

Course Syllabus
Physiology of Reproduction
Fall 2016

Course Number: 16:340:502 (Index # 18055), 3 credits

Time: Monday and Wednesday 3:55-5:15 PM (Period 5)

Location: Foran 191B, Cook Campus

Website: <https://sakai.rutgers.edu/portal>

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Course Instructors:

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Prerequisites: Organic chemistry and physiology; seniors with special permission.

Objectives: The objectives of the course are (i) to provide a comprehensive, up-to-date review of reproductive physiology, including molecular and cellular mechanisms and (ii) to provide opportunities for critical-thinking and problem-solving exercises in the area of reproduction.

This graduate-level course will cover subjects shown below:

Wk	Date	Monday	Wednesday
1	Sept 5, 7	Labor day – no class	Introduction (MU)
2	Sept 12, 14	Repro Hormones (MU)	Sexual Differentiation (MU)
3	Sept 19, 21	Discussion #1 (MU)	Neuroendocrine Control (TR)
4	Sept 26, 28	Puberty (TR)	Ovarian Biology & Ovulation (MU)
5	Oct 3, 5	Discussion #2 (MU)	Female Cycles & Fertilization (CB)
6	Oct 10, 12	Discussion #3 (CB)	Implantation & Pregnancy (CB)
7	Oct 17, 19	Discussion #4 (CB)	Parturition & Lactation (CB)
8	Oct 24, 26	Pre-exam Review	Midterm (weeks 1-7)
9	Oct 31, 2	Male Reproduction (MU)	Testis Biology (MU)
10	Nov 7, 9	Spermatogenesis (MU)	Reproductive Cancers (WC)
11	Nov 14, 16	Discussion #5 (WC)	Reproductive Behaviors (LK)
12	Nov 21, 23	Discussion #6 (LK)	Epigenetics (MU)
13	Nov 28, 30	Discussion #7 (MU)	Nutrition & Reproduction (NB)
14	Dec 5, 7	Discussion #8 (NB)	Fertility Control & ART (MU)
15	Dec 12, 14	Pre-exam Review	Final (weeks 9-14)

Format:

As indicated, **Mondays are** primarily for interactive student discussion of reproductive biology problems or controversial topics assigned by faculty on the subject. These discussions are usually on the topics of the previous week's lecture.

Wednesdays are for faculty lectures on the subjects.

During the lectures, prior to the discussion sessions, the faculty presents an overview of the subject and assigns a problem or a controversial topic in the field. As a take-home assignment, all students write a 1-2 page, double-spaced typed paper, describing approaches to solve the problem or present important aspects of the topic. During the discussion session on the following Monday, students are divided into groups to discuss the topic and to reach a consensus opinion within the group. One of the members from each group presents, and the

class debates the merits of each group's hypothesis and their supporting arguments. Every student will have an opportunity to present during the semester. See the document entitled "Critical Interactive Thinking Exercise or CITE" for general instructions how to prepare the papers. In addition, faculty may provide specific instructions for each assignment and modify the format as needed.

Exams: A midterm and a final exam. Both will be in-class and essay format.

Grading:

- Problem and topic papers (8 papers total) (40%)
- Classroom presentation and participation (10%)
- Midterm (25%)
- Final (25%)

Course Materials:

- To prepare problem and topic papers students are expected to use outside sources such as primary research papers and review articles as well as classroom materials.
- The following book will be available as an additional reference for the course at the Chang Library (Foran Hall, Cook Campus): **KNOBIL AND NEILL'S PHYSIOLOGY OF REPRODUCTION**, 2 volumes, 3rd Edition, 2006, ACADEMIC PRESS.
- Faculty may assign review papers or research articles related to topics.