

Syllabus: Biology 140 - Fall Semester 2009

Textbook: Life: The science of biology, 8th Edition

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Wednesday 10-12

The ultimate goal of this course is to expose and correct misconceptions you might have about cell biology, construct knowledge and understanding of new sets of concepts and use those to demonstrate a deeper understanding of the workings of a cell. Hopefully, this will provide a foundation for you to think critically, analyze and put into the correct context any new information you encounter. To accomplish this will require a give and take. I will ask questions of the class as a whole using the "clicker" technology and will also call on individuals. My intention is to gauge understanding. I expect you to ask questions if you encounter ambiguity. As you have all heard, there are no stupid questions. If one person has a question because something is unclear, it is likely that several if not many more have the same question. So ask it.

I expect you to come to class having read the material in anticipation of the class.

The following is an outline of the topics to be covered. The timeline is approximate and will depend on how much time is necessary to cover any particular area. Because you already have this, you will know what to read for the next class based upon where we ended the previous class.

Date	Topic	Relevant Readings
Aug. 20 (R)	Intro - collecting facts	
Aug. 25 (T)	A Bird's-Eye View of the Cell, Chemical Bonds /redox	Chapter 2 & 4
Aug. 27 (R)	Water / pH / Organic Compounds	Chapter 2 & 3
Sept 1 (T)	Biological Macromolecules I	Chapter 3
Sept 3 (R)	Biological Macromolecules II	Chapter 3
Sept. 8 (T)	Biological Macromolecules III	Chapter 3
Sept 10 (R)	Organization of the cell: overview and methods	Chapter 4
Sept 15 (T)	" and Biological membranes	Chapter 4 and 5
Sept 17 (R)	Biological membranes: transport	Chapter 5
Sept 22 (T)	EXAM 1	
Sept 24 (R)	Energy, Enzymes and Metabolism	Chapter 6
Sept 29 (T)	" and Harvesting Chemical Energy	Chapter 6 and 7
Oct. 1 (R)	Harvesting Chemical Energy	Chapter 7
Oct. 6 (T)	Photosynthesis: Energy from the sun	Chapter 8
Oct. 8 (R)	Photosynthesis: Energy from the sun	Chapter 8
Oct. 13 (T)	EXAM 2	
Oct. 15 (R)	Fall Break	

Oct. 20 (T)	The Cell Cycle and Cell Division	Chapter 9
Oct. 22 (R)	" and DNA and Heredity	Chapter 9 and 11
Oct. 27 (T)	DNA and Heredity	Chapter 11
Oct. 29 (R)	DNA to Protein	Chapter 12
Nov. 4 (T)	DNA to Protein	Chapter 12
Nov. 6 (R)	EXAM 3	
Nov. 11 (T)	Eucaryotic Genome and its expression	Chapter 14
Nov. 12(T)	Eucaryotic Genome and its expression	Chapter 14
Nov. 17(T)	Cell Signaling and Communication	Chapter 15
Nov. 19 (R)	Cell Signaling and Communication	Chapter 15
Nov. 24 (T)	Recombinant DNA and Biotechnology	Chapter 16
Nov. 26 (R)	Thanksgiving	
Dec. 1 (T)	Classes end - Recombinant DNA and Biotechnology	Chapter 16
Dec. 4 (R)	Final Exam	NOTE TIME: 10:15 - 12:15

Homework: You can earn extra credit by writing multiple choice questions (with five choices) about the content of the course. These are to be posted on the course wiki so that everyone can read them. However, this is not so simple. On the blackboard site under course materials is a link to what is referred to as a "one page Blooms". Dr. Bloom developed a "taxonomy" for the different cognitive levels of learning, ranging from lower to higher order cognition. To earn credit for your questions you must write questions that test more than simple memorization. I'll post some guidelines for these on BB. I want you to do this in teams of 4 or 5. Before you have posted any questions you must let me know the team members' names and the team name. When questions are posted they must be identified with the team name. No questions will be accepted except from teams.

It is important for you to know about some of the support systems and university policies that apply to all courses.

If you need course adaptations or accommodations because of a documented disability or if you have emergency information to share, please contact the office of disability services at 974-6087.

"An essential feature of the University of Tennessee, Knoxville, is a commitment to maintaining an atmosphere of intellectual integrity and academic honesty. As a student of the university, I pledge that I will neither knowingly give nor receive any inappropriate assistance in academic work, thus affirming my own personal commitment to honor and integrity."
[2008-2009 Undergraduate Catalog, p. 38]

"Students are also responsible for any acts of plagiarism. Plagiarism is using the intellectual property of someone else without giving proper credit. The undocumented use of someone else's words or ideas in any medium of communication (unless such information is recognized as common knowledge) is a serious offense, subject to disciplinary action that may include failure in a course and/or dismissal from the university. Specific examples of plagiarism are:

Copying without proper documentation (quotation marks and a citation) written or spoken words, phrases, or sentences from any source;
Summarizing without proper documentation (usually a citation) ideas from another source (unless such information is recognized as common knowledge);
Borrowing facts, statistics, graphs, pictorial representations, or phrases without acknowledging the source (unless such information is recognized as common knowledge);
Collaborating on a graded assignment without the instructor's approval;
Submitting work, either in whole or in part created by a professional service and used without attribution (e.g., paper, speech, bibliography, or photograph)."

[2008-2009 Undergraduate Catalog, p. 38]

University Withdrawal Policy

No W on transcript: **August 28** is the last day you may drop full-term courses without a W on your transcript.

W on transcript: **October 20** is the last day you may drop full-term courses and receive a "W" on your transcript that is not computed in your GPA.

WP or WF on transcript: from **October 21** until **November 10** you may drop full-term courses and receive either a WP (Withdraw Pass) or WF (Withdraw Fail). If you are passing the course, I will award you a grade of WP. This grade will not impact your GPA. If you are failing the course, you will receive a WF. This grade will not impact your GPA. My signature is required on a WP/WF form that you may retrieve from the web at <http://registrar.tennessee.edu/forms/index.shtml> or pick up at the registrar's office. Classes end - December 1.

Total Withdrawal from the University:

If you need to drop all of your courses for the term (e.g. due to unexpected illness, accident, etc.), you may do so by applying for a total withdrawal from the university for the term. The deadline for total withdrawal is December 1, 2009 (last day of classes), and the application is available at <http://registrar.tennessee.edu/forms/index.shtml>. If you apply for a total withdrawal, you must also apply for readmission through the Office of Undergraduate Admissions, 320 Student Services Building, (865) 974-2184.

Grading: After about the fourth class period any clicker quizzes given will count toward the grade. You will get immediate, anonymous feedback after each question is answered. The four lowest clicker quiz scores will be dropped. The rest will count toward the grade. This is intended to cover any problems such as forgetting to bring your clicker to class, the clicker malfunctioning during class, not being able to attend class, etc. These in class quizzes will count as 7% of your total grade. There will be optional homework that you can do and this will count as extra credit. This could add 7% to your total grade. Each of the exams will be worth 100 points. Each will be worth 17% of the final grade. The exam questions will be multiple choice. The lab grade counts as 25% of your total grade.

The contribution of each evaluative part of the course contributes to the final grade as follows:

Laboratory grade: 25%
Exam 1: 17 %
Exam 2: 17%
Exam 3: 17%
Final Exam: 17%
In class quizzes: 7%
Extra credit: 7%

The grading scale is as follows:

A: 90 - 100
A-: 87-89
B+: 84-86
B: 80 - 83
B-: 77-79
C+: 72-76
C: 65 - 71
D: 50-64
F: 0 - 49