

Avian Physiology 503

2014 Syllabus

WEEK 1

May 20 - 24

Dr. Mark E. Berres, Ph.D., Course Coordinator
University of Wisconsin-Madison
Department of Animal Sciences
Madison, WI 53706
Phone: (608) 890-1086
markb@ansci.wisc.edu

Dr. Scotti Hester, Ph.D.
Purdue University
Department of Animal Sciences
West Lafayette, IN 47907
Phone (765) 494-8019
phester@purdue.edu

WEEK 2

May 27-31

Dr. Mark E. Berres, Ph.D., Course Coordinator
University of Wisconsin-Madison
Department of Animal Sciences
Madison, WI 53706
Phone: (608) 890-1086
markb@ansci.wisc.edu

Dr. Greg S. Fraley, Ph.D.
Hope College
Biology Department
Holland, MI 49423-3605
Phone: (616) 395-7306
fraley@hope.edu

Dr. Murray Bakst, Ph.D.
US Dept. Agriculture, Agriculture Research Service
Animal Biotechnology & Biosciences Lab
Beltsville, MD 20705
Phone: (301) 504-8795
murray.bakst@ars.usda.gov

Office Hours: Schedule an individual meeting with each instructor as needed.

Wednesday speakers: Each Wednesday in the late afternoon we will meet an industry representative. Come prepared to enjoy the food, get to know each other, ask questions, discuss, and participate! Specific details will be announced during class.

Course Description:

AnSci 503 is an intensive lecture and laboratory course designed to introduce you to aspects of avian physiology with particular emphasis on systems and functions related to both egg and meat production including metabolism, integumentary, musculoskeleton, circulation, respiration, excretion, neurology, digestion, immunology, endocrinology, and reproductive physiology. Our main objective is to provide you with both theoretical (lecture) and applied (laboratory) experiences. In addition to lecture, you will have multiple opportunities to work with live birds, participate in the design and execution of experiments, collect and analyze data, and appreciate the individual variation that is observed in the biology among animals.

Learning Outcomes	<ol style="list-style-type: none">1. Understand and appreciate:<ol style="list-style-type: none">a) the functional mechanisms of birds including the physiology of body systems and tissues;b) the anatomy and histology of avian tissues; andc) the physiological and anatomical differences between avians and mammals2. Identify abnormal physiological mechanisms that impact avian health3. Critically evaluate information sources for scientific content and accuracy4. Demonstrate qualitative and analytical skills5. Effectively communicate principles of physiology both verbally and in writing
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Exams and quizzes: One quiz and one exam *each week* (Wednesday and Friday, respectively). One laboratory exam will be given the second Friday following the 2nd lecture exam.

Grading:	Lecture exams 2 @ 150 points each	300 points
	Quizzes 2 @ 50 points each	100 points
	Lab exam 1 @ 100 points	<u>100 points</u>
		Total: 500 points

Attendance Policy and Make-up Exams:

Regular attendance is expected of all students. Unexcused absence will require that additional assignments are completed or an additional exam is taken (see instructor). If students are going to miss an exam, prior notice must be given. An alternative arrangement needs to be agreed upon prior to the scheduled exam. A grade of zero will be given for unexcused absences during an exam period.

WEEK 1

Monday 19	Tuesday 20	Wednesday 21	Thursday 22	Friday 23
MORNING LECTURE in 212 Animal Sciences Building 8:00 AM - noon				
Scotti Hester <ul style="list-style-type: none"> • Integument • Skeleton • Muscles 	Scotti Hester <ul style="list-style-type: none"> • Nervous System • Special Senses 	Scotti Hester <ul style="list-style-type: none"> • Cardiovascular • Respiration • Renal function 	Scotti Hester <ul style="list-style-type: none"> • Acid-base • Alimentary system 	Scotti Hester-proctor <p style="text-align: center;">Exam 1 8:00-9:30:am</p> Mark Berres <ul style="list-style-type: none"> • Parathyroid/Calcium
AFTERNOON LABORATORY in 203 Animal Sciences Building 1:00 PM – 5:00 PM				
Mark Berres Scotti Hester <ul style="list-style-type: none"> • Introduction • Safe laboratory procedures • Bird handling (Poultry Res. Lab.) • Anatomy • Molecular diagnosis & limb mutations • Skeletal diagnosis (Computer Lab) 	Mark Berres Scotti Hester <ul style="list-style-type: none"> • Blood collection • Anatomy Quail necropsy 	Mark Berres Scotti Hester <p style="text-align: center;">QUIZ 1 1:00-1:45am Lecture room 212</p> <ul style="list-style-type: none"> • EKG • Blood (hematocrit) • Oligozaugodactyly (PCR) 	Mark Berres Scotti Hester <ul style="list-style-type: none"> • Calorimetry • Hormone injections (1) • Review- Quiz Bowl 	Mark Berres <ul style="list-style-type: none"> • Antibody agglutination • Hormone injections (2)

* Saturday, May 25 Students Hormone injections (3)
 * Sunday, May 26 Students Hormone injections (4)

WEEK 2

Monday May 26	Tuesday May 27	Wednesday May 28	Thursday May 29	Friday May 30
MORNING LECTURE in 212 Animal Sciences Building 8:00 AM - noon				
Greg Fraley <ul style="list-style-type: none"> • Behavior • Immunity 	Greg Fraley <ul style="list-style-type: none"> • Endocrinology • Stress • Hypothalamic-pituitary-adrenal axis 	Greg Fraley <ul style="list-style-type: none"> • Sex determination/differentiation Murray Bakst <ul style="list-style-type: none"> • Female reproduction 	Murray Bakst <ul style="list-style-type: none"> • Male reproduction • Fertility 	Mark Berres- proctor <p>Exam 2</p> <p>Laboratory Practical Exam</p> <p>Evaluations</p>
AFTERNOON LABORATORY in 203 Animal Sciences Building 1:00 PM – 5:00 PM				
Greg Fraley Mark Berres <ul style="list-style-type: none"> • Hormone injections (5) • Tonic immobility • Somatosensory • Oligozaugodactyly (Development) 	Greg Fraley Mark Berres <ul style="list-style-type: none"> • Glucose tolerance 	QUIZ 2 1:00-1:45am Lecture room 212 Mark Berres Greg Fraley <ul style="list-style-type: none"> • Female anatomy • Yolk formation • Hormone assay 	Murray Bakst Mark Berres <ul style="list-style-type: none"> • Semen collection • Semen evaluation • Testis histology • Sperm holes 	