

ANS 6704 – Mammalian Endocrinology

Tuesday and Thursday, Period 8 3:00 – 3:50 pm

INSTRUCTOR: Dr. Corwin Nelson
Larson Dairy Science Bldg. – 204F
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352-294-6993
Office Hours: By appointment

CATALOG DESCRIPTION: CREDIT: 2; PREREQ: BCH 3025 or 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:

Two lectures and discussions per week on topics relating to animal physiology and endocrinology.

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.

TEXT:

Vertebrate Endocrinology, 5th Edition, Norris and Carr, ISBN# 0123948150

Basic reference textbooks that may be useful to students include:

Endocrinology. 6th edition, ME Hadley; ISBN#0131876066.

GRADING:

<u>Activity</u>	<u>Percent of final grade</u>
Exam 1	25%
Exam 2	25%
Exam 3	25%
Literature Review	25%

Grading scale:

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

Exams (75%)

- Three exams will be given at two-week intervals.
- Exams will be comprised of 8-10 short answer/essay questions.
- Exams will account for 75% of the final course grade (25% for each exam).

Literature review (25%)

Students will select a topic on endocrinology outside of their research focus and write a review on the topic (minimum 10 pages double spaced, excluding references).

OUTLINE OF COURSE TOPICS

Week	Dates	Topic
1	1/8, 1/10	Overview of endocrine systems
2	1/15, 1/17	Neuroendocrine system
3	1/22, 1/24	Hormone synthesis and metabolism
4	1/29, 1/31	Receptors and Signal Transduction Pathways
5	2/5, 2/7	FL RNS on 2/5, Exam 1 on 2/7
6	2/12, 2/14	Thyroid axis
7	2/19, 2/21	Somatotropic axis
8	2/26, 2/28	Adrenal axis, outline of lit review due
7	3/5, 3/7	Spring Break
9	3/12, 3/14	Gonadotropic axis, Exam 2 on 3/14
10	3/19, 3/21	Insulin/Glucagon/Leptin
11	3/26, 3/28	Endocrine control of Ca/P and bone
12	3/28, 3/30	Endocrine control of metabolism, rough draft of lit review due
13	4/2, 4/4	Endocrine control of growth
14	4/9, 4/11	Endocrine control of lactation, final draft of review due
15	4/16	Exam 3

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, which includes the following pledge: *"We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity."* You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit 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."*

It is assumed that you 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/process/student-conduct-honor-code>.

SOFTWARE USE:

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.

SERVICES FOR STUDENTS WITH DISABILITIES

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation

0001 Reid Hall, 352-392-8565, www.dso.ufl.edu/drc/

CAMPUS HELPING RESOURCES

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

University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575,
www.counseling.ufl.edu/cwc/

Counseling Services
Groups and Workshops
Outreach and Consultation
Self-Help Library
Wellness Coaching

U Matter We Care, www.umatter.ufl.edu/

Career Resource Center, First Floor JWRU, 392-1601, www.crc.ufl.edu/