Biology 1441 and Biology 1341: Cell and Molecular Biology
Lecture Syllabus
Spring 2016 Semester, Lecture Section 002

Lecture Instructor: Dr. Shawn Christensen
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Office Hours: MWF 10:50 am -11:50 am (i.e., right after class)
Time and Place of Class Lecture Meetings: MWF 10:00 am - 10:50 am, Life Science (LS) 119.

Description of Course Content (BIOL 1441/1341): The first of a two-part introductory biology sequence, this course focuses on the chemical and molecular basis of life, including metabolism, cell structure and function, and genetics. Laboratory experiments are designed to complement theory presented in lecture.

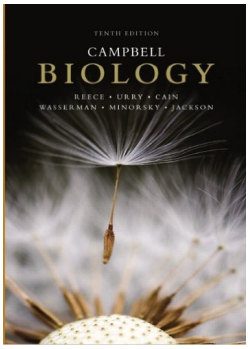
This course satisfies the University of Texas at Arlington core curriculum requirement in life and physical sciences.

Student Learning Outcomes (lecture and lab):
- Understand the essential details of cell and molecular biology at an introductory level and gain a basic knowledge of the scientific method.
- Gain hands-on knowledge of cellular and molecular aspects of biology through demonstration and experimentation
- Learn the scientific process by designing and conducting experiments, collecting and analyzing data, and presenting results, in both written and oral formats
- Learn essential laboratory procedures and protocols
- *Critical Thinking Skills*: to include epistemology, scientific methodology, synthesis of information, creative thinking, innovation, inquiry, analysis, and evaluation;
- *Communication Skills*: to include effective development, interpretation and expression of ideas through written, oral and visual communication
- *Empirical and Quantitative Skills***:** to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions
- *Teamwork***:** to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal

Course Components and Syllabus Structure: This syllabus describes policy, procedures, and content for both the lecture and laboratory components of this course. Lecture information is given first, and then a description of how your final grade will be calculated based on your lecture and lab grades. This is followed by the Laboratory Syllabus, and finally, general rules and requirements for the entire course (lecture plus lab).

NOTE: I am not responsible for the labs. If you have a laboratory-related issue, you should speak with your Graduate Teaching Assistant, and then if necessary the Laboratory Coordinator. Refer to the Laboratory Syllabus below for details.

Lecture Requirements: You are responsible for material covered in lectures, plus anything else that I specify, from the textbook or other sources. [Other instructors may have additional or slightly different requirements]



Required Textbook for Lecture: Campbell Biology, 10th Edition, by Reece and coauthors (Publisher: Benjamin-Cummings, Pearson). Among the cheapest ways to accomplish this is to buy a subscription to electronic version of the text book which is good for several semesters: Campbell Biology, 10th Edition $102.99 | ISBN-10: 0-321-97473-5 / ISBN-13: 978-0-321-97473-0 / eTextbook; http://www.mypearsonstore.com/bookstore/campbell-biology-subscription-0321974735. For those that would rather have a paper version of the text book, the UTA bookstore has the physical text book ISBN-13: 978-0321775658 / ISBN-10: 0321775651. You can use earlier versions of the physical text book, however you are responsible for noting any changes. Exams will be based on the material in the 10th edition.

Studying: UTA recommends that for courses such as these, students should expect to spend about 3 hours per week studying for each course credit hour. Including lab, this is a 4-credit course -- so the University's recommendation is 12 hours per week outside of class. This is the foundation for all other Biology classes that you will take, and if you get the basics straight here, it will make your entire degree program easier. Given the fast pace and range of facts and concepts that we cover, this course is pretty much guaranteed to take a lot of time. There is no way to avoid this, and it is essential that you keep up with the material or you will get behind very quickly. Many top students study 20 hours a week, spaced out over multiple days.

Lecture Attendance: Class attendance and participation will be based on class questions posed through Clickers (iClicker2 ISBN: 1498601364 – can purchase iClicker 1).

I do not take attendance. However, students who attend class regularly almost always perform better on exams than those who do not. Attendance at lab is required (see Laboratory Syllabus).

Supplemental instruction (SI): You will have access to Supplemental Instructor(s) for 1441/1341 who will hold sessions outside lecture to help you understand the material. Supplemental Instruction is run through the student support services in Ransom Hall. I do not oversee Supplemental Instruction for 1441/1341 or have any connection to it. For general information on Supplemental Instruction, as well as other student support services available at Ransom Hall, please visit http://www.uta.edu/universitycollege/current/academic-support/learning-center/index.php.

Lecture Schedule (topics and exams): Timing of exams and material covered is approximate and may be adjusted according to our progress. You will be notified of upcoming exams at least a week in advance. There is no excuse for "not knowing" that an exam is coming up! Come to class regularly and check blackboard regularly. The URL for blackboard is https://elearn.uta.edu.

Chapter 2: The Chemical Context of Life
Chapter 3: Water and Life
Chapter 4: Carbon and Molecular Diversity of Life
Chapter 5: The Structure and Function of Large Biological Molecules
Lecture Exam 1 = 23% of lecture grade

Chapter 6: A Tour of the Cell
Chapter 7: Membrane Structure and Function
Chapter 8: An Introduction to Metabolism
Chapter 9: Cellular Respiration and Fermentation
Chapter 10: Photosynthesis
Lecture Exam 2 = 23% of lecture grade

Chapter 12: The Cell Cycle
Chapter 13: Meiosis and Sexual Life Cycles
Chapter 14: Mendel and the Gene Idea
Chapter 15: The Chromosomal Basis of Inheritance

Chapter 16: The Molecular Basis of Inheritance
Lecture Exam 3 = 23% of lecture grade

Chapter 17: Gene Expression: From Gene to Protein
Epistemology, critical thinking, the scientific method, evolution, climate change
Final Lecture Exam (comprehensive) = 23% of lecture grade
Class participation/attendance = 8% of lecture grade via iClickeriClicker2 ISBN: 1498601364

Exams will be mostly multiple-choice. On occasion I may include short answer questions. You are required to bring #2 pencil and a form 4521 Scantron to each exam. Mark answers firmly on the Scantron. Erasures should be called to the attention of the professor at the time the Scantron is turned in on the exam day. Scantrons are copied immediately after the exam. **If the answer is not marked on your scantron, but is circled on your exam, the answer does not count.**

NO ELECTRONIC DEVICES MAY BE USED IN ANY LECTURE EXAM.

Important UTA Dates:
Jan 19_First day of classes
Mar 14-19_Spring Break
Apr 01_Last day to drop classes; submit requests to advisor prior to 4:00 pm
May 06_Last Day of Classes
May 09_Final Exam **8:00 am - 10:30 am** in LS 119 (our normal classroom)

Blackboard: You are responsible for checking Blackboard on a regular basis. Lecture slides, syllabus, exam dates, grades, and other topical information can be found on Blackboard. If you have any questions, please check Blackboard first before emailing me. To access blackboard point your web browser of choice to elearn.uta.edu

Grading Policy: Biology 1441 is a four−credit class that includes a lecture and a laboratory. For grading purposes, the lecture comprises 2/3 of your grade while other 1/3 is your lab grade. Therefore, you can multiply your final lecture grade by 0.6667 and your lab grade by 0.3333 and add them together to get your complete course grade. Biology 1341 is identical to Biol 1441 except that there is no lab associated with the course (the lab component is separate). The grade in 1341 is based solely on the lecture.

- You are not permitted to drop/withdraw from the lecture OR laboratory separately. Drops and withdrawals will be applied to both (= lecture and lab are parts of the same course).
- University policy prohibits extra credit in any form for lecture or lab.
- Your lecture grade will be determined as follows:
  Midterm exams (3 total), 23% each
  Comprehensive Final Exam, 23%
  iClicker = 8%

Determination of Final Grade (Lecture & Lab):

90+ = A
80-89.9 = B
70-79.9 = C
60-69.9 = D
Less than 59.9 = F

There are no make-up exams. Grades for exams missed with a verifiable excuse will be replaced by the final exam grade. Otherwise, the grade for a missed exam is zero. After posting the exam results, I will go over the exam in class. You will be able to view your most recent exam during office hours for two weeks post posting of the grade.

Grade Grievance Policy: Students have ***one week*** from the time a grade is posted on Blackboard or provided otherwise to dispute the grade. Grades cannot be contested after this deadline has passed. After

posting, I will go over the exam in class. You will be able to briefly view your most recent exam during office hours for two weeks post posting of the grade.

Academic Integrity: It is the philosophy of The University of Texas at Arlington that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form. All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. Discipline may include suspension or expulsion from the University. According to the UT System Regents' Rule 50101, §2.2

> ***Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.***

CHEATING IN ANY FORM WILL NOT BE TOLERATED. IF YOU ARE CAUGHT, YOU WILL NOT RECEIVE CREDIT FOR THAT EXAM OR ASSIGNMENT AND MAY BE DISMISSED FROM LECTURE OR LAB. ALL CASES OF PLAGIARISM OR OTHER CHEATING WILL BE REFERRED TO THE OFFICE OF STUDENT CONDUCT WITHOUT EXCEPTION.

Drop Policy: Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. **Students will not be automatically dropped for non-attendance** (= if you stop showing up, taking exams, going to lab, etc. you will receive a grade of zero for everything you missed and a final grade that includes these zero grades). Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. Contact the Financial Aid Office for more information. Payment must be received by the term due date or your registration will be cancelled. If your registration is cancelled for non-payment, you may reregister for classes but only if seats are available.

Grade Replacement Policy: Students enrolling in a course with the intention of replacing a previous grade earned in the same course must declare their intention to do so at the Registrar's office by Census Date of the semester in which they are enrolled. Grade replacement will not be allowed if the above procedure is not followed.

Americans with Disabilities Act: The University of Texas at Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including the *Americans with Disabilities Act (ADA)*. All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. In order to receive accommodation, students must present this letter to their lecturer AND GTA or the Laboratory Coordinator ***by the end of the second week of lecture AND second week of labs, and prior to any assignments, exams, quizzes or other activities that require accommodation.*** Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability or by calling the Office for Students with Disabilities at (817) 272-3364.

Student Support Services Available:
The University of Texas at Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. These resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals to resources for any reason, students may contact the Maverick Resource Hotline at 817-272-6107 or visit www.uta.edu/resources for more information.

Electronic Communication Policy
The University of Texas at Arlington has adopted the University "MavMail" address as the sole official means of communication with students. MavMail is used to remind students of important deadlines, advertise events and activities, and permit the University to conduct official transactions exclusively by electronic means. For example, important information concerning registration, financial aid, payment of bills, and graduation are now sent to students through the MavMail system. All students are assigned a MavMail account. ***Students are responsible for checking their MavMail regularly.*** Information about activating and using MavMail is available at http://www.uta.edu/oit/email/. There is no additional charge to students for using this account, and it remains active even after they graduate from UT Arlington.

Student Feedback Survey: At the end of each term, students enrolled in classes categorized as lecture, seminar, or laboratory shall be directed to complete a Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student's feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit http://www.uta.edu/sfs.

Final Review Week: A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week unless specified in the class syllabus. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.