

**CORS 206**  
**HUMAN REPRODUCTION: SCIENCE, ETHICS, AND THE LAW**  
**FALL SEMESTER 2008**

Description: This course will explore three themes.

- What are the biological underpinnings of human reproduction and development?
- How is modern medical science able to assist in reproductive or developmental processes to increase fertility or correct embryological errors?
- What will be the predicted societal or legal ramifications of the new scientific advances that are forthcoming in this biological arena?

3 Credits.

Instructor: J G Cloud

Office: Room 238 Gibb Hall

Office Hours: 3:00-4:00 pm MWF

**LECTURE OUTLINE**

Aug	25	Introduction; cell structure (nucleus)
	27	Introduction; cell structure (cytoplasm)
	29	Introduction: genetics; <b>quiz 1</b>
Sept	01	Labor Day / No Class
	03	Meiosis and gametogenesis
	05	An overview of fertilization (the purpose) / <b>quiz 2</b>
	08	What is unique about an egg?
	10	When and where eggs are made
	12	There is a biological clock and it is ticking / <b>quiz 3</b>
	15	When and where sperm cells are made
	17	Vasectomies and hot tubs / Factors that affect male fertility
	19	What is a sperm cell? / How do sperm cells move?
	22	Interaction of egg and sperm within the oviduct (or fallopian tube)
	<b>24</b>	<b>Hour Exam 1</b> (covers material from 25Aug through 19Sept)
	26	Infertility: gamete problems
	29	Assisted Reproductive Technology (artificial insemination; in vitro fertilization; Intracytoplasmic sperm injection)
Oct	01	Sperm banks / Cryopreservation of embryos
	03	Legal and ethical issues associated with assisted reproduction (buying and selling gametes; surplus embryos) / <b>quiz 4</b>
		<b>Due date for completing the selection of a topic</b>
	06	How the sperm and egg get to the site of fertilization
	08	Union of sperm and egg / blocking the entrance of more than one sperm
	10	Early embryonic development: cleavage / <b>quiz 5</b>
	13	Early embryonic development: formation of the blastocyst
	15	Site of implantation; Ectopic pregnancy
	17	Hormonal control of the menstrual cycle
	20	Pregnancy (why there is no menstrual cycle; how a pregnancy test works)
	<b>22</b>	<b>Hour Exam 2</b> (covers material from 25Aug through 15Oct)
	24	Infertility: Artificial stimulation of follicular development & ovulation
	27	Infertility: Surrogate mothers / regulations
	29	Infertility: Cancer therapy / Cryopreservation & transplantation of ovaries

	31	Puberty / Menopause / Reproduction in post-menopausal women / <b>quiz 6</b>
Nov	03	Developmental abnormalities and their causes
	05	Diagnosis of the fetus / Amniocentesis
	07	Genetic screening / <b>quiz 7</b>
	10	Sex determination (genetic selection of children)
	12	Embryonic stem cells
		<b>Due date for the research paper</b>
	14	Human embryonic stem cells and the law
	17	Cloning to produce stem cells
	19	Alternative technologies to produce embryonic stem cells
	<b>21</b>	<b>Hour Exam 3</b> (covers material from 25Aug through 14Nov)
Dec	01	Umbilical cord blood
	03	Human development
	05	Ethanol and other teratogenic agents / <b>quiz 8</b>
	08	Giving birth
	10	Review
	12	Review
	<b>18</b>	<b>FINAL EXAM (12:30 – 2:30 pm; covers material from 25Aug through 12Dec)</b>

### Exams

There will be three one-hour exams and a comprehensive final.

All lecture exams will be comprehensive; that is, they will always cover everything from the beginning of the course.

Exam questions will be based upon material presented in lectures and assigned readings.

All students will be required to take the final exam and there will be no early finals given in this course.

Exams may contain take-home questions

Each hour exam is worth 150 points

The final exam is worth 300 points

### Quizzes

There will be eight 10-minute quizzes

All quizzes are comprehensive

Each quiz is worth 25 points

The quiz with the two lowest grades will be dropped if all eight quizzes are taken; any quiz that is missed (excused or non-excused absence) will be given a grade of 0.

The dates of the quizzes are as follows:

### Research Paper

Each student is required to write a research paper.

The topic must cross at least two disciplines (science + ethics/law);

**Everyone must see me during office hours to obtain permission for the topic (bring a complete outline and five references; failure to complete this requirement will reduce the grade of the research paper by 50%)**

## **This selection and final approval of a topic must be completed by 3:00 pm on Oct 3**

The paper must be typed/printed (12 pt font), double-spaced with one inch margins  
All information must be referenced, and the paper must contain a complete reference list using the style of the Journal of Experimental Zoology

The paper (not including references) must be 5 pages in length (a maximum of 15 pages)

**The paper is to be completed (and handed in) on or before the beginning of class on Nov 12, 2007 (any paper handed in after this time will not be graded and will be awarded 0 points)**

The paper is worth 100 points

<b>Summary of grade</b>	<b>Points</b>
Hour exams (3 / 150 points each)	450
Final exam (1 / 300 points)	300
Quizzes (6 / 25 points each)	150
Research paper (1 / 100 points)	100
<b>Total</b>	<b>1000</b>

### **Grading**

Grades will be based solely upon the percentage of total points you have accumulated.

90% or greater of the total accumulated points	= A
80%	= B
70%	= C
60%	= D
Below 60%	= F

### **Excused Absence**

An absence from class is excused if it is due to a medical problem; a medical problem is defined as any physiological compromise that requires medical attention (a visit to a medical facility). Participation in extracurricular activities is not a valid basis for an excused absence; if there is any question, see me first.

### **Rules for the course**

**Plagiarism is a form of academic dishonesty; any student that plagiarizes another writer will receive a grade of "F" for the course. If you have any doubts about what constitutes plagiarism, see me (also see rules of the course below).**

The rules for this course are outlined in the "Student Code of Conduct" for the University of Idaho. The most important of these rules are listed below:

#### **ARTICLE II--ACADEMIC HONESTY.**

1. Cheating on classroom or outside assignments, examinations, or tests is a violation of this code. Plagiarism, falsification of academic records, and the acquisition or use of test materials without faculty authorization are considered forms of academic dishonesty and, as such, are violations of this code. Because academic honesty and integrity are core values at a university, the faculty finds that even one incident of academic dishonesty seriously and critically endangers the essential operation of the university and may merit expulsion. [rev. 7-98]

2. The operation of UI requires the accuracy and protection of its records and documents. To use, make, forge, print, reproduce, copy, alter, remove, or destroy any record, document, or identification used or maintained by UI violates this code when done with intent to defraud or misinform. Entrance without proper authority into any private office or space of a member of the faculty, staff, or student body is a violation of this code.

3. Instructors and students are responsible for maintaining academic standards and integrity in their classes. Consequences for academic dishonesty may be imposed by the course instructor. Such consequences may include but cannot exceed a grade of "F" in the course. The instructor should attempt to notify the student of the suspected academic dishonesty and give the student an opportunity to respond. The notice and the opportunity may be informal and need not be in writing. Penalties for any disciplinary infraction must be judicially imposed. [See [1640.02 C-5](#)] [rev. 7-98]