Master Syllabus

BIOL 2316 GENETICS

Name:	Section:
	Synonym:
Phone #:	Course hours:
Email:	Office location:
Website:	Office hours:
	Appointments:

Course Description

BIOL 2316 GENETICS (3-3-0) is an introduction to the basic concepts of human heredity and cytogenetics including Mendelian, molecular, and population genetics. **Prerequisite** is BIOL 1406 with minimum grade of C.

Required Text

Textbook from the approved departmental list.

Instructional Methodology

This is a three-credit lecture course.

Course Rationale

BIOL 2316 Genetics is an intensive sophomore-level course that explores modern genetics. Students will learn the basics of molecular and Mendelian genetics in a problem-based format. The course is divided into three parts.

- Part I discusses the basics of DNA biology, including transcription, translation and DNA technology.
- Part II explores molecular genetics including genomics, Mendelian genetics, quantitative genetics and gene mapping.
- Part III looks at gene expression, the genetics of cancer, non-Mendelian genetics, population genetics and molecular evolution.

Common Course Objectives

The common course objectives are available at http://www2.austincc.edu/biology/ccobjectives.

Grading System: [Faculty: Insert your own as desired]

TESTS: There will be three unit tests whose dates are listed on the schedule. Each of these tests is worth 100 points. Each test will have 10 questions and will be designed to be completed in one hour in class. There is no curve. Students who receive a D or less on a test may hand in test corrections within 1 week to receive up to 6 additional points. One make-up test is allowed with *prior permission* of the instructor. Contact me in advance to arrange for a make-up test.

CLASS ACTIVITIES: Activities are given out throughout the semester to reinforce ideas discussed in lecture. These are usually small group activities and are graded at 5-10 points each. One make-up is allowed if a student is absent. It is the student's responsibility to complete these class activity sheets and hand them in for grading. The grading rubric will be adjusted at the end of the semester to reflect the exact number of class activity points that may be obtained this semester.

HOMEWORK PROBLEMS: Genetics is a problem-oriented course. Therefore, homework problems are assigned for each chapter as indicated on the schedule. There will be a total of 100 questions assigned, each one worth 1 point. These questions are due the week following the day the relevant chapter was discussed in class. Late homeworks will be accepted, but will be discounted 5% for each class they are late.

POSTER: Near the end of the semester, each student will develop a poster on a genetic disease or syndrome and give a ten minute presentation to the rest of the class. Details will be provided later in the semester.

Grading Rubric

Grade Component	Points
3 tests @ 100 pts each	300
Class activities	50
HW problems	100
Poster project	150
Total points	**600**

CLASSROOM ETTIQUETTE

Everyone learns better when there is mutual respect. To this end, please make every effort to follow these rules of courtesy:

Cell Phones and Pagers: These should be turned off before entering the classroom. Do NOT set on vibrate; do NOT leave the room to answer your phone; do NOT make phone calls during class or lab. Repeat offenders will be docked 10 points on their next test. Exceptions will be made in an emergency; please see me before class if you absolutely must be available by phone.

Questions and Discussions: East person is encouraged to ask questions on the content or related subjects. There are no stupid questions. The same is true for discussions. Every student deserves to express his or her own opinions without interference.

Active Learning: The foundation in science that you develop in this course will be valuable in your further studies. Therefore you will need to be actively involved in your learning. The following are ways to be active learners in biology or any other field:

- *Attend.* Come to every class and be punctual. Stay awake in class; save sleeping for your bed. Properly attending helps me, your fellow students and especially yourself.
- *Communicate.* Let me know if you don't understand an idea. Speak up in class, talk to me afterwards, come to office hours, or email me. If something doesn't make sense to you, it probably doesn't make sense to others in the class, too. Also, let me know if you will have to be absent from class or if there is anything going on in your life that impacts your performance so we can make arrangements.
- *Participate.* One of the best bumper stickers I saw was "Science is NOT a spectator sport." Biology requires your participation both because you learn better when you participate but also because we will be learning about things that directly impact your life and how you think about our world. Besides, it's much more fun when you're part of the discovery. Do the reading and the homework, speak up in class, and share your own understanding with others.
- *Know your learning style*. Are you a visual learner, or do you prefer to learn by doing? We all learn in different ways. Here is a site that will give you a free 5-minute quiz, and tell you how you learn and strategies to help you learn better. Log onto http://www.metamath.com/lsweb/dvclearn.htm

Course Policies:

A**. Attendance Policy:**

This is a challenging course. It is important that you not only know the material but understand it as well. There are things that you can do to increase your chances of successfully completing this course.

- **Come to class**. This is the single most important predictive factor for success, those students who regularly come to class succeed at a much higher rate than those who don't (this seems like a no-brainer but it is an important factor) Also, tests are given over material discussed in class. History has shown that for every class that is missed, the test grade goes down by about 10%.
- **Study**. Students tend to underestimate the amount of material covered in this course as well as the depth of understanding that is required. This is not high school; you cannot cram in one night. It is necessary to keep up with the material (meaning to review it every day!!). A good rule of thumb is that you should spend 2 hours preparing for each hour you spend in class.
- **Read your text.** The text has been selected to match the information in the lectures and reading the text will only help you understand the material.
- **Use all the help available**. Your text contains a CD-ROM that has tutorials and links to content specific web sites. Use them. Come to office hours and come prepared with questions. Bother your instructor with incessant relevant questions (not necessarily during lecture, sometimes it is important to get through the material, but I am happy to answer even slightly relevant questions after class, in office hours, by email, etc.)

I expect that each of you will come to class prepared and willing to work, this includes: reading the chapter **before** the lecture, participating in discussions, asking questions where appropriate

B. **Withdrawal**. Sometimes it becomes necessary to withdraw from the course. I will never withdraw a student; withdrawing is your decision and your responsibility. The last day to withdraw this spring is April 24. If you drop the course and do not withdraw by this date, your name will appear on the final grade sheet and I must give you a grade.

C**. Incomplete**. Occasionally an incomplete grade may be given. In order to obtain an incomplete, the student must work with the instructor to fill out the Incomplete Grade form. This is essentially a contract between the student and the instructor in which the student promises to complete and hand in the work before a given date, usually 1 month after the start of the next semester. See me if you wish to be considered for an incomplete in this course.

D. **Scholastic Dishonesty**. "Acts prohibited by the college for which discipline may be administered include scholastic dishonesty, including but not limited or

cheating on an exam or quiz, plagiarizing, unauthorized collaboration with another in preparing outside work. Academic work submitted by students shall be the result of their thought, research or self-expression. Academia is defined as, but not limited to tests, quizzes, whether taken electronically or on paper, projects, either individual or group; classroom presentations, and homework."

F. **Student Discipline**. Any student caught cheating as described above will receive a "0" for that section and further disciplinary actions will be considered.

G. **Office of Students with Disabilities**. "Each ACC campus offers support services for students with documented physical or psychological disabilities. Students with disabilities must request reasonable accommodations through the Office for Students with Disabilities on the campus where they expect to take the majority of their classes. Students are encouraged to do these three weeks before the start of the semester."

"Students who are requesting accommodation must provide the instructor with a letter of accommodation from the Office of Students with Disabilities (OSD) at the beginning of the semester. Accommodations can only be made after the instructor receives the letter of accommodation from OSD."

H. **Academic Freedom**. "Institutions of higher education are conducted for the common good. The common good depends upon a search for truth and upon free expression. In this course the professor and students shall strive to protect free inquiry and the open exchange of facts, ideas, and opinions. Students are free to take exception to views offered in this course and to reserve judgment about debatable issues. Grades will not be affected by personal views. With this freedom comes the responsibility of civility and a respect for a diversity of ideas and opinions. This means that students must take turns speaking, listen to others speak without interruption, and refrain from name-calling or other personal attacks."

Testing Center Policy
ACC Testing Center policies can be fund at http://www2.austincc.edu/testctr/

Student Services
The web address for student services is
http://www3.austin.cc.ts.us/evpcss/rss/default.htm.
The student handbook can be found at
http://www3.austincc.edu/evpcss/handbk/toc.htm

Instructional Services
The web address is http://www3.austincc.edu/evpcss/memos/reference.htm, then click on "Campus Based Student Support Overview"