

Principles of Genetics

Biology 3704, Section 02

Course Syllabus — Spring 2007

Professor: Dr. F. S. Glazer (Office: C-138; Telephone: 737-3661; email: fglazer@kean.edu)

Office Hours: Monday and Wednesday: 8:30 – 10:30 am
Tuesday: 8:15 – 9:15 am

Required Textbook:

Text — Pierce, Benjamin A. (2005) Genetics: A Conceptual Approach, 2nd edition. New York: W.H. Freeman and Company.

On-line Resources: We will be using WebCT in this course as a way to communicate. I will post reading guides and announcements there, as well as links and other materials that may be helpful to you in learning the course material. The WebCT site also contains quizzes you can use to test your understanding of the material before we meet. For instructions on how to log into the course and information about where to get help on using WebCT, please go to my website, located at <http://www.kean.edu/~fglazer>, and click on “Principles of Genetics” (under “Spring 2007 Courses.” Once you know your login and ID, you can log into the WebCT server at <http://online.kean.edu:8900>. You may also want to check out the textbook web site (<http://bcs.whfreeman.com/pierce2e/>), where you will find review materials, self-tests, and other useful resources.

Catalog Description: The nature and functioning of hereditary material in living organisms including its biochemistry, mode of expression, and physical basis of inheritance. Emphasis on recent developments in the field. (3 hr. lec.)
Prerequisite: BIO 2400, CHEM 1084, or permission of instructor.

Reading Assignments: Before you come to class, *read the chapter!!* Reading guides will be posted on the WebCT site no later than the Thursday preceding the class. An average student should expect to spend 8-10 hours a week on this course, in addition to class time.

Help: Please feel free to ask questions as they arise during class. My office hours are listed on the top of this syllabus, as is my office phone number and email address. If you are having any difficulty with the course please come see me during office hours, send me email, post a question in WebCT, or set up an appointment. I will be happy to help you.

More Help: If you would like a tutor for this course, the Center for Academic Success provides one for you, free of charge. **I encourage you to work with a tutor regularly:** make a visit to the CAS to review the material a normal part of your weekly studying.

Exams: When taking exams, please keep in mind that you may not leave the room for any reason until you have turned in the exam. The dates will not be changed unless class is canceled, in which case the exam will be given the following class period. **Missed exams cannot generally be made up.** If you need to miss an exam for any reason, please call me BEFORE the exam if at all possible. Material

presented in reading assignments, team activities, class discussions and via WebCT activities may all be included on the tests.

Decorum: Please be sure to arrive on time – *your team is depending on you!*

Remember that there is usually bad traffic, and it is always hard to find a parking spot; allow extra time to get here. If you are late, please come in quietly and unobtrusively. Repeated late arrivals will lower your course grade. **Please do not conduct private conversations in class.** Please turn off all noise-making electronic devices (cell phones, beepers, etc.) before class starts. Please use the bathroom or get a drink before class starts. **Consistently disruptive behavior will lower your course grade.** Disruptive behavior includes but is not limited to the following: receiving beeper or cell phone calls during class, leaving class early or coming to class habitually late, talking out of turn or engaging in side conversations, doing assignments for other classes, reading the newspaper or other non-class-related materials, sleeping, and engaging in other activities that detract from the classroom learning experience.

Attendance: is strictly required of freshmen, and expected of everyone. The University Attendance Policy will be followed. Since the exams will be based primarily (but not exclusively) on material discussed in class, frequent absences will undoubtedly lower your grade. Please be sure to come on time; allow enough time to get here in bad traffic and to find a parking spot. Important announcements regarding exams, etc. are sometimes made at the beginning of class, and are not usually repeated.

Final Grade: Final grades are available on KeanWISE. If you would like to see your third exam, I will be available during class on the last day of the semester to go over the third exam and your grades with you. I do not discuss grades over the telephone or by email.

Special Needs: If you require special accommodations in this class because of a disability, please speak with me privately as soon as possible, so that we can work together to meet your needs.

Academic Integrity: is expected of everyone. I adhere strictly to the guidelines laid out in the University Academic Integrity Policy. All violations will be reported to the Office of the Provost.

Team-Based Learning: This course will be taught using Team-Based Learning (TBL; Michaelsen, Knight, & Fink, 2002). TBL is different than traditional teaching in two main ways. The first is in the use of the 'readiness assurance process' and the second is in the use of application-focused team activities.

In TBL, the majority of each class is spent applying the concepts in the readings. Therefore, you are responsible for reading the assigned chapters prior to each class meeting in order to ensure you are fully prepared to participate in in-class activities and discussions. In-class activities will involve decision-making tasks and other problem solving activities that will involve everyone in your team.

You will be assigned to a team the first week of class and will work with that team for the semester. The advantages of TBL include more interaction time among students, more hands-on application of concepts, and the opportunity to learn from others and for others to learn from you.

Readiness Assurance Process (RAP): The readiness assurance process is designed to help you begin to master the course material. The RAP is designed to provide you with immediate feedback on your understanding of the concepts, and with clarification of troublesome concepts. We will use the RAP every time we begin a new chapter. The RAP consists of five different activities:

- 1) individual pre-class preparation;
- 2) the individual Readiness Assessment Test (I-RAT);
- 3) the team RAT (T-RAT);
- 4) the team appeals process (instructions to be discussed in class); and
- 5) the post-RAT mini-lecture and/or focused conversation.

Both individual and team RATs will consist of 10-15 multiple-choice questions (assessing mostly foundational and application knowledge). Reading Guides for each RAP will be available via WebCT and you will be allowed to refer to your handwritten notes (one 8 ½ by 11 sheet per chapter) during the RATs.

After each RAP, you will work in your teams on application focused activities. These activities will be both topic-specific (related to the material from a single chapter) and integrative (related to the material from multiple chapters) assignments. Their goal is to deepen your understanding of the concepts and enable you to apply your knowledge to new situations.

Problem-Based Learning/Case Study: In your teams, you will work through a case study as a way to learn certain parts of the material. The case study will primarily be conducted online, with some class meetings devoted to the content. The case study will include discussion questions on WebCT, a list of “talking points” that you have to prepare (as a team) for your character, a mediation session that will culminate the case, and a reflective essay (written individually) about the content and process of the activity.

Grading Criteria: Your grades will be determined by scores in three major areas: Individual Performance (I-RATs, discussion questions, reflective essay, and exams), Team Performance (T-RATs, talking points, mediation activity, and application activities), and Team Maintenance (performance evaluations by team members). We will discuss the performance evaluation criteria part-way through the semester, and you will also have opportunities to give/get feedback to/from your team members so you can best improve your performance.

Your first team activity will be to determine the relative grade weights given to each of the three major areas this semester. Next, you will determine, within each category, how much weight will be given to each particular activity. Finally, a representative for each team will negotiate with representatives of the other teams to reach a consensus for the class.

Grade Weights:	% in each category	% of Total Grade
Individual Performance (10% - 70%)		30 %
I-RATs	15 %	
Discussion Questions (<i>for case study</i>)	20 %	
Reflective Essay (<i>for case study; maximum 15%</i>)	15 %	
Exam 1 (<i>minimum 25%</i>)	25 %	
Exam 2 (<i>minimum 25%</i>)	25 %	
	100%	
Team Performance (10% - 60%)		50 %
T-RATs	30 %	
Application activities	30 %	
Talking Points (<i>for case study</i>)	25 %	
Mediation Activity (<i>for case study</i>)	15 %	
	100%	
Team Maintenance (10% - 30%)		20 %
TOTAL		100%