

## **ANS 6704 – Mammalian Endocrinology**

### **INSTRUCTORS:**

Dr. Corwin Nelson  
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**OFFICE HOURS:** By appointment

### **CATALOG DESCRIPTION:**

Credit: 2; Prereq: BCH 3025, BCH 4024 or equivalent.

Advanced insight into physiologic systems of farm animals. Special emphasis will be placed on providing an in-depth overview of how endocrinology and cell biology impact animal physiology, development and performance.

### **COURSE FORMAT:**

All lectures will be provided online via Canvas. Exams and review sessions will meet either Tuesday or Thursday, Period 8 3:00 – 3:50 pm

### **COURSE OBJECTIVES:**

1. To provide graduate and advanced undergraduates with a comprehensive overview of the physiological, biochemical, cellular and molecular processes controlling animal development and performance.
2. To develop an understanding of the anatomy and physiology of mammals with a special emphasis on farm species.
3. To develop an advanced understanding of concepts relating to endocrinology and cell biology of farm animals.
4. To be able to read, interpret and discuss scientific journal articles in physiology.
5. To critically evaluate clinical and research case problems relating to endocrinology and cell biology.
6. To develop independent thinking skills and written and oral communication abilities.

### **EXPECTED OUTCOMES:**

Upon completing this course, graduate students are expected to:

1. Possess a clear understanding of how endocrinology and cell biology impact the physiology of farm animals.
2. Appreciate how current developments in physiology can be used to improve animal development and performance.

3. Integrate physiological concepts to critically evaluate physiological issues in farm animals.
4. Read, interpret and discuss scientific journal articles in physiology.

**RECOMMENDED TEXT:**

*Vertebrate Endocrinology*, 5<sup>th</sup> Edition, Norris and Carr, ISBN# 0123948150

Basic reference textbook that may be useful to students include:

*Endocrinology*. 6<sup>th</sup> edition, ME Hadley; ISBN#0131876066.

**GRADING:**

Grading will be determined on the basis of two exams. Exams will consist of short answer and essay style questions based on lecture notes and assigned readings. Any content covered in lecture or assigned readings is fair game for exam questions. All exams are **CLOSED** book and do not permit any resources to complete.

Activity	Percent of final grade
Exam 1 (March 10)	50%
Exam 2 (April 24)	50%

**GRADING SCALE:**

<b>A</b>	<b>A-</b>	<b>B+</b>	<b>B</b>	<b>B-</b>	<b>C+</b>	<b>C</b>	<b>C-</b>	<b>D+</b>	<b>D</b>	<b>D-</b>	<b>E</b>
100-93	92-90	89-87	86-83	82-80	79-77	76-73	72-70	69-67	66-63	62-60	< 60

## OUTLINE OF COURSE TOPICS

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Module	Topic	Instructor
1	Overview of Endocrine Systems	Nelson
2	Neuroendocrine System	Bromfield
3	Hormone Synthesis and Metabolism	Nelson
4	Receptors and Signal Transduction Pathways	Nelson
5	Hypothalamus-Pituitary-Gonad Axis	Bromfield
6	Prostaglandins	Bromfield
7	Hypothalamus-Pituitary-Adrenal Axis	Nelson
<b>Exam 1 (October 4)</b>		
8	Regulation of Glucose	Nelson
9	Endocrine Control of Ca/P and Bone	Nelson
10	Hypothalamus-Pituitary-Thyroid Axis	Yue
11	Somatotropic Axis	Santos
12	Endocrine Control of Metabolism	Nelson
13	Endocrine Control of Growth	Nelson
14	Endocrine Control of Lactation	Dahl
<b>Exam 2 (November 22)</b>		

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## **ADDITIONAL COURSE INFORMATION**

### **GRADES AND GRADE POINTS:**

For information on current UF policies for assigning grade points, see <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

### **ABSENCES AND MAKE-UP WORK:**

Requirements for class attendance and make-up exams, assignments and other work are consistent with university policies that can be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.

It is expected students will attend all meeting periods and regularly check the course content in Canvas (<https://ufl.instructure.com>) for announcements and discussions.

During the class meetings students are expected to refrain from activities, such as cell phone use and internet use, that distract from the lecture and discussion.

### **ONLINE COURSE EVALUATION PROCESS:**

Student assessment of instruction is an important part of efforts to improve teaching and learning. At the end of the semester, students are expected to provide feedback on the quality of instruction in this course using a standard set of university and college criteria.

These evaluations are conducted online at <https://evaluations.ufl.edu>. Evaluations are typically open for students to complete during the last two or three weeks of the semester; students will be notified of the specific times when they are open. Summary results of these assessments are available to students at

<https://evaluations.ufl.edu/results>.

### **ACADEMIC HONESTY:**

As a student at the University of Florida, you have committed yourself to uphold the Honor Code. UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code specifies a number of behaviors that are in violation of this code and the possible sanctions. [Click here to read the Honor Code](#). Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Students will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: <http://www.dso.ufl.edu/SCCR/honorcodes/honorcode.php>

## **DISABILITY ISSUES:**

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center. [Click here to get started with the Disability Resource Center](#). It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

## **SOFTWARE USE AND PRIVACY POLICIES:**

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

### **Software Privacy Policies:**

1. Canvas (Instructure) - <https://sonicfoundry.com/privacy-policy/>
2. PlayPosit - <https://api.playposit.com/privacy/>
3. Mediasite - <https://sonicfoundry.com/privacy-policy/>
4. Zoom - <https://zoom.us/privacy>
5. Honorlock - <https://honorlock.com/student-privacy-statement/>
6. You Tube - <https://policies.google.com/privacy>

## **CAMPUS ASSISTANCE RESOURCES:**

Students experiencing crises or personal difficulties that interfere with general well-being are encouraged to utilize the university's resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students experiencing difficulties or lacking clear career or academic goals, which interfere with their academic performance:

### **Health and Wellness Resources**

*U Matter, We Care:* If you or someone you know is in distress, please contact [umatter@ufl.edu](mailto:umatter@ufl.edu), 352-392-1575, or visit [U Matter, We Care website](#) to refer or report a concern and a team member will reach out to the student in distress.

*Counseling and Wellness Center:* [Visit the Counseling and Wellness Center website](#) or call 352-392-1575 for information on crisis services as well as non-crisis services.

*Student Health Care Center:* Call 352-392-1161 for 24/7 information to help you find the care you need, or [visit the Student Health Care Center website](#).

*University Police Department:* [Visit UF Police Department website](#) or call 352-392-1111 (or 9-1-1 for emergencies).

*UF Health Shands Emergency Room / Trauma Center:* For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; [Visit the UF Health Emergency Room and Trauma Center website](#).

### **Academic Resources**

*E-learning technical support:* Contact the [UF Computing Help Desk](#) at 352-392-4357 or via e-mail at [helpdesk@ufl.edu](mailto:helpdesk@ufl.edu).

*Career Connections Center:* Reitz Union Suite 1300, 352-392-1601. Career assistance  
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and counseling services.

[Library Support](#): Various ways to receive assistance with respect to using the libraries or finding resources.

[Teaching Center](#): Broward Hall, 352-392-2010 or to make an appointment 352- 392-6420. General study skills and tutoring.

[Writing Studio](#): 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers.

*Student Complaints On-Campus*: [Visit the Student Honor Code and Student Conduct Code webpage for more information](#).

*On-Line Students Complaints*: [View the Distance Learning Student Complaint Process](#).

If you are having problems comprehending lecture and (or) lab material or have other academic, university, or personal issues that are affecting your academic performance, please feel free to visit with the instructors to address the problem(s). Please do not wait until the end of the semester to address any difficulties you may be having.

### **ONLINE COURSE EVALUATION PROCESS:**

Student assessment of instruction is an important part of efforts to improve teaching and learning. At the end of the semester, students are expected to provide feedback on the quality of instruction in this course using a standard set of university and college criteria. These evaluations are conducted online at <https://evaluations.ufl.edu>. Evaluations are typically open for students to complete during the last two or three weeks of the semester; students will be notified of the specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results>.

### **ABSENCES:**

Requirements for class attendance and make-up exams, assignments, and other work in this course are outlined herein and consistent with university policies. [Click here to read the university attendance policies](#).

### **MAKE-UP WORK:**

A student missing an exam will be allowed to make up the exam provided that a documented, valid reason for missing it exists (Please see valid excuses in lab section). Whenever possible, these problems should be discussed with the instructor in advance, preferably by email, excuse note, or handwritten note. A missed exam with no valid excuse will be considered as a "0".

### **Course Expectations:**

Lecture participation is highly correlated with your final grade, so it is expected that you maintain your progress in the course work. Classes are "No Cell Phone Areas". Class decorum require that you act socially, professional, treat fellow students with respect, and appreciate their viewpoints and beliefs.