

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. It 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 2023.

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 - <https://ufl.zoom.us/j/94746056926>

Course Coordinator

P.J. Hansen
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Other Instructors

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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.

Schedule

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|--------|--|------------|
| 10-Jan | Hypothalamic-pituitary axis | Hansen |
| 10-Jan | Hypothalamic-pituitary axis | Hansen |
| 12-Jan | Hypothalamic-pituitary axis | Hansen |
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| 17-Jan | Folliculogenesis, oogenesis, and oocyte maturation | Bromfield |
| 17-Jan | Folliculogenesis, oogenesis, and oocyte maturation | Bromfield |
| 19-Jan | Folliculogenesis, oogenesis, and oocyte maturation | Bromfield |
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| 24-Jan | Reproductive behavior | Bisinotto |
| 24-Jan | Spermatogenesis and testicular function | Hansen |
| 26-Jan | Spermatogenesis and testicular function | Hansen |
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| 31-Jan | EXAM 1 | |
| 31-Jan | EXAM 1 | |
| 2-Feb | Sex determination | Daigneault |
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| 7-Feb | Fertilization | Daigneault |
| 7-Feb | Fertilization | Daigneault |
| 9-Feb | Fertilization | Daigneault |
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| 14-Feb | Corpus luteum | Binelli |
| 14-Feb | Luteolysis | Binelli |

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|--------|---|-----------|
| 16-Feb | Maternal recognition of pregnancy | Hansen |
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| 21-Feb | Endometrium | Binelli |
| 21-Feb | Endometrium | Binelli |
| 23-Feb | Endometrium | Binelli |
| | | |
| 28-Feb | Preimplantation embryo | Hansen |
| 28-Feb | Preimplantation embryo | Hansen |
| 2-Mar | Preimplantation embryo | Hansen |
| | | |
| 7-Mar | EXAM 2 | |
| 7-Mar | EXAM 2 | |
| 9-Mar | Preimplantation embryo (9:30 AM) | Hansen |
| | | |
| 14-Mar | Spring Break | |
| 14-Mar | Spring Break | |
| 16-Mar | Spring Break | |
| | | |
| 21-Mar | Placenta | Jones |
| 21-Mar | Placenta | Jones |
| 23-Mar | Placenta | Jones |
| | | |
| 28-Mar | Nutritional influences | Santos |
| 28-Mar | Nutritional influences | Santos |
| 30-Mar | Nutritional influences | Santos |
| | | |
| 4-Apr | Reproductive immunology | Bromfield |
| 4-Apr | Reproductive immunology | Bromfield |
| 6-Apr | Reproductive Immunology | Bromfield |
| | | |
| 11-Apr | Epigenetics of the preimplantation embryo | Jiang |
| 11-Apr | Epigenetics of the preimplantation embryo | Jiang |
| 13-Apr | Regulation of pluripotency in the embryo | Jiang |
| | | |
| 18-Apr | Evolution of reproduction | Hansen |
| 18-Apr | Evolution of reproduction | Hansen |
| 20-Apr | Evolution of reproduction | Hansen |
| | | |
| 25-Apr | EXAM 3 | |
| 25-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.

For information on current UF policies for assigning grade points, see

<https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>

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/UGRD/academic-regulations/attendance-policies/>

Privacy Statement

Class sessions will be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

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. Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at: <https://gatorevals.aa.ufl.edu/students/> Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl>. Summaries of course evaluation results are available to students at: <https://gatorevals.aa.ufl.edu/public-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.

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, <https://disability.ufl.edu>

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

Counseling Services

Groups and Workshops

Outreach and Consultation

Self-Help Library

Wellness Coaching

- U Matter We Care, www.umatter.ufl.edu/
- Career Connections Center, First Floor JWRU, 392-1601, www.crc.ufl.edu/

Student Complaints

- Residential Course: <https://sccr.dso.ufl.edu/policies/student-honor-code-studentconduct-code>
- Online Course: <https://distance.ufl.edu/state-authorization-status/#student-complaint>