



**Master of Chemical and Life Sciences Program
College of Computer, Mathematical, and Natural Sciences**

CLFS 609B: Human Reproductive Biology

Syllabus

INSTRUCTORS:

Janet Norcross, Ph.D.

COURSE OBJECTIVES

All living organisms are capable of reproducing. This course will take a comprehensive look at this interesting and relevant process by examining the role of hormones, developmental and genetic sex, the process of puberty, and the production of offspring. While a variety of species will be used to help you understand the reproductive process, this course will concentrate on sexual reproduction by emphasizing mammalian, especially human, reproduction. While there are no specific prerequisites to take this course, reproduction either directly or indirectly involves all systems and functions of the body and therefore you should have a basic knowledge of biology.

TEXT

We will be using HUMAN REPRODUCTIVE BIOLOGY 4th edition, Jones and Lopez, 2014, Academic Press: New York (ISBC 0-12-389775-0).

WEEKLY MODULES

This course consists of 11 “Modules,” which will be released approximately weekly. Each module consists of Goals, Text Readings, links to Internet sites reviewing key concepts, and popup-type pages that define unfamiliar terminology. Most modules require you to complete an Assignment, either a written thought question or a quiz, and to participate in group discussions.

ASSIGNMENTS AND EXAMS

Quizzes and Discussion Questions

At the end of each module you will be asked to either answer discussion/thought questions extending the material in the module, take a brief quiz after reading a supplemental scientific journal article, or participate in a group discussion. Some independent research is expected.

Innovative Classroom Exercise in Reproduction (ICER)

As part of your learning experience you will participate in the design of an original classroom activity or exercise (ICER), along with a lesson plan, based upon material relevant to this course. This will be a small group project and will be due about two weeks before the end of the course. Completed projects will be viewed by the entire class.

Exams

There will be two exams, a midterm and a non-comprehensive final. These exams will be open book, but you are not allowed to discuss or interact with another student or person when taking the exams.

CLASS GRADES

The final grades are assigned according to a standard +/- percentage scale.

LECTURE TOPICS AND EXAM SCHEDULE

The following is a list of the topics from the book and the order we will be covering them in:

UNIT 1 - Introduction to Hormones

Module 1 General introduction to reproduction

Module 2 What is a Hormone?

Unit 2 Reproductive Systems

Module 3 Female Reproductive System

Module 4 Male Reproductive System

Unit 3 Sexual Development

Module 5 Sexual Differentiation and Development

Module 6 Puberty

Module 7 Menstrual Cycle

Unit 4 Reproduction

Module 8 Gamete Transportation and Fertilization

Module 9 Pregnancy

Module 10 Labor and Birth

Module 11 Lactation and Neonate

(FINAL EXAM)