Bellevue Community College
Biology 275
Introductory Biology
Spring 2010
Item # 3125 (Section A)

Course Information

Instructor: Dr. Gita Bangera
Class Hours: MW 9.30 to 10.45 (S110)
TTh 9.30 to 11.20 (S110)
Office S240E
Email gita.bangera@bellevuecollege.edu
Telephone 425 564 4031
Text Book: Bios Instant Notes in Molecular Biology Third Edition
Lab Packet: None
Website http://scidiv.bcc.ctc.edu/mb
Other Materials:

This syllabus is the best guess as of now and is liable to change. Changes to the syllabus will be announced in class and/or listed on the website
1. Introduction

Biology 275 introduces the use of laboratory tools and techniques to sequence DNA. Topics include DNA structure and gene expression. Emphasis is on experimental methods and design. Students learn to think critically about research methodology and scientific investigation. Required: Bio101 (Biol& 160) or Bio 201 (Biol& 211)

Learning outcomes

- Describe the role of DNA science in genomics and biotechnology
- List structural, functional and organizational features of DNA and RNA
- Compare and contrast prokaryotic and eukaryotic gene structure function and regulation.
- Recognize the important features of genomic structure.
- Perform specific recombinant DNA techniques
- Demonstrate skill in storage, handling and quantification of DNA
- Describe methods used for DNA library construction and maintenance
- Demonstrate skill in DNA isolation and purification
- Compare and contrast DNA sequencing strategies
- Analyze DNA sequences using current software
- Use software required for construction and maintenance of genome database
- Demonstrate ability to present data in a scientific format
- Apply research strategies and scientific methods
- Discuss ethical, social and economic issues with genome science

2. Attendance

Class attendance is expected. It is difficult to do well in any subject without attending class, and lecture and laboratory materials are essential for success. You are responsible for knowing class materials whether you attend class or not. You are also responsible for any changes in the syllabus, including changes for exam dates or assignment dates whether you have been attending class or not, or if for some reason, fail to note a change at the time it is announced.

3. Grading

Grading will be discussed on the first day of class

*Code of Conduct – How scientists work

Teamwork is essential to the success of modern research. The success of each day’s sequencing experiment depends upon working together. In order to accomplish our DNA sequencing project, each student must take their role and responsibility seriously. This involves:

- Professional conduct, including punctuality. To be successful, each step in the experiment depends upon the timely and accomplishment of the preceding steps.
- Being able to provide and request help when needed. Each of you maybe or may become more adept in some aspects during the class than other students. If you are the “expert” in the field, you are expected to help other students in those areas. Similarly you should feel free to ask other students for help in areas in which they may become “experts”.
- Observation—be alert to the details of each day’s experiment. Often discoveries are made when an anomaly is noted and communicated
- Communication - share your observations with others—The use of the daily log book is mandatory. In the log book it is essential that you record any unusual characteristics of a given day’s experiment. This will enable us to troubleshoot or interpret unusual results.
- Mentoring - You may have opportunities to discuss your work with students who are in the feeder classes. You are expected to help them with their questions as much as possible. If you are not sure, please feel free to refer them to the instructor.

*Initiative

Bio 275 is the heart of the ComGen genome sequencing project. Unlike other courses, Bio 275 is designed to help you learn by actually doing research, functioning like a research team dedicated to a common goal. As for any research scientist, this opportunity is what you make of it. A scientist's effort and dedication are the keys to
success. Ideally, in Bio275 you will always be seeking ways to advance the project. By enrolling in the course you have taken the initiative through research in a relatively unstructured setting. Thus you begin the quarter with 75 points for initiative. If the teaching team observes that you make poor use of your laboratory time or computer laboratory time, your 75 initiative points will be docked incrementally. Our progress depends on the quality and quantity of everyone’s contribution.

Nobody will be watching over your shoulders all the time. You have to keep track of what you have turned in - I will not be constantly reminding you. If you find interesting websites etc, share it with the class (Send a link to me and I will try to put it on the class website). If you are having trouble understanding something first ask a fellow student then come and ask me or Qing or Chris

The Grading scale is:
A = 4.0 = 93% or higher of total points possible
A- = 3.7 = 89-92% of total points possible
B+ = 3.3 = 87-89% of total points possible
B =3.0 = 83-86% of total points possible
B- = 2.7 = 80-82% of total points possible
C+ =2.3 = 77-79% of total points possible
C = 2.0 = 73-76% of total points possible
C- =1.7 = 70-72% of total points possible
D+ =1.3 = 66-69% of total points possible
D = 1.0 = 60-65% of total points possible
F = Less than 60% of total points possible

4. Assignments and Reports

All assignments and reports are due at the beginning of class on the due date. Late papers are not accepted and receive no credit. Assignments will be announced in class. Credit received for assignments will be added to the total course point total. You are responsible for assignments even if you do not attend class on the day an assignment is announced, or for some reason, fail to note the assignment at the time it is announced.

On occasion, I may assign group projects in which members of the group will work collaboratively on the assignment. Each member of the group will receive a common score on the project, as well as an individual score for his/her contribution to the assignment’s completion. A collaborative assignment means that one comprehensive report/project is turned in. Although each member uniquely contributes to the whole, the project is not a sequential compilation of each individual’s component part. For example, a text chapter summary should consist of one cohesive report, not three or four independent sections, each completed by one member of the group.

5. Bellevue Community College Science Division Policy on Cheating

You, the student, are expected to conduct yourself with integrity. When you cheat*, or aid someone else in cheating, you violate a trust. If you cheat the following actions may be taken:

1. You will receive a grade of 0 on the exam, lab, quiz, etc., where evidence of cheating has been demonstrated. This grade cannot be dropped.
2. A report of the incident will be sent to the Dean of Student Services. He/she may file the report in your permanent record or take further disciplinary action such as suspension or expulsion from the college.

If you feel you have been unfairly accused of cheating, you may appeal. (For a description of due process procedures see WAC 132H-120, copies of which are available in the Student Body Government Office)

*Cheating includes, but is not limited to, copying answers on tests or homework, glimpsing at nearby test papers, swapping papers, stealing, plagiarizing, illicitly giving or receiving help on exams or
assignments

Note that copying and pasting or using the exact words from a website without quotation marks and a reference is considered plagiarism. When in doubt say it in your own words!

6. Withdrawal from the Course
Withdrawal from a course is the termination of the student's registration in that course. To do so, the student must complete an official Add/Drop form, available at the Registration Office.
The various deadlines for withdrawal are listed at the following website:
http://www.bcc.ctc.edu/enrollment/calendar/deadlines/
If you just stop coming to class and do not complete the course, you will receive an "F" at the end of the quarter

7. Disability accommodation:
If you require accommodations based on a documented disability, have emergency medical information to share, or need assistance in case of emergency evacuation; please make an appointment with me as soon as possible.

If you would like to inquire about becoming a DRC (Disability Resource Center) student please call (425) 564-2498 or 564-4110 (TTY line) or go in person to the DSS office in B132