Advanced Biochemistry, Cellular and Molecular Biology, Biology 567  
(BCMB III)  
Spring 2014  
Schedule # 20465

COURSE INFORMATION

Class Days: Tuesdays/Thursdays/Fridays  
Class Times: 9:30-10:45 (T/Th), 9:00-9:50 (F)  
Class Location: LS 134 (T/Th), LS 132 (F)  

Contact Information:

Section I: Dr. Ricardo Zayas  
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Section III: Dr. Marilyn Thoman  
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Course Overview

Description from Official Course Catalog: Advanced concepts of cellular biology, molecular biology, and biochemistry.

Course Content: Major topics include gene regulation (transcription, translation and gene regulatory networks), genomics and whole genome analyses, cytoskeleton and locomotion, cell adhesion, signal transduction, immunology and cancer.

Student Learning Outcomes: This course will provide students with knowledge of advanced concepts of modern integrated cell biology, molecular biology, and biochemistry. As part of the learning objectives of this course the students will:

1) Interpret classic experiments in the fields of biochemistry, cell and molecular biology.  
2) Be able to access, analyze, and interpret the primary research literature.  
3) Design and propose experimental approaches to solving questions in biochemistry, cell and molecular biology.  
4) Orally present material from the primary research literature.  
5) Be able criticize and/or defend experimental data in the primary research literature.

Real Life Relevance: Students will learn how animals share common developmental mechanisms and how the information contained within their genomes is decoded during the process of development. Understanding these concepts can help students make informed decisions about topics such as stem cells, cloning and genetic engineering.
Relation to Other Courses: Bio 567 builds upon the major cell and molecular biology concepts introduced in Bio 203, Bio 366 and Chem 365. This course will present advanced examples of these subjects in the form of both lecture and literature presentations.

**Enrollment Information**

Prerequisites: Chem 365, Bio 366 and Bio 366L.

Adding/Dropping Procedures: Per University policy, the last day to add this course is the 10th day of the semester. Please note that if you have not been attending lectures through this period of time you risk falling behind in the material and your final grade may be negatively impacted.

If you have registered for the course but do not attend class within the first two lectures, you will be dropped from the course by the instructor. If you fail to have the required pre-requisite courses you may also be dropped from the course by the instructor. Please note that the instructor may not automatically drop you if you lack the pre-requisite courses - this could negatively impact your final grade for the course.

Crashers: Priority for crashing will be based on the number of units in the major. Open University students will be provided add codes once all SDSU students have added the course as per University policy.

**Course Materials**

Required Text: Molecular Cell Biology, H. Lodish et al., 7th Ed., W.H. Freeman & Co. [2013]. Note: You should have this textbook from Biology 366. The 6th edition of Lodish et al. is also suitable, but assigned reading pages are listed for the 7th Ed. Primary literature papers as assigned. Additional reading materials will be provided via Blackboard.

Additional online resources will be provided in lecture when applicable.

**Course Structure and Conduct**

The course is composed of lectures and primary literature presentations. Students are expected to complete assigned readings prior to class. We will discuss nine primary literature papers. All students should be ready to participate in class discussions. See Blackboard for Exam and Lecture Schedule.

It is important that you read the assigned materials before you come to lecture. Exams will cover both lecture and assigned reading materials.

All information for the course will be posted on Blackboard. Please be sure to consult Blackboard for scores, PDF files, notes, etc.

A separate document lists specific lecture topics and dates, including due dates for assignments and exams.
Course Assessment and Grading

There will be one exam for each of the three segments of the course, based on assigned readings and lecture material. Each segment will be worth one-third of the final course grade. For each segment, the exam is worth 75% of your segment grade. The remaining 25% of the segment grade will be based on literature analysis and critique, as specified by the instructors.

Make-up Policy: Note in advance when paper discussions and exams are taking place. Only exceptional circumstances or a medical condition accompanied by a doctor’s excuse will be accepted for a make-up exam.

Excuses for work-related activities are not valid.

Exam grading: When graded exams are returned to you, we will be happy to correct any math errors in calculating your score. If you wish to dispute a score on a graded question, you must write and submit a paragraph documenting why you feel your question was not graded correctly. We will use this information to determine if your question should be re-graded.

Final grades will likely be assigned according to a straight percentage distribution: A = 90-100%; B = 80-89.9%; C = 70-79.9%; D = 60-69.9%; F = <60%. The instructors may alter the grading scheme at their discretion.

Other Policies

Course Etiquette: Turn off your cell phones and pagers before entering class. Computer use for class is acceptable, but must not be distracting or disruptive. Use of cell phones or earphones during exams will not be permitted. Use of these devices during exams will result in an immediate grade of zero (0) for that exam.

Academic Dishonesty:
Plagiarism in any form will not be tolerated. No credit will be given for plagiarized work and students who plagiarize will be reported to the Judicial Procedures Office. Use of electronic devices such as cell phones and earphones will not be permitted.

Cheating will not be tolerated. Students who cheat will be reported to the Judicial Procedures Office.

Students with Disabilities: If you are a student with a disability and believe you will need accommodations for this class, it is your responsibility to contact Student Disability Services at (619) 594-6473. To avoid any delay in the receipt of your accommodations, you should contact Student Disability Services as soon as possible. Please note that accommodations are not retroactive, and that I cannot provide accommodations based upon disability until I have received an accommodation letter from Student Disability Services. Your cooperation is appreciated.