graduate teaching assistant during his regular office hours (see Course Information sheet).

A good rule to follow for learning physiology and preparing for quizzes and exams is that a student should spend at least three hours studying out-side of the classroom for every hour spent in the classroom. Earning a good grade will require hard work and sound study habits throughout the semester. Students who have difficulty understanding a physiological concept, biological process or pathway are encouraged to seek help from the professor during regular office hours. Students should do not wait until the last minute to seek help in preparation for quizzes or exams or for completion of exercise assignments.
Course Grading System

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<tr>
<th>Course</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>First Hour Exam</td>
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<tr>
<td>Second Hour Exam</td>
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<td>Final Exam</td>
<td>25 %</td>
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<td>Quizzes</td>
<td>15 %</td>
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<td>IP Exercises</td>
<td>10%</td>
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<td><strong>Total</strong></td>
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Course Policies:

1. This course is managed through the Learning Management System Sakai@UD ([http://www.udel.edu/sakai](http://www.udel.edu/sakai)). Course information, syllabus, lecture schedule, reading assignments, weekly exercises, lecture handouts, full-content PowerPoint presentations, and additional information including web-links will be provided through the Sakai@UD system.

2. Student attendance in lecture is mandatory and accordingly attendance will be taken by the graduate TA at each lecture. Students are expected to come to class prepared by completing reading assignments and the assigned learning modules on the InterActive Physiology CD, before attending class.

3. Food and beverages are **not** permitted in the classroom; however, drinking water is allowed to maintain adequate hydration. Companion animals are **not** allowed in University buildings or classrooms.

4. Excessive talking to adjacent classmates after lecture begins is considered rude and inconsiderate behavior and will not be permitted. However, students are encouraged to interrupt lecture to ask the professor questions to clarify terms, concepts or illustrations.

5. The use of a cell phone, pager or PDA is prohibited in the classroom. Please switch your cell phone or pager to OFF and place in your book-bag or purse **before** entering the classroom. You will be asked to leave the lecture room if your cell phone rings during class. Excessive violation of this rule will result in expulsion from the classroom.

6. Students will not be allowed to make-up an unannounced quiz or scheduled exam that is missed due to an unexcused absence.

7. In this course, there are no opportunities for students to earn extra credit due to poor performance on exercise assignments, quizzes or exams.

Excused Absences

Please consult the University policy on excused absences due to illness, medical emergency, a sanctioned University event or religious holiday ([http://www.udel.edu/provost/fachb/III-1-1-attendance.html](http://www.udel.edu/provost/fachb/III-1-1-attendance.html)). Documentation of an excused absence must be presented to: Ms. Kim Yackoski ([yackoski@udel.edu](mailto:yackoski@udel.edu)), Assistant Dean for Student Services, College of Agriculture and Natural Resources, 104 Townsend Hall (phone: **302/831-2508**). Dean Yackoski’s written approval will be required to make-up any missed class work, quiz or exam.
Disability Statement

Any student who has a need for special accommodations based upon the impact of a disability should contact the professor at the beginning of the semester. The student should also contact the Office of Disabilities Support Services, Suite 119 Alison Hall, 240 Academy Street, Newark, DE [Phone: 302-831-4643; http://www.udel.edu/DSS/] to provide medical documentation and to coordinate appropriate accommodations.

Code of Conduct

Academic Dishonesty. Academic dishonesty will not be tolerated at the University of Delaware. Examples of academic violations are plagiarism, fabrication, cheating and academic misconduct. (For details, see: http://www.udel.edu/stuguide/11-12/index.html). All students must be honest and forthright in their academic studies. To steal the work or ideas of another, to cheat on an assignment, or to allow or assist another to commit these acts corrupts the educational process. Students are expected to do their own work and neither gives nor receives unauthorized assistance. Any violation of these standard must be reported to the Office of Student Conduct. The faculty member, in consultation with a representative from the Office of Student Conduct, will decide under which option the incident is best filed and what specific academic penalty should be applied.

Disruptive Behavior. A student shall not impair, interfere with, or obstruct the orderly conduct, process, or function of the University or any of its students, faculty members, University officials, guests or the surrounding community.

Disclaimer: Information presented in this syllabus is subject to change as the instructor deems necessary or as required by University policy, provided that reasonable notice is given to students enrolled in the class.

Revised: 9/1/11 LAC

ANFS 445
Comparative Physiology of Domestic Animals
Fall, 2011

I have read and understand all items presented in this syllabus; and, I agree to the follow the procedures and policies set forth.

Name:_________________________________________ Student ID # _____________________

Signature:_____________________________________

Date:____________________________