

## AnSc 3730B Applied Avian Physiology

Instructors: Dr. Greg Fraley, Purdue University, gfraley@purdue.edu  
Dr. Dawn Koltes, Iowa State University, delkins@iastate.edu

TA: Isabella von Seggern, Purdue University, ivonsegg@purdue.edu

Lecture: Monday - Friday: 8:00 – 12:00 pm, 2310 Kildee Hall

Laboratory: Monday - Friday: 1:00 - 5:00 pm, Poultry Teaching Farm or 25 Kildee Hall

**Student-Instructor Contact hours:** This is a two-week course: June 2 through June 13, 2025. The total student-instructor contact hours is approximately 90 hours.

**Course Description:** Applied Avian Physiology is an intensive 3-credit lecture and laboratory course designed to introduce industry relevant aspects of avian physiology with emphasis on behavior, neurology, muscle, cardiovascular, immunology, digestive, endocrinology, and reproductive systems for egg and meat producing birds.

**Learning Outcomes:** At the completion of this course, students should be able to:

1. Describe the major functions and processes associated with behavior, nervous, muscular, cardiovascular, immune, digestive, endocrine and reproductive system.
2. Describe physiological processes that are unique to avian species and that provide challenges and opportunities for housing and management in the poultry industry.
3. Critically evaluate and communicate both verbally and written scientific research that integrates physiological concepts discussed in class.

**Grading:** Your final grade for this course is calculated from a total of 430 points:

Quiz 1	50 points
Quiz 2	50 points
Quiz 3	50 points
Quiz 4	50 points
Group Debate	100 points
Debate team evaluation	15 points
Lab Notebook	100 points (12 pts/lab + 4 pts for completion)
1 page summary of debate topic	15 points

**Final grades are assigned as follows:**

A	430 - 400 points	C	330 - 314 points
A-	399 - 387 points	C-	313 - 301 points
B+	386 - 374 points	D+	300 - 288 points
B	373 - 357 points	D	287 - 271 points
B-	356 - 344 points	D-	270 – 258 points
C+	343 - 331 points	F	< 257 points

Course Schedule: **\*Note Locations are subject to change\***

Date	Topic	Location	Instructor	Assignment
6/2 AM	Intro to Physiology; Cardiovascular system	2310 Kildee	Dr. Koltes	
6/2 PM	Biosecurity; Bird handling; Stress	Balloun Turkey	Dr. Koltes	
6/3 AM	Blood Collection/blood smears	Balloun Turkey	Dr. Koltes	
6/3 PM	Immune System	2310 Kildee	Dr. Koltes	

6/4 AM	Digestive System	2310 Kildee	Dr. Koltes	
6/4 PM	Necropsy	25 Kildee	Dr. Koltes	Quiz 1
6/5 AM	Endocrine System	2310 Kildee	Dr. Koltes	
6/5 PM	Corticosterone Assay	25 Kildee	Dr. Koltes	
6/6 AM	Respiratory Systems and Acid/base	2310 Kildee	Dr. Koltes	
6/6 PM	One-on-One Debate topic	2310 Kildee	Dr. Koltes	Quiz 2; 1 page debate topic; Laboratory reports due
6/9 AM	Nervous	2310 Kildee	Dr. Fraley	
6/9 PM	Tonic immobility	Poultry Farm	Dr. Fraley	
6/10 AM	Welfare	2310 Kildee	Dr. Fraley	
6/10PM	Tonic immobility with drugs	Poultry Farm	Dr. Fraley	
6/11 AM	Muscle/skeletal/Ca balance	2310 Kildee	Dr. Fraley	Quiz 3
6/11 PM	Tonic immobility with drugs	Poultry Farm	Dr. Fraley	
6/11 AM	Reproduction	2310 Kildee	Dr. Fraley	
6/11 PM	Tonic immobility with drugs	Poultry Farm	Dr. Fraley	
6/13 AM	Quiz and Debate Preparation	2310 Kildee	Dr. Fraley	Quiz 4
6/13 PM	Student Debates	2310 Kildee	Drs. Fraley and Koltes	Laboratory reports due

## **Classroom expectations:**

- *Lecture:* Will be delivered in-person during the morning session from 8:00 am to 12:00 pm. We will meet in the Farm Bureau Pavilion classroom or 2310 Farm Bureau Pavilion unless otherwise instructed.
- *Laboratory:* Will be held in 25 Kildee Hall from 1:00-5:00 pm. From time to time we will be meeting at the Poultry Farm. These labs will be announced ahead of time and it is expected that students have their own ride or ride share to the farm. The address is: [3840 520th Ave, Ames, IA 50014](https://www.google.com/maps/place/3840+520th+Ave,+Ames,+IA+50014).
- *Attendance:* Full participation is not only expected but required. Late arrival or early departure is disruptive and disrespectful to the instructor and peers and will result in the loss of ALL points for that section. This includes use of electronic devices outside of designated times.
- *Missing or late assignments:* Missed in-class evaluation (quizzes and exams) cannot be made up and students will receive a zero. Missed materials may be made up only for sponsored activities. The student must provide signed official documentation of this sponsored event or forfeit all points associated with the missed class time. If you have an emergency, you must email the instructor before class or lab begins. Late work is not accepted and will receive a zero.
- *Downloading video and material:* Material used in the instruction of this course are the property of the instructor and posting this material on other websites (e.g. Studocu, Blue Study, Course Hero) is a violation of university policies.
- *Quizzes and Exams:* For quizzes and exams that will be given in this course, it is expected that students will adhere to all academic standards outlined by the instructors.

## **Lab protocols:**

- *Photography:* Cell phone use or photography during lab is strictly prohibited. Any use of cell phones for any purpose outside of specific times will result in removal of the student and forfeit of all points associated with that day. Repeated violations of this could result in dismissal from the program.
- *Dress code:* Clean, close-toed shoes, and long pants. We are going to be working with poultry in the lab sections, so please be mindful you may get dirty. Additionally, you will be required to wear 2 forms of facial coverings. A plastic face shield will be provided the first lab class.
- *Biosecurity:* The ISU poultry farm maintains a strict biosecurity policy of 72 hours without bird and swine contact to enter the research facilities; this includes commercial, research, hobby, or pet birds that would interfere with compliance to the biosecurity policy. Please let ALL instructors know if you have potential conflicts with this policy as soon as possible.
- *Transportation:* Transportation will NOT be provided from Kildee Hall to the Iowa State University poultry farm.

**Academic Honesty:** Academic misconduct is a violation of the behavior expected of a student in an academic setting as well as a student conduct violation. A student found responsible for academic misconduct is subject to the appropriate academic penalty,

determined by the instructor of the course, as well as sanctions under the university Student Disciplinary Regulations. Depending on the act, a student could receive an F grade on the test/assignment, F grade for the course, and could face removal from the program along with notification of the home institution. See the Student Disciplinary Regulations at <http://www.policy.iastate.edu/policy/SDR> for more details and a full explanation of the policy on Academic and Research Misconduct by students.

**Students with special needs:** Iowa State University complies with the American with Disabilities Act and Section 504 of the Rehabilitation Act. Any student who may require an accommodation under such provisions should contact the ALL course instructors as soon as possible, as no retroactive accommodations will be provided in this class. You will need to provide documentation of your disability to the Student Disability Resources (SDR) office, located on the main floor of the Student Services Building, Room 1076, 515-294-7220.

**Discrimination and Harassment:** Iowa State University strives to maintain our campus as a place of work and study for faculty, staff, and students that is free of all forms of prohibited discrimination and harassment based upon race, color, age, ethnicity, religion, national origin, pregnancy, sexual orientation, gender identity, genetic information, sex, marital status, disability, or status as a U.S. Veteran. Students engaging in any negative behaviors in this class, or in Animal Science facilities, are subject to appropriate disciplinary action by the course instructor and will also have their cases referred to the Dean of Students Office. Any student who has concerns about such behavior should contact the course instructor, Chair of the Animal Science department at 515-294-2160; Student Assistance at 515-294-1020 or email [dso-sas@iastate.edu](mailto:dso-sas@iastate.edu), or the Office of Equal Opportunity and Compliance at 515-294-7612.

**Religious Accommodation:** Iowa State University strives to reasonably accommodate students who's sincerely held religious beliefs or creed conflict with academic requirements. Accommodation requests must be made proactively. The process for requesting an accommodation is interactive and the process must be initiated by the individual seeking the accommodation. For optimal consideration, students should inform instructors as soon as possible in the semester of a course conflict. It is recommended that the student and instructor discuss the request in person and then document the resolution in an email format. Assistance throughout the process for all parties involved is available through the Office of Equal Opportunity at 515-294-7612.

**Disability Accommodation:** Iowa State University is committed to assuring that all educational activities are free from discrimination and harassment based on disability status. Students requesting accommodations for a documented disability are required to meet with staff in Student Accessibility Services (SAS) to establish eligibility and learn about related processes. Eligible students will be provided with a Notification Letter for each course and reasonable accommodations will be arranged after timely delivery of the Notification Letter to the instructor. Students are encouraged to deliver Notification Letters as early in the semester as possible. SAS, a unit in the Dean of Students Office, is located in room 1076 Student Services Building or online at [www.sas.iastate.edu](http://www.sas.iastate.edu). Contact SAS by email at [accessibility@iastate.edu](mailto:accessibility@iastate.edu) or by phone at 515-294-7220 for additional information.