

BIOLOGY OF REPRODUCTION
ZOO 4926

Spring Semester 2010
Periods 3 (9:35-10:25) Tuesday and 2-3 (8:30-10:25) Thursday: MCCB 3108

Professor: Louis J. Guillette Jr. – Distinguished Professor of Zoology
Office: 528 Bartram Hall
Office Hours: Tuesday period 4 (10:40-11:25) and by appointment
Phone: 392-1098; Email: ljpg@ufl.edu

TA: Ashley Boggs – PhD student
Office: 521 Bartram Hall
Office Hours: Monday period 4 (10:40-11:30) or by appointment
Phone: 846-1156; Email: boogsta@ufl.edu

Additional Help: Chair of Zoology: Dr. Alice Harmon, 392-1107

Textbook: Essential Reproduction – 6th Edition Martin Johnson - 2007

Web Link: http://people.biology.ufl.edu/ljpg/Courses/Biology_of_Reproduction/zoo4926_2010.htm
Syllabus, weekly reading assignments, announcements

Examinations:

All exams will be a combination of short answer, essay and multiple choice. NO MAKE UP EXAMS WITHOUT PRIOR PERMISSION. ALL MAKE UP EXAMS WILL BE IN AN ESSAY/ORAL FORMAT. Grade is based on the student's total score relative to the class curve and class mean. Each lecture exam is worth 100 points. Total points possible = 300 pts. Exams are not cumulative. ALL EXAMS WILL BE GIVEN ON THE DATES BELOW.

Exam I: February 4th - In Class

Exam II: March 4th - In Class

Exam III: April 15th – In Class

Description: This class will examine the biology of vertebrate reproduction. We will discuss a wide range of topics including the genetics of sex determination, the evolution of sex, the biology of fertilization, the evolution of maternal recognition of pregnancy, environmental estrogens, the embryonic origin of testicular cancer and breast cancer, and cloning, to name a few. Topics will be covered using approaches from genetics, cell biology and anatomy to endocrine physiology and physiological ecology. Each topic will be presented initially at a general biology level and then developed in depth. Did you know that some shark embryos eat their brothers and sisters in utero? Only the best predator is born! We will examine the many methods by which animals reproduce. What is the role of estrogens in males? Modern technology allows us to make animals missing various receptors so that this and other questions can be examined. We will also examine many topics in the fields of reproductive biology and embryology that occur daily in newspapers and magazines. Students will be expected to read a textbook and articles from the popular or scientific literature. Grading will be based on exams given in class.

Prerequisites: Students must have a basic biology background but need not be Zoology majors. Suggest that students have taken BSC2010, and at least one year of chemistry.

BIOLOGY OF REPRODUCTION

ZOO 4926

Lecture Date	Topic	Chapter Readings	Handouts Other Reading
January 5	Introduction		
January 7	Methods in Reproductive Biology		
January 12	Evolution of Sex	1	Gen Biol Text
January 14	Gender and Sexuality (<i>A. Boggs lecture</i>)	2	Gen Biol Text
January 19	Male and Female Anatomy	4,5	Gen Biol Text
January 21	Reproductive Endocrinology I	3,6	Gen Biol Text
January 26	Reproductive Endocrinology II	3,6	Gen Biol Text
January 28	Sex Determination - Genetic	1	Gen Biol Text
February 2	Sex Determination - Environmental		Web pdf
February 4	EXAM I - IN CLASS		
February 9	Embryology of the Ovary	1	Web pdf
February 11	Embryology of the Testis	1	Web pdf
February 16	Embryology of External Genitalia (<i>Marty Cohn lecture</i>)	1	
February 18	Sexual Maturation and Puberty	7	
February 23	Reproductive Cyclicity	8	
February 25	Fertilization – External (<i>Heather Hamlin lecture</i>)		Web pdf
March 2	Fertilization - Internal	9	
March 4	EXAM II – IN CLASS		
March 8-12	Spring Break		
March 16	Evolution of Amniote Egg (<i>Lori Albergotti lecture</i>)		Web pdf
March 18	Evolution of Viviparity		Web pdf
March 23	Placentation	10	Web pdf
March 25	Maternal Recognition of Pregnancy	11	
March 30	Endocrinology of Pregnancy	11, 12	Web pdf
April 1	Endocrinology of Oviposition		
April 6	Endocrinology of Parturition	13	
April 8	Lactation	14	Web pdf
April 13	Fetal Origins of Adult Disease		Web pdf
April 15	EXAM III - IN CLASS		