# BIOLOGY 311C - Brand INTRODUCTORY BIOLOGY I Spring 2010

Discussion sections corresponding to unique course numbers:	49710 Discussion Fri. 12:00 - 1:00 p.m.   49715 Discussion Mon. 1:00 - 2:00 p.m.   49720 Discussion Fri. 1:00 - 2:00 p.m.   49725 Discussion Mon. 2:00 - 3:00 p.m.	RLM 5.124 JES A215A RLM 5.124 JES A203A				
Lecture location:	GRG 102					
Lecture time:	Mon., Wed. & Fri. 9:00 – 10:00 a.m.					
Instructor:	Dr. Jerry Brand					
Office:	BIO 321					
Office Hours*:	Tuesday, Wednesday & Thursday 8:00 - 9:00 a.m.					
Tel:	471-1589					
e-mail:	jbrand@mail.utexas.edu					
Discussion Instructor:	Rebecca Knight					
Office:	BIO 320					
Office Hours*:	Wednesday 12:00 – 3:00 p.m.					
Tel:	471-1589					
e-mail:	<rknight@mail.utexas.edu></rknight@mail.utexas.edu>					
Textbook:	"BIOLOGY" 8 <sup>th</sup> Edit., by Campbell & Reece Publisher: Benjamin Cummings, 2008					
BIO 211-Brand web site: Website User ID: Password:	<u>www.sbs.utexas.edu/brand/bio311c</u> biosci\bio311c Prokaryotes!					

Many web sites include information pertaining to topics covered in this course and many books on various areas of cell and molecular biology are available in the Life Science Library in Main Bldg., Room 220 (MAI 220). You are encouraged to explore these resources on your own for more information.

Completion or concurrent enrollment in a semester of college-level chemistry such as CHE 301 is required for enrollment in BIO 311C. Thus, it is assumed that you know basic chemical principles. However, weeks 2 and 3 (Jan. 22 - 25 and Jan 29 - Feb. 1) discussion periods will be devoted to a review of chemical information directly applicable to this course.

The order of the lecture topics and reading assignments for this course is listed in the "Lecture/Exam Schedule and accompanying Reading Assignment". Information provided in the lectures and in textbook reading assignment will overlap, but will not always be exactly the same. Therefore you must become familiar with both the lecture content and the textbook information in order to be fully prepared for examinations.

\* The instructors will also be available for assistance at times other than during regularly scheduled office hours. Please e-mail to make an appointment.

## **General Course Information**

BIO 311c is an introduction to cell and molecular biology. These fields are among the most exciting frontiers of modern science, and are rapidly changing as new discoveries accumulate. Recent advances in practical applications of cell and molecular biology are revolutionizing medicine, agriculture and other fields of direct relevance to our daily lives. The sociological implications are profound. Thus, it is critical that rational decisions be made to determine what new biotechnologies should be exploited, and in which directions. An introductory course in cell/molecular biology is relevant not only as training for scientists, health-care practitioners and other specialists, but also as a source of information for the general public who will be voting on, and impacted by, these important issues.

Modern cell and molecular biology represent much more than a descriptive account of the tiny structures appearing superficially like microscopic bags, called cells. Structures and functions of cells are now known to the extent that roles of individual cellular molecules can be appreciated within the context of the integrated operation of the cell, and even the whole organism. Furthermore, technology is now available to manipulate cells biochemically and genetically such that individual organisms may be profoundly modified or whole species permanently altered. Although in this introductory course we mostly consider basic concepts of cellular structures and functions, it is hoped that you will explore topics of interest in more detail through web and library resources, especially to learn about practical applications and implications.

The subject matter of this course builds as new terms and concepts are introduced. Topics that are introduced early in the semester will serve as a basis for considering cells in more detail later in the course. You must become familiar with new topics and learn new terms as they are presented in order to master the material by the end of the semester. Most students find that attempting to "cram" the subject matter just a few days before an examination is not sufficient to produce "A"-level work. On the other hand, those who seriously attempt to understand the subject matter each day as it is presented generally require a minimum of review before examinations, and are likely to retain much of the information long after the course is completed.

## Textbook Reading Assignments

This course covers most of the information included in Campbell & Reece  $8^{th}$  ed. Chapters 2 -12, 15 – 17 and 19. A few illustrations and/or sections of other Chapters are also included. Textbook reading assignments are listed in the "LECTURE/EXAM SCHEDULE". Illustrations selected from chapters other than those listed in the Schedule will be placed on the course web site along with other presentation slides.

## Classroom policy

Regularly scheduled class periods will be devoted to lectures, punctuated by three exams. The lectures will be rather formal, but students are encouraged to ask questions or insert comments when these are likely to be of interest to others in the class. Virtually all lectures will be accompanied by PowerPoint presentation slides. Lecture information and the accompanying presentation slides will be primary sources of exam questions, so it is very important to attend lectures, obtain a complete set of class notes, and become familiar with presentation slide contents. Presentation slides will be placed on the course web site at least 24 hr prior to each lecture. For some lectures one or more slides may be updated after the lecture to correct any errors. Updated presentations will be placed on the web site no

later than 48 hr after each lecture. No formal lecture attendance record will be kept, but past experience indicates that regular class attendance greatly improves the prospects for high grades on course exams. The pace of the lectures is sometimes brisk, and definitions provided early in the course are used without review during subsequent class periods. Therefore, presentation slides and textbook reading assignments should be studied prior to each corresponding lecture. In general, specific reading assignments will not be announced in class for each successive period; rather you should determine which topic comes next from the subject under current consideration and the ordered list of topics "LECTURE/EXAM SCHEDULE AND ACCOMPANYING TEXTBOOK READING ASSIGNMENTS". We will adhere closely, but not necessarily exactly, to the dates indicated for each topic.

## Discussion Sections

Each student has been assigned a discussion section that meets one hour per week for the duration of the course. That period will serve different functions during different phases of the course. Attendance is expected and attendance records will be taken at all of the discussion periods. Subject matter presented during the discussion periods may be included on the exams. Faithful attendance at discussion periods may also have a bearing on where we draw the line between two letter grades in borderline cases. The assigned discussion rooms are large enough to accommodate extra students; some students may wish to attend a second discussion period for review. However, your attendance will be recorded for the discussion period to which you have formally been assigned. You must obtain written permission from the discussion instructor in order to switch from one discussion period time to another unless you formally go through the drop-add process.

The discussion periods during Jan. 22 & 25 and during Jan. 29 & Feb. 1 will emphasize chemical background information. Some of that information may be review to some students, but a thorough comprehension of the introductory chemical information will be essential for a good understanding of topics that will be presented later in the course. A few exam questions will be taken directly from materials presented during the first two discussion periods. The discussion periods immediately preceding each exam will be devoted primarily to a general review of the subject matter covered on the exam. Other discussion periods will be used principally to clarify or supplement topics covered in the textbook and in lectures.

## Examination and Grading Policy

Your grade will be based on your combined performance on mid-semester exams and a Final Exam. The schedule for these exams is shown in a table below and in the Course Schedule. Exam 1 - 3 will take place in the classroom during lecture periods. Each of these three exams will include only information presented since the most recent previous exam, and will not be comprehensive. The Final Exam will be comprehensive. It will be given in Room GAR 0.102, not in the classroom.

You are required to take all three of the 1-hour exams. We will then drop your lowest score for these three exams in calculating your final course average. The final average for students who must miss a one-hour exam due to an illness or other emergency will be calculated using the scores of the other two mid-semester exams and the final exam. Do not miss any of the one-hour exams lightly since there will not be any make-up exams. You will be assigned a "0" exam grade for any more than missed one-hour exam.

## **EXAMINATION SCHEDULE**

EXAM	DATE	TIME	LOCATION	TOPICS COVERED	COURSE WEIGHT
1	Friday, Feb. 12	9:00 a.m.	GRG 102	Through Feb. 10 assignme	ent 30%*
2	Friday, Mar. 12	9:00 a.m.	GRG 102	Feb. 16 – Mar. 10 assignme	ent 30%*
3	Friday, Apr. 16	9:00 a.m.	GRG 102	Mar. 22 – Apr. 14 assignme	ent 30%*
Final	Wednesday, May 12	7 - 10 p.m.	to be announced	All	40%

\*Only two of the three mid-semester (1-hour) examination grades will be averaged into the final course grade.

Most exam questions will be multiple choice, four choices with only one correct answer. A few questions may require you to fill in a blank, supply a short answer, or match a statement with a word or number from a list. A few questions may call for a simple calculation, but no calculator will be required or permitted during the exam. There will be no questions that require a long essay answer, and there will be no true-false questions. Exams from one or two previous semesters are on line at the course web site.

Your final course grade will depend on your performance on the exams, weighted as indicated in the table above. There will be no adjusted curve, so you are not competing with others in the class. We will not use the plus/minus grading system for assigning grades. We will adhere to the following grading scale:

## **ASSIGNMENT OF COURSE GRADES**

90 - 100 % = A 80 - 89 % = B 66 - 79 % = C 55 - 65 % = D < 55 % = F

Please see one of the instructors as early in the semester as possible if you are having excessive difficulty in the course. It is usually impossible to make corrective adjustments late in the semester.

## Course Drop dates

The last date to drop this course without possible academic penalty is February 15. The last date to drop the course (with the Dean's approval) is March 29.

## University Policies with regard to student conduct, obligations and privileges

This and all courses at UT-Austin must adhere to university standard policies as stated in the University "Handbook of Operating Procedures". Policies regarding academic integrity, students with disabilities, etc. can be found at: <a href="http://deanofstudents.utexas.edu/">http://deanofstudents.utexas.edu/</a>>.

Students with disabilities may request appropriate academic accommodations from the Division of Diversity and Community Engagement, Services for Students with Disabilities, 471-6259.