BIOL 210 - GENETICS
Course Logistics – Revised 8-28-06

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Course website: The website can be accessed through the website of the Department of Biological Sciences or directly at
http://www.sci.uidaho.edu/biosci/labs/wichman/courses/index.html

COURSE PREREQUISITES: Biol 115 Cells and the Evolution of Life. You should have at least one semester of chemistry. If you do not have these prerequisites, you should see Dr. Cantrell or Dr. Robison immediately.

TEXT: ***Genetics: A Conceptual Approach,* Second Edition Syllabus Attachment:**
The required textbook for this course is Pierce, *Genetics: A Conceptual Approach*, Second Edition. There is a very helpful free Web site to accompany the book at www.whfreeman.com/pierce2e . This site from the publisher has activities and animated tutorials for the more challenging concepts from the text.

Available for purchase separately only at http://ebooks.bfwpub.com : If you prefer to read and study online, the **eBook** is the way to go. The eBook is a complete online version of the printed textbook which integrates all of the existing student media resources and adds features unique to the eBook. It's available for half the cost of the printed text; you purchase your 12-month subscription online at the URL above.

OTHER CLASS MATERIALS: Problem Sets, Lab Handouts, Chapter Outlines and Vocabulary Lists will be posted on the course website (http://www.sci.uidaho.edu/biosci/labs/wichman/courses/index.html). It is your responsibility to print these and have copies in class or lab as needed.

GENERAL CONSIDERATIONS: This is a survey course, and as such it will cover a great deal of material. We will examine classical experiments and methods in detail to teach you to interpret data and think like a geneticist. Genetics is one of the central subjects in all of biology, so the approaches we discuss here are used in such diverse disciplines as behavior, physiology, ecology and systematics.

Problem solving in genetics is based on logic and requires solid mathematical skills. Some of you may find this aspect of the course quite different from other courses you have taken in biology. Some of you may even find it to be fun! As with many skills, your performance will

improve with practice. This is not a course where you can get a B just by memorizing vocabulary (although you will learn an extensive new vocabulary), and genetics does not lend itself to "cramming." We would suggest that you *start preparing for the first exam now*. Study groups that meet regularly can be an excellent way to master this material.

You are responsible for both the lecture material and the assigned reading. Lectures will be used to stress basic principles, explain complex concepts, and supplement the text. Many lectures will include current topics in genetics that have minimal coverage in current texts, therefore regular attendance is necessary. This is the only way of giving you an up-to-date course in a field that moves as quickly as this one. *Each lecture will be given with the assumption that you have read the assigned material.*

Calculators may be used during exams (devices that can access the web are prohibited, so you may need to buy a cheap calculator). All books and notes should remain out of sight, and there will be no talking during exams. No one may leave the room once the exam has begun. We will not answer questions or give hints during an exam except to clarify typographical errors.

Office hours are times set aside for your benefit, so don't wait until you are in big trouble or it's the day before an exam to use them.

PROBLEM SETS: Problem Sets will be designed to coordinate with each exam; the two problems sets for each exam are designated A and B. They are due at the beginning of class on the assigned day, and will be graded. No late Problem Sets will be accepted since answers will be posted on the website. Many questions will be from past exam questions, and these will give you an idea about the types of tests we give. One of the two Problems Sets for each exam will be graded (chosen by random draw). Problem Sets will be worth a total of 100 points.

EXAMS: There are 5 exams. The fifth exam is in two parts: the first hour is over the last material covered in the course and the second hour is comprehensive. You may replace your lowest exam grade with the grade from the comprehensive portion of the final. Questions or challenges related to the grading of an exam (or other assignment) must be turned in to your TA by 5:00 pm within the following 3 school days after the exam or assignment is returned to you. You should include the exam in question and a written explanation of your question or challenge. If an exam is turned in for re-grading, any other errors found will also be corrected.
EXAM LOCATION: The first four exams will be given at the normal class time, but will be given in Engineering/Physics building, room 122. Fifth exam and final exam location to be announced.

MISSING EXAMS: *If you miss an exam for a valid excuse, the comprehensive portion of the final exam will serve as the make-up exam. This means you will not be able to use that exam to replace your lowest grade.* Individual make-up exams will only be given for the second (and subsequent) exams missed with a valid excuse. It is therefore important to document that your excuse was valid whenever you miss an exam, since you cannot make-up a second missed exam unless the first one is excused. No make-up exams will be given except with a valid excuse (illness, family emergency) or by prior arrangement for University related responsibilities. All make-up exams will be cumulative and some portion of these exams may be oral. Illness or other emergency must be documented in writing (for example, through Student Health) within 3 school days of a missed lab or exam.

GENETICS LAB: The laboratory portion of this course will consist of a combination of projects and wet labs. **Lab fees will not be refunded to students who drop the course after the second week of class.**

Two major projects will take up the bulk of your time in the laboratory. One of these is CSI Idaho, for which you will serve as the local forensic lab. This project will expose you to molecular techniques and analysis. The second project is a bacteriophage evolution experiment in which you will select for mutants capable of growth at normally prohibitive temperatures. You will use molecular genetics techniques to identify the specific mutations responsible. Both of these are group projects, but will involve individual write-ups.

MISSING LABORATORIES: Students may not turn in late assignments for unexcused absence from lab; therefore, attendance in lab is mandatory. Each lab assignment will have some fraction of points associated with participation. Excuses for University related responsibilities must be arranged in writing in advance of any missed lab or exam. Illness or other emergency must be documented in writing (for example, through Student Health) within 3 school days of a missed lab or exam.

ACADEMIC HONESTY: All students are expected to uphold the highest standards of academic honesty. This includes but is not limited to: not cheating, not giving or taking help during exams, not using the ideas of others without giving appropriate credit, and not giving false excuses for missed classes or exams. You may get help from others on the homework *but you may not simply copy* from someone else. Any incident of academic dishonesty will be handled according to the guidelines of the University of Idaho.

GRADING POLICY: Grade will be based on 900 total points. Six 50-minute exams are worth 100 points each, and the lowest of these may be dropped. Your laboratory performance will make up a significant portion of your grade, as indicated below. Your final grade will be the grade you earn - no deals, no plea bargains. The grading scale is standard: A (90 -100 %), B (89 - 80 %), C (79 - 70 %), D (69-60 %) F(below 60 %).

GRADING BREAKDOWN:

Exams	**500**
Problem Sets (5 graded)	**100**
Casino	**20**
Mini Labs (total of 3)	**30**
Curious about Genetics	**50**
CSI Idaho	**100**
Bacteriophage evolution	**100**
Total	**900**