MOLECULAR BIOLOGY (BIO 3913)

Summer, 2007

MB 1.124; Tuesday& Thursday; 2:00-3:15 pm; UTSA-1604

Instructor: Dr. Tao Wei

Office: SB 4.02.34

Office Hours: Thursday 3:30 – 4:30 pm by appointment

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Required Text: *Molecular Biology* (3rd edition), 2005. Bobert F. Weaver. McGraw-Hill

Prerequisites: Biology I, II, III, organic chemistry I, BIO 2313 (Genetics)

Course Goal. This course encompasses a comprehensive general study of molecular biology. The syllabus spans biotechnology, functions of DNA and RNA and genomes. Objectives of the course are to provide the students with a general understanding of molecular biology, as well as to prepare them for advanced studies and research in related disciplines. The course further aims to prepare students for biomedical research.

Course Format. Lecture

Web page. Lectures and supplemental classroom instruction materials will be made available on the course web page. The students may access this material using either UTSA computers or the personal ones. WebCT is accessible at **http://webct.utsa.edu** or through "Quick Links" on the UTSA homepage [http://www.utsa.edu]. Detailed instructions are available on the WebCT home page.

Policy on Testing. Students must provide their own Scantron forms for exams if necessary. All personal items, such as caps, hats, books, purses, backpacks, phones, and briefcases must be placed out of view during exams. No one will be allowed to leave the room during exams. Responses recorded on the Scantron answer sheet will be graded as the student's answers. Makeup exams will be allowed only under extenuating circumstances, such as illness, and proof of such circumstances may be required.

Policy on Cheating. Copying, plagiarism, and cheating in any form will not be tolerated. Those in violation will be dropped from this class with a grade of "F." Further disciplinary action may follow.

Classroom Etiquette. To maintain learning focus in the classroom, all forms of disruption will be strictly prohibited. Thus, students must turn off their cell phones, pagers, and similar devices in class. Those who must keep such devices operational, such as for emergency information, must set them to vibration or a similar mode.

Course Assessment:

LECTURE ATTENDANCE

To enhance active and interactive learning in the classroom, students must attend each of lectures. Questions will be discussed based on the lecture topic and will be major components of exams. Attendance will be considered for grading; so please sign in.

EXAMS.

There will be three general exams and a final comprehensive one. For each exam the date will be announced two weeks before the exam. The typical format of questions will be multiple choices, but the instructors reserve the option to ask questions that require short descriptive answers. Each exam will carry 100 points. The material on each exam may include material covered during class, as well as material from out-of-class assignments. The final exam will be comprehensive, but its format will be similar to that of the general exams. Makeup general exams will be allowed only and only under extenuating circumstances, such as illness, and the instructor may require proof of such circumstances. No open notes or textual material will be permitted during the exams.

There will be no makeup final exam. Also, the University sets the final exam schedule, and requires full compliance with it. A student who cannot take the final exam at the specified time will be required to petition the Dean of the College of Sciences for permission to postpone the examination, following guidelines established by the College. Review your final exam schedules for all the courses that you are taking now. If you find that you have multiple final exams scheduled for the same day, plan accordingly or drop a course prior to census date and receive your full refund.

Grading.

Midterm grade will be based on Exam 1 and REVIEW QUESTIONS of Part 1.

The final course scores will be determined as follows:

	% of Final Score
ATTENDANCE	20%
Exam 1	20%
Exam 2	20%
Exam 3	20%
Final Examination	20%

There will be no "extra credit" options available at the end of the semester. The final scores and grades will be based solely on the listed above.

Letter grades will be assigned according to the percent scale below:

90-100	A
80-89	B
70-79	C
60-69	D
Less than 60	F

Student Responsibilities:

1. Commit an appropriate amount of study time outside of class for each hour spent in class. Because the syllabus is organized in a logical learning sequence, the students must strive to follow that order. Information in one chapter logically leads to the next. The students therefore must avoid study approaches, such as cramming, that disrupt this sequence.

2. Prepare for class by reading assigned material before it is covered in class. Your ability to understand and comprehend the lecture material will be significantly enhanced by reviewing the material beforehand.

3. Attend class regularly, take good lecture notes, and review class notes in context of relevant reading assignments. Exams will be largely on the textual and lecture material. You may therefore record lectures on tape for use as your own **personal** study aid. Note that lectures may embody material drawn from other sources. Thus, students should pay particular attention to lectures.

4. Find someone else to study with. Exchanging critical analysis of learning material with others is a proven technique for good learning. We therefore urge the students to form study groups for this purpose, and are willing to help any way we can. Nonetheless, it is the students' responsibility to act in this regard.

5. Ask questions and take advantage of office hours. Remember, the time the instructors make available for students outside the class is extremely valuable, both for the instructors and the students. Please take advantage of it.

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COURSE OUTLINE

Part 1. Introduction and biotechnology (5/06 –)

Chapters 1-5,

Part 2. Functions of DNA

Chapters 20 -23,

Exam #1

Part 3. Function of RNA.

Transcription Chapters 6-13
Posttranscription Chapters 14-16

Exam #2

Translation Chapters 17-19

Part 4. Genomes

Chapter 24

Exam #3

Comprehensive Final Examination (08/14 at 1:30-4:00pm**)**

This schedule is intended to reflect the tentative course content and an order of presentation.

Students are responsible for material indicated on these outlines as well as any additional material covered in lecture or provided as supplemental information either in class or on the Web page.

APPLICATION FOR AN EXCUSED ABSENCE

(One application for each absence only)

Course Number:
Course Title:
Name of Instructor: Name of Student: _____
Date of Absence:_____
Reason for Absence: Medical _____ Non-medical_____

For an absence with a medical excuse**, please attach an <u>original</u> copy of the physician statement with date, explanation and signature of attending physician. Please submit this application to Dr. Wei ASAP.**

For an absence without a medical excuse, you must submit this application in person to the Instructor <u>5 days prior to the day of absence</u> and obtain a tentative approval, pending completion of make-up work. **Late applications will NOT be accepted.** Please also indicate the followings:
1. the reason for absence: Excused absences will only be approved for academic-related reasons (such as presentation of your research paper in a national meeting). Personal matters including job and medical school interviews will NOT be approved.

_____

_____

2. support documents attached to this application: (such as a note from your professor on the presentation of your research paper in a national meeting)

_____

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3. make-up work and completion deadline: (such as submitting a two-page typed report on the missed class from recorded materials no later than 7 days after the class)

_____

_____

For Office Use Only:
Date received: _____Date of Tentative Approval _____By:_____
Date of make-up work completed_____
Date of Final Approval_____ By:_____