


# Biology 1441.001

## Cell & Molecular Biology

### Fall 2014



**Lecturer:** Claudia P. Marquez

**Email:** claudia.marquez@mavs.uta.edu

**Office:** Engineering Research Building #448

**Office Hours:** M & W: 2:00 – 3:30 PM

**Telephone number:** 817-272-9188

**Section Information:** BIOL 1441.001

#### **Time and Place of Class Meetings:**

- Monday, Wednesday and Friday 9:00 – 9:50 AM
- Life Science, Room 119

#### **Description of Course Content:**

The first of an 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.

Note: Modern Biology is an integrative discipline, incorporating elements of Mathematics, Chemistry, Computer Science, and Writing. We expect that you have at least a basic understanding of each of these elements.

#### **Student Learning Outcomes:**

- 1) Students will learn the essential details of cell and molecular biology at an introductory level.
- 2) Students will learn to apply their knowledge using critical thinking skills.

#### **Expectations:**

Attend class regularly and participate in discussions. Show up and be prepared to learn. Be courteous and respectful to your fellow classmates.

#### **Recommended Textbooks and Other Required Course Materials:**

- Campbell & Reece. Biology 8<sup>th</sup>, 9<sup>th</sup> or 10<sup>th</sup> Edition
- Supplemental Materials and Announcements can be accessed on Blackboard <https://elearn.uta.edu/>
- **Laboratory Manual:** UTA An Introduction to General Biology Laboratory Manual, Walsh (\$20 for sale during your lab)

**Grading:** Your lecture grade is 67% (2/3) of your total grade. Your lab grade is 33% (1/3) of your total grade.

- A. 3 Lecture Examinations, each 100 points (50 multiple choice questions). Your lowest lecture exam grade will be dropped.

**NOTE:** If you receive A's on **all three** lecture exams, you will take a shortened final exam of 20 questions on new material only (chapters 16 & 17).

- B. Final Examination- comprehensive, 100 points (100 multiple choice questions).

**YOU MUST TAKE THE FINAL EXAM.** The final exam will cover chapters 2-17. If you qualify for the shortened final, you will only be tested on new material. You are scored the same as if you took the regular final; for example 18/20 = 98/100, 98% not 90%.

**\*Total possible points for lecture:** 300 points (200 points lecture exams + 100 points final exam)

C. To calculate your grade:

**Lecture-** Add your exam points together and divide by 400, then multiply times 0.67.

**Lab-** multiply lab grade times 0.33.

\*Add those numbers together for your final grade.

D. Grades: A = 89.5-100; B = 79.5-89.4; C = 69.5-79.4; D = 59.5-69.4; F = 59.4 and below

**Expectations for Out-of-Class Study:** Beyond the time required to attend each class meeting, students enrolled in this course should expect to spend at least an **additional 9 hours per week of their own time** in course-related activities, including reading required materials, completing assignments, preparing for exams, etc.

**EXAM DAY:** Students are required to provide their own scantron form 4521 and a #2 pencil for each test. Your student ID is required for every examination. **If the answer is not marked on your scantron, but is circled on your exam, the answer does not count.** Please make sure you mark your scantron correctly!

**Make-up Exam Policy:** There are no make up exams. If you miss a lecture exam, it will count as your dropped exam.

**Attendance:** Attendance is highly recommended; excessive absences can potentially affect your course grade. You are responsible for any information presented in class. If you miss class, **YOU** are responsible for obtaining missed information, class notes, etc. Attendance on exam days is mandatory.

#### Important Dates:

- **Labor Day Holiday:** Monday, September 1st
- **Last day to withdrawal:** Wednesday, October 29th
- **Thanksgiving:** November 27-28th
- **Final Exam:** Wednesday, December 10th, **8:00 – 10:30 AM**, same room as lecture  
[http://www.uta.edu/aao/recordsandregistration/assets/pdf/final\\_exam\\_schedule\\_fall2014.pdf](http://www.uta.edu/aao/recordsandregistration/assets/pdf/final_exam_schedule_fall2014.pdf)

**STUDENT WITH DISABILITIES:** If you require an accommodation based on disability, I would like to meet with you in the privacy of my office, during the first week of the semester, to make sure you are appropriately accommodated.

**American 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. Student responsibility primarily rests with informing faculty at the beginning of the semester and in providing authorized documentation through designated administrative channels. 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. 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](http://www.uta.edu/disability) or by calling the Office of Students with Disabilities at (817) 272-3364.

**Title IX:** The University of Texas at Arlington is committed to upholding U.S. Federal Law “Title IX” such that no member of the UT Arlington community shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity. For more information, visit [www.uta.edu/titleIX](http://www.uta.edu/titleIX).

**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. "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." (Regents' Rules and Regulations, Series 50101, Section 2.2).

All students enrolled in this course are expected to adhere to the UT Arlington Honor Code:

*I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.*

*I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.*

**I WILL NOT TOLERATE CHEATING IN ANY FORM. IF YOU ARE CAUGHT, YOU WILL NOT RECEIVE CREDIT FOR THAT ASSIGNMENT AND WILL BE REPORTED TO THE OFFICE OF STUDENT CONDUCT.**

#### **STUDENT RESPONSIBILITIES:**

- A. Familiarize yourself with course syllabus. **YOU** are responsible for this information.
- B. **Memorize your lecture section and your professor's and GTA's names.**
- C. **Write your entire name and student ID on anything you turn in to the instructor.**
- D. Show respect for instructor and fellow students at all times.
- E. Adhere strictly to standards of academic honesty, cheating results in an automatic F in the course.
- F. Attend class regularly, **on time**, and remain the entire class period.

**Electronic Communication:** UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at <http://www.uta.edu/oit/cs/email/mavmail.php>.

**Students are responsible for checking their email regularly.**

**\*Email Note:** When emailing me, be sure to **include your entire name, your class and your section.** I will not read the email if this information is not available. Be professional and courteous. You should always address your professors as: Professor or Dr. and include your full name.

**BLACKBOARD:** **You are responsible for checking Blackboard on a regular basis.** All class notes; grades and information, including this syllabus can be found on Blackboard. If you have any questions, **please check Blackboard first**, if you still cannot find the information you are looking for, then you may email me. **To access blackboard:** [elearn.uta.edu](http://elearn.uta.edu)

**Student Support Services:** UT 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. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to [resources@uta.edu](mailto:resources@uta.edu), or view the information at [www.uta.edu/resources](http://www.uta.edu/resources).

**SOAR TUTORING:** SOAR (Students Obtaining Academic Readiness) is located in 132 Hammond Hall and offers free academic support for qualifying students and low-cost services for all students, including Cost Share Tutoring.

**SUPPLEMENTAL INSTRUCTION (SI):** SI leaders are students who sit in your classroom right along with you and provide **FREE** tutoring for you according to your professor's coursework. Your SI leader will be introduced to you and provide all their contact information during the first week of class.

**Writing Center. :** The Writing Center, 411 Central Library, offers individual 40 minute sessions to review assignments, *Quick Hits* (5-10 minute quick answers to questions), and workshops on grammar and specific writing projects. Visit <https://uta.mywconline.com/> to register and make appointments. For hours, information about the writing workshops we offer, scheduling a classroom visit, and descriptions of the services we offer undergraduates, graduate students, and faculty members, please visit our website at [www.uta.edu/owl/](http://www.uta.edu/owl/).

**Additional services:**

Library Home Page .....	<a href="http://www.uta.edu/library">http://www.uta.edu/library</a>
Subject Guides .....	<a href="http://libguides.uta.edu">http://libguides.uta.edu</a>
Subject Librarians.....	<a href="http://www.uta.edu/library/help/subject-librarians.php">http://www.uta.edu/library/help/subject-librarians.php</a>
Database List .....	<a href="http://www.uta.edu/library/databases/index.php">http://www.uta.edu/library/databases/index.php</a>
Course Reserves.....	<a href="http://pulse.uta.edu/vwebv/enterCourseReserve.do">http://pulse.uta.edu/vwebv/enterCourseReserve.do</a>
Library Tutorials .....	<a href="http://www.uta.edu/library/help/tutorials.php">http://www.uta.edu/library/help/tutorials.php</a>
Connecting from Off- Campus.....	<a href="http://libguides.uta.edu/offcampus">http://libguides.uta.edu/offcampus</a>
Ask A Librarian .....	<a href="http://ask.uta.edu">http://ask.uta.edu</a>

The following URL houses a page where we have gathered many commonly used resources needed by students in online courses: <http://www.uta.edu/library/services/distance.php>.

The subject librarian for your area can work with you to build a customized course page to support your class if you wish. For examples, visit <http://libguides.uta.edu/os> and <http://libguides.uta.edu/pols2311fm> . If you have any questions, please feel free to contact Suzanne Beckett, at [sbeckett@uta.edu](mailto:sbeckett@uta.edu) or at 817.272.0923.

**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 syllabi. 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. Classes are held as scheduled during this week and lectures and presentations may be given.

**Drop Policy:** Students may drop or swap (adding & dropping a class concurrently) classes through self-service MyMav from the beginning of registration 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 of the second floor of Davis Hall. 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. *You* are responsible for seeing that all of the proper paperwork is completed and submitted to the appropriate university officials. If this paperwork is not completed, you will receive a letter grade corresponding to your earned grade, including zeros for all missed work.

**Students will not be automatically dropped for non-attendance.** 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.

As a result of recent legislation passed by the Texas Legislature, any student who enrolls in a public institution of higher education as a first-time freshman in Fall 2007 or later will be limited to six dropped courses during the course of their academic career. This applies to UTA course work and course work completed at other Texas public institutions. In addition, a student can only attempt the same course two times. On the third attempt, the student will be charged the equivalent of out-of-state tuition for the course.

**Student Feedback Survey:** At the end of each term, students enrolled shall be directed to complete an online 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>.

**Emergency Exit Procedures:** Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit, which is located out the doors to the left. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and

instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist handicapped individuals.

**BOMB THREATS:** If anyone is tempted to call in a bomb threat, be aware that UTA will attempt to trace the phone call and prosecute all responsible parties. Every effort will be made to avoid cancellation of presentations/tests caused by bomb threats. Unannounced alternate sites will be available for these classes. Your instructor will make you aware of alternate class sites in the event that your classroom is not available.

**AFTER HOURS SAFETY ESCORT:** The Sam Mav Escort service provides a service to assist students, faculty, staff and campus visitors to reach their destinations after regular business hours. The hours of service are 7:00 p.m. to 1:00 a.m., Sunday through Saturday. 817-272-3381

**Emergency Phone Numbers:** In case of an on-campus emergency, call the UT Arlington Police Department at **817-272-3003** (non-campus phone), **2-3003** (campus phone). You may also dial 911.

**LAB INFORMATION:** You must complete the online safety training **BEFORE** your lab begins the week of August 26<sup>th</sup>.

**Mandatory Online Safety Training:**

1. Go to <http://www.uta.edu/training>.
2. Log on using your network log-on ID and password (what you use to access email). If you do not know your NetID or need to reset your password, visit <https://webapps.uta.edu/oit/selfservice/>.
3. The available courses for completion will be listed under "Training I'm Enrolled In". Complete the course entitled 'Student Lab Safety Training – General.' \*\*\*NOTE: If you completed Wet, Dry or Biology Lab Safety Training course last semester for another class, that training is still applicable until the end of this academic year.
4. If you have just completed the training but it is not updated on the 'Training I've Completed' page, please log out of the system and log back in. If the training still does not show up on this page, call the Helpline at **817-272-5100**.
5. If you were enrolled in a course with a lab last semester and did not complete the training or if you do not see training for this academic year listed, email [compliance@uta.edu](mailto:compliance@uta.edu) providing your name, a contact phone number, NetID and course (e.g. BIOL 1441-004) and request the appropriate training for your course.
6. Students who have not completed the training by census date may be dropped from the lab (and consequently the lecture).
7. Lab Safety Training is required to be completed once every academic year. Training completed in the Fall semester is valid for the Fall, Spring and Summer sessions.  
*For training specific questions, contact the Environmental Health and Safety office at 817-272-2185.*  
*For technical assistance with the training, please contact the Office of Institutional Compliance at 817-272-5100 or email [compliance@uta.edu](mailto:compliance@uta.edu)*

**Notes for Success in Biology 1441:**

1. Attend every lecture. It is highly unlikely you will succeed in this course if you do not attend lecture. The topics covered in this course build on each other; missing class will quickly put you behind.
2. **Prior** to class, read the chapter, which will be covered in lecture.
3. Review your lecture notes after each class. Note topics, which require further study or clarification.
4. Work the problems in the back of the chapter. Do the practice problems online at the Mastering Biology website.
5. Spend the necessary amount of time studying. The rule of thumb for succeeding in Biology is **three hours of study for every hour of lecture**. This means that at a minimum you should plan to study **nine hours each week**, outside of lecture and lab.
6. Don't procrastinate. These concepts take time to sink in and apply.
7. Check Blackboard and your UTA email on a regular basis.
8. Get organized. Put important dates in your planner today and make a study plan.

**This information is going to come at you fast in more detail than you are accustomed to. These are major differences between high school and college. If you do not study and prepare independently, you will fall behind quickly.**

**Tentative Lecture Schedule:**

Chapter 2.....	The Chemical Context of Life
Chapter 3.....	Water and Life
Chapter 4.....	Carbon and the Molecular Diversity of Life
Chapter 5.....	The Structure and Function of Large Biological Molecules
Chapter 6.....	A Tour of the Cell

**Exam #1 – Friday, September 19<sup>th</sup>**

Chapter 7.....	Membrane Structure and Function
Chapter 8.....	An Introduction to Metabolism
Chapter 9.....	Cellular Respiration and Fermentation
Chapter 10.....	Photosynthesis
Chapter 11.....	Cell Communication

**Exam #2 – Friday, October 17<sup>th</sup>**

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

**Exam #3 – Wednesday, November 19<sup>th</sup>**

Chapter 16.....	The Molecular Basis of Inheritance
Chapter 17.....	From Gene to Protein

**Comprehensive Final Exam Wednesday, December 10 8:00 – 10:30 AM**

What you can immediately gather from this info, if you bothered to read it, is that there is a lot of chemistry, math and even some physics in this course. No, you are not learning these subjects, you are using the basics from them and applying them to understand and study LIFE! Which is also called *biology*. Are we having fun yet?!