

Biology 3444-002 - General Microbiology

Instructor: Dr. Julian Hurdle

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Office hours: Tuesdays and Thursdays 9:00-10:30AM

Course Number, Section Number, and Course Title: Biology 3444-002, General Microbiology

Course location and times: LS 118, Tuesdays and Thursdays 12:30PM – 1:50PM

Course Description: Fundamental principals of microbiology. This includes the structure and function of microbial cells and their activities in nature.

Student course outcomes:

This course is designed to provide you with the basic information about a microbial cell. At the end of the course, you must be able to understand and describe: structural differences between Gram-positive, Gram-negative and Archaeal bacteria; the growth phases of a microbe, describing events at each phase; metabolic pathways used to generate energy in prokaryotes; microbial transcription, translation and replication; effects of mutations on microbial growth, evolution and microbial diversity; how microbes cause diseases and response of host defense; epidemiology of infectious diseases; beneficial role of microbes on earth and human society. It is anticipated that you should appreciate the diversity of microbial systems and ecological interactions with eukaryotes (disease and beneficial).

Course requirements: Biology 1441 (General Biology) and one year of Chemistry or equivalent .

Textbook and Materials: Brock Biology of Microorganisms. Madigan and Martinko. 12th ed. Prentice Hall Publishers. Have a #2 pencil and a Scantron 882-E electronic grading form for each exam.

Exams: There will be three exams during the course. The first two exams will be covering the material for that portion of the course. The final exam will be a comprehensive one. In the final exam, approximately half will cover the material presented since the third exam, and the rest will be comprehensive. You may be required to bring to each exam a NO. 2 lead pencil and a SCANTRON 882-ES electronic grading form. You may not have any other personal belongings at your desk during an exam. You will not be allowed to take an exam if you do not comply. The format of examinations may be multiple choice, true/false, and/or short essay questions. Exams will be announced at least one week prior to the exam date.

NO EXAMS will be administered after the first student to finish the exam has exited the room.

MavMail Requirement: UTA has adopted MavMail as an official means of communication with students. Please, check your e-mail regularly. If you have any questions regarding your e-mail, go to: <http://www.uta.edu/oit.email/>

Cell Phone Policy: Cell phones must be turned off (or placed on vibrate mode) at all times during lectures.

Drop Policy: See university guidelines.

Website: Grades, final lab grades, and final course grades will be available on blackboard or myMAV.

Grades: Your final grade will be composed of the following:
20% from Laboratory Section
20 % from Exam 1
20 % from Exam 2
40 % from Final Exam

No extra credit will be allowed!

Final Grade: The following grade scale will be used to determine your final grade:
A) 100 – 90%
B) 89 – 80%
C) 79 – 70%
D) 69 – 60%
F) below 59%

Make Up Exam Policy: You are required to be present for announced examinations. Absences will be excused only with written request by a physician, other responsible professional, or with written proof of jury duty. No exceptions. If you miss an exam, you will be given an exam score of zero. You will have **ONLY** two options for make up exams: (1) your final exam grade will be issued as a make up exam for the lost exam or (2) take the make up exam after the final exam. In the later case, an exam will be provided after 5 min of the expiration time of the final exam. Either case, it is **YOUR RESPONSIBILITY** to let me know.

Attendance Policy: With the exceptions of exam dates, you are not required to attend lectures; however, you are responsible for all material covered in lecture including changes to the syllabus. Be aware that, historically, students who attend lectures consistently get better grades.

Important University Policies:

Americans With Disabilities Act: The University of Texas at Arlington is committed to both the spirit and letter of federal equal opportunity legislation; reference Public Law 92-112 – The Rehabilitation Act of 1973 as amended. With the passage of federal legislation entitled *Americans with Disabilities Act (ADA)*. It is your responsibility to inform me of your disability at the beginning of the semester and to provide authorized documentation through

designated administrative channels. If you require accommodation based on disability, I would like to meet with you in my office the first week of class to discuss your special needs.

Academic Dishonesty: 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."

Student Support Services Available: The University of Texas at Arlington supports a variety of student success programs to help you connect with the University and achieve academic success. These programs include learning assistance, developmental education, advising and mentoring, admission and transition, and federally funded programs. Students requiring assistance academically, personally, or socially should contact the Office of Student Success Programs at 817-272-6107 for more information and appropriate referrals.

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.

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

Other Policies

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.

Smoking, Food, and Drink in the Lecture Hall: University regulations prohibit smoking, eating, and drinking in lecture halls.

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Americans With Disabilities Act: The University of Texas at Arlington is on record as being committed to both the spirit and letter of federal equal opportunity legislation; reference Public Law 92-112 - The Rehabilitation Act of 1973 as amended. With the passage of federal legislation entitled *Americans with Disabilities Act (ADA)*, pursuant to section 504 of the Rehabilitation Act, there is renewed focus on providing this population with the same opportunities enjoyed by all citizens.

As a faculty member, I am 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 of their need for accommodation and in providing authorized documentation through designated administrative channels. You must provide me with the ARC exam test 10 days in advance to the test. Information regarding specific diagnostic criteria and policies for obtaining academic accommodations can be found at www.uta.edu/disability. Also, you may visit the Office for Students with Disabilities in room 102 of University Hall or call them at (817) 272-3364.

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)

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Tentative Schedule of Lectures*

* This is **ONLY** an outline of lectures. It might change according to our progress. You **MUST** attend lectures to know when changes in schedule will take place AND sections covered in the Chapters.

Date	Subject	Required Readings
Aug 25	Introduction	Chapter 1
Aug 30	Introduction	Chapter 2
Sept 01	Chemistry of the Cell	Chapter 3
Sept 06	Cell structure and function	
Sept 08	Cell structure and function	Chapter 4
Sept 13	Cell structure and function	
Sept 15	Metabolism	Chapter 5
Sept 20	Metabolism	
Sept 22	Metabolism	
Sept 29	Review	
Oct 4	Exam 1	
Oct 6	Growth	Chapter 6
Oct 11	Growth	
Oct 13	Control of Growth	Chapter 27
Oct 18	Molecular Biology	Chapter 7
Oct 20	Regulation of Gene Expression	Chapter 9
Oct 25	Overview Viruses	Chapter 10
Oct 27	Genetics	Chapter 11
Nov 01	Genetics	Chapter 12
Nov 03	Review	
Nov 8	Exam 2	
Nov 10	Microbial Ecosystems	Chapter 23
Nov 15	Industrial Microbiology	
Nov 17	Microbial Interactions with Humans	Chapters 28
Nov 22	Essentials of Immunology	Chapter 29
Nov 29	Epidemiology & Diseases	Chapter 33-37
Dec 01	Epidemiology & Diseases	
Dec 06	Review	