

HUMAN GENETICS

BIOL 2310

Instructor: Dr. James J. Youngblom

Fall 2011

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Office Hours- Wednesday 9-10 am, Thursday 11-12 am, Friday 9-10 am, or by appt.

Required Text: Human Heredity: Principles and Issues (2011) by Michael Cummings, 9th ed.

1. Important Dates-

Monday, Sept. 5- No classes, Labor Day

Monday Sept. 19- Last day to drop a course

Tuesday, Oct. 11- No classes, Columbus Day

Friday, Nov. 11- No classes, Veteran's Day

Thursday and Friday- Nov. 24 and 25 - No classes, Thanksgiving break

Wednesday, Dec, 7- No classes, Reading Day

Friday Dec. 9- (last day of classes)

2. EXAMS = 200 pts. total

A total of 3 exams will be given, 2 midterms each worth 60 pts, and 1 final exam, worth 80 pts. The first 2 exams are not comprehensive. **Exam dates- Sept. 22, Nov. 1, and the final exam on Thursday Dec. 15 at 8:30 a.m.** No leaving the classroom during the exams.

Make-up- If you know you can not be in class on the day of an exam, please see me beforehand so we can discuss your situation. In some circumstances, I will allow a make-up exam. If something comes up unexpectedly on the day of an exam, please call me. If you a leave a message, leave a phone number and I will contact you to discuss your situation. Don't 'let it ride' and plan on discussing it with me later. If your situation warrants a make-up exam, then schedule your make-up exam ASAP. If I don't hear from you soon enough, you get a 0.

Cheating- Students caught cheating are automatically awarded an F. They are no longer allowed in class and a report is filed with the Dean of Student Affairs.

3. Quizzes = 80 pts. total

Remote control clickers are provided for each student. Each student is assigned a particular clicker. Integrated into each PowerPoint lectures are “Clicker” questions. During 22 of the lectures, 2 clicker questions will be pop quiz questions (from the previous lecture) and your answers will be recorded and the points tabulated. Many other clicker questions will not be graded. For the questions designated as graded questions, correct answers are worth 2 pts. and incorrect answers are worth 1 pt. Hence you can score 2, 3, or 4 points each lecture by attending and answering 2 questions. You get a 0 for the day if you are not attending. Your lowest 2 days will be ignored in the final tabulation. If you answered every clicker question correctly you will be rewarded with 80 (20 x 4) pts. Even if you missed them all but answered every question designated for grading, you will be awarded 40 points (20 x 2). Of course significant number of absences will mean less points awarded.

4. Oral Presentation = 50 pts. total

Each student must select a partner and together assemble a PowerPoint presentation. The topic must be one of the human genetic conditions selected from the list of diseases (below). Only one group can choose a particular genetic condition. To secure a particular topic, sign up with your instructor.

Research the disease and then prepare your PowerPoint presentation. Prepare your talk as if you have a friend who has just had a child born with the genetic condition you are researching. Provide information that you think these new parents would like to have- how are children affected, is there a cure for this condition, how many others are affected, how can we help our child, etc. You do not need to explain basic genetic terms that have already been explained in class. Rehearse your PowerPoint presentation. Each person must present half of your slides. The presentation should be 8-9 minutes in length. **Your score will be deducted if your presentation is too long or too short.** You need to turn in a bibliography (hard copy) of your sources (APA format). You are not allowed to read anything during the your presentation. No reading of notes, and no reading off of your PowerPoint slides. Use your PowerPoint slides as a rough outline for you to follow and then know the material well enough to explain each slide without reading it or using notes. Don't discuss the various types of your disease. Discuss one type and its ramifications thoroughly.

Two pairs of students will give their presentation during each of the class periods between **Tuesday Oct. 25 and Thursday Dec. 8**. Your classmates will help in grading your presentation- 2/3 of your class presentation score is determined by students. All

students in attendance will rate your presentation but the top ¼ and bottom ¼ of student scores are ignored. The actual presentation is worth 40 pts. 10 pts. credit is given for each pair of students that signs up with a partner for a presentation topic and time by Oct. 13.

5. **PROBLEMS AT THE END OF THE CHAPTERS**

You are highly encouraged to answer the questions at the end of each chapter that we are covering.

6. **TAPING POLICY**

Audiotaping of classes is permitted only with prior permission of the instructor; videotaping is not permitted under any circumstances. Authorized tapes are for the personal use of the student, and may not be distributed to others without the permission of the instructor.

7. **GUEST POLICY**

Guests are permitted in class but only with prior permission of the instructor.

8. **GRADING SYSTEM**

This course may be taken for a letter grade or credit/no credit. You can opt for the credit/ no credit grading on the registration form, or by notifying me in writing on the front page of your Final Exam. Otherwise you will receive a letter grade. No exceptions will be made. The grading system is as follows:

93.5-100%= A	90-93%=A-	87-89.5%=B+	83.5-86.5%=B
80-83=B-	77-79.5%=C+	73.5-76.5=C	70-73%=C- (score needed for Credit)
67-69.5%=D+	63.5-66.5 =D	60-63%=D-	<60%=F

IMPT. NOTE- These numbers (↗) are frequently lowered (just a bit), but never raised.

HOW TO DO WELL IN THIS CLASS

1. **COME TO CLASS**- take good notes, ask questions. Rewrite your notes after class.
2. Read the chapters accompanying each lecture, preferably before class.
3. If material is unclear, come and see me during my office hours.
4. Work the problems at the end of each chapter.

5. For extra questions- see the “student companion” web site at <http://academic.cengage.com/biology/cummings>.
6. Start early and prepare a good PowerPoint presentation. Be sure to rehearse it.

Goals for General Education Courses

1. **Subject knowledge.** To provide an educational experience that will enhance students understanding of the disciplines' basic principles, methodologies, and perspectives.
2. **Communication.** To provide an educational experience that will enhance the ability to communicate.
3. **Inquiry and Critical Thinking.** To provide an educational experience that will enhance critical thinking skills and will contribute to continuous inquiry and life-long learning.
4. **Information Retrieval and Evaluation.** To provide an educational experience that will enhance the ability to find, understand, examine critically, and use information from various sources.
5. **Interdisciplinary Relationships.** To provide an educational experience that will enhance students' understanding of a discipline's interrelationships with other disciplines.
6. **Global or Multicultural Perspectives.** To provide an educational experience that will enhance the ability to look at issues from multiple perspectives and/or that will describe the disciplines impact on or connection to global issues, AND/OR
7. **Social Responsibility.** To provide an educational experience that will help students understand the complexity of ethical judgment and social responsibility and/or that will describe the discipline's impact on or connection to social and ethical issues.

Links of interest-

PowerPoint Tutorial- <http://office.microsoft.com/en-us/powerpoint-help/create-your-first-presentation-RZ001129842.aspx>

How to make a good PowerPoint Presentation- <http://www.iasted.org/conferences/formatting/Presentations-Tips.ppt>

APA format for bibliographies- <http://owl.english.purdue.edu/owl/resource/560/06/>

Avoiding Plagiarism- <http://owl.english.purdue.edu/owl/resource/589/01/>

Presentation Topics:

Ataxia Telangiectasia
Bloom Syndrome
Fanconi anemia
Galactosemia
Phenylketonuria
Thalassemia
Xeroderma pigmentosum
Tay-Sachs disease
Achondroplasia
Brachydactyly
Crouzon syndrome
Ehlers-Danlos syndrome
Familial hypercholesterolemia
Adult polycystic kidney disease
Hypercalcemia
Marfan syndrome
Nail-patella syndrome
Porphyria
Adrenoleukodystrophy

Fabry Disease
Glucose-6-phosphate dehydrogenase
deficiency
Hemophilia
Ichthyosis
Lesch-Nyhan syndrome
Muscular dystrophy
Von Gierke disease
Pompe Disease
Cori Disease
Andersen disease
Pseudohypoparathyroidism
Von Hippel-Landau syndrome
Retinoblastoma
Aniridia
Osteogenesis imperfecta
Neurofibromatosis
Haw-River syndrome
Machado-Joseph syndrome
Li-Fraumeni syndrome