

ANS 6751-Physiology of Reproduction

Description

The course provides graduate students with a state-of-the-art perspective on mammalian reproductive biology at molecular, cellular and whole-animal levels of organization. Among the topics covered are hypothalamic-pituitary function, oogenesis and spermatogenesis, folliculogenesis, uterine biology, embryonic development, pregnancy endocrinology, reproductive immunology, and photoperiodic and nutritional regulation of reproduction. The course is taught at a high level and is expected that students will have a good understanding of the fundamentals of reproductive biology and biochemistry.

Frequency of Offering

Alternate years (odd years). The course will next be offered in Spring 2019.

Prerequisites

BCH 5045 or equivalent. An undergraduate course in animal reproduction would be helpful.

Time and Place

Lectures on Tuesdays will be period 3 (9:35 - 10:25 am) and 4 (10:40 - 11:30 am). Lectures on Thursdays will be period 4 (10:40 - 11:30 am). Class will meet in Room 102 Bldg 459 (Animal Sciences Building). Lectures will be broadcast by Zoom.

Course Coordinator

P.J. Hansen
Dept. of Animal Sciences
Room 122B Bldg 499 (Dairy Science Building)
Phone: 352-359-5753 Fax: 352-392-5595
pjhansen@ufl.edu
Zoom ID: 982-503-876

Other Instructors

John Bromfield
Dept. of Animal Sciences
Room 122D Bldg 499 (L.E. "Red" Larson Dairy Science Building)
email: jbromfield@ufl.edu
Zoom ID: 910-901-3924

Jimena Laporta
Dept. of Animal Sciences
Room 104H Bldg 499 (L.E. "Red" Larson Dairy Science Building)
email: jlaporta@ufl.edu

Mario Binelli
Dept. of Animal Sciences
Room 122C Bldg 499 (L.E. "Red" Larson Dairy Science Building)
Email: Mario.binelli@ufl.edu

Jose E.P. Santos
Dept. of Animal Sciences
Room 204A Bldg 499 (L.E. "Red" Larson Dairy Science Building)
Phone: 294-6998
email: jepsantos@ufl.edu
Zoom ID: 649-065-6162

Textbooks and Other Readings

There is no required textbook. Various readings will be handed out during the semester or made available by email.

Learning Objectives

After completion of the course, the student will comprehend mammalian reproductive biology at the molecular, cellular and whole-animal levels of organization. Among the topics covered are hypothalamic-pituitary function, oogenesis and spermatogenesis, folliculogenesis, uterine biology, embryonic development, pregnancy endocrinology, reproductive immunology, and photoperiodic and nutritional regulation of reproduction.

Schedule

DATE	TOPIC	INSTRUCTOR
8-Jan	Hypothalamic-pituitary axis	Hansen
8-Jan	Hypothalamic-pituitary axis	Hansen
10-Jan	Hypothalamic-pituitary axis	Hansen
15-Jan	Spermatogenesis and testicular function	Hansen
15-Jan	Spermatogenesis and testicular function	Hansen
17-Jan	Spermatogenesis and testicular function	Hansen
22-Jan	Folliculogenesis and oogenesis	Bromfield
22-Jan	Folliculogenesis and oogenesis	Bromfield
24-Jan	Folliculogenesis and oogenesis	Bromfield
29-Jan	Oocyte maturation	Hansen
29-Jan	Oocyte maturation	Hansen
31-Jan	Fertilization	Hansen
5-Feb	EXAM 1	
5-Feb	EXAM 1	
7-Feb	Corpus luteum	Binelli
12-Feb	Corpus luteum	Binelli
12-Feb	Oviduct	Binelli
14-Feb	Endometrium	Binelli
19-Feb	Endometrium	Binelli
19-Feb	Preimplantation embryo	Hansen
21-Feb	Preimplantation embryo	Hansen

26-Feb	Preimplantation embryo	Hansen
26-Feb	Placenta	Hansen
28-Feb	Placenta	Hansen
5-Mar	SPRING BREAK	
5-Mar	SPRING BREAK	
7-Mar	SPRING BREAK	
12-Mar	Evolution of reproduction	Hansen
12-Mar	Evolution of reproduction	Hansen
14-Mar	Evolution of reproduction	Hansen
19-Mar	EXAM 2	
19-Mar	EXAM 2	
21-Mar	Reproductive Immunology	Bromfield
26-Mar	Reproductive Immunology	Bromfield
26-Mar	Reproductive Immunology	Bromfield
28-Mar	Parturition	Hansen
2-Apr	Lactation	Laporta
2-Apr	Lactation	Laporta
4-Apr	Embryonic stem cells	Hansen
9-Apr	Nutritional influences on reproduction	Santos
9-Apr	Nutritional influences on reproduction	Santos
11-Apr	Nutritional influences on reproduction	Santos
16-Apr	EXAM 3	
18-Apr	EXAM 3	

Grading

The grading scale is A, 90-100%; B+, 86-89; B 80-85, etc. The final grade will be based on performance in the exams as well as in course participation. The breakdown is as follows:

Exam 1 - 30%

Exam 2 - 30%

Exam 3 - 30%

Participation - 10%

If you are having trouble with the course, see Pete Hansen.

Exams

Exams will primarily be essay, problem solving, and short answer questions. Exams will focus on material that is new since the last exam although it is expected that students will be familiar with concepts from the entire course. For each exam, the student will be able to select a specific number of questions to answer from a wider range of questions.

Students with Disabilities

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

Attendance 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>

Online Course Evaluation Process

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>

Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>

Communication about the Class

Email will be used as the major method for communicating when not in class. Therefore, provide Dr. Hansen with your email address, if one is available. Dr. Hansen's email is pjhansen@ufl.edu

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.

Campus Helping Resources

Students experiencing crises or personal problems that interfere with their general wellbeing 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/

Student Complaints

https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf