

Biology 3328-001
Environmental Microbiology Spring 2006

General information:

Instructor: Dr. Thomas Chrzanowski

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Office Hours: Monday, Wednesday, and Friday 9:00-10:00 am

Textbook: Environmental Microbiology by Maier et al., Academic Press publisher

Other reading: You are responsible for reading assigned from sources other than your textbook.

Meeting times: The class meets in LS 120 MWF 11:00-11:50 am

Learning Objectives/Goals: The objective of this course is to introduce you to the life of microbes in their natural environment, some of the methods used to study mixed communities of microbes, and how microbes impact upon human activities.

Prerequisites: Biology 1441 (General Biology) or equivalent; Biology 3444 (General Microbiology) or equivalent.

Withdrawal Policy: You may drop without penalty with a grade of W during the first six weeks of the semester (prior to 28 Feb.)

After 27 Feb. but before 17 April:

If you have taken scheduled examinations and maintain a grade average above 60%, you may drop with a W.

If you have taken scheduled examinations and maintain a grade average below 60%, you may drop with an F.

If you have not taken scheduled examinations, you may drop with a grade of F.

No one will be permitted to drop after the 12th week of class (after 16 April). If you chose to drop the course, you may no longer attend lectures.

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.

Drop for Non-payment of Tuition: If you are dropped from this class for non-payment of tuition, you may secure an enrollment loan through the Bursar's office. You may not continue to attend class until your Enrollment Loan has been applied to outstanding tuition fees.

Absence from exams: 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 proof of jury duty. If you miss an exam, you will be given an exam score of zero. Exams missed due to excused absence must be taken within one day of your return to class. No other make-up exams will be given.

Americans with Disabilities: The University of Texas at Arlington is committed to both the spirit and letter of federal equal opportunity legislation (Public Law 93-112--The Rehabilitation "Act of 1973 as amended; 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 and accommodation based on disability I would like to meet with you in my office the first week of class to discuss your special needs.

Evaluation: The lecture section will follow a traditional format of lecture with subsequent evaluation of your mastery of the topic material. While the lecture material will broadly follow the material in the book, I will often supplement the book with material from other sources. Your performance in this course will be assessed through four examinations. Exams I, II, and III will each contribute 20% to your final grade, Exam IV will contribute 40% to your

final grade (20% new material and 20% comprehensive). Exams will be announced at least one week prior to the exam date. The schedule of exams will depend upon our progress through the material. The following grading scale will be used to determine your grade for the course; A - 90 to 100%, B - 80 to <90%, C - 70 to <80%, D - 60 to <70%, F - <60%. 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 form of examinations may be multiple choice, short essay, long essay, or whatever is best suited to the material. The form of the examinations is solely the discretion of the instructor.

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.

"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, Part One, Chapter VI, Section 3, Subsection 3.2. Subdivision 3.22).

Grade Replacement Policy: If you are enrolling in this course with the intention of replacing a previous grade earned in this course, you must declare your intention to do so at the registrar's office by Census Date of this semester.

Bomb Threats: If you are 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 classrooms or sites will be available in the event that your classroom is not available.

Recording Devices: The use of electronic devices to record lectures is forbidden without exception.

Cell Phones: *Ringers must be turned off during class.*

Smoking, food and drink in the lecture hall: University regulations prohibit smoking, eating, and drinking in lecture halls.

Student Success Programs: The University of Texas at Arlington supports a variety of student success programs to help you connect with the University and achieve academic success. They 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

Changes to the syllabus: The following serves only as an outline. Our progress in covering material may warrant changes in this outline.

Sequence of Lecture Topics:

Part I: Background and Environments: The primary-text reading for this unit: Chapters 1-7

Introduction, distinction between Microbial Ecology and Environmental Microbiology,
A survey of the environments typically under investigation.

Exam I

Part II: Tools of the trade: The primary-text reading for this unit: Chapters 8-13

The reality of the limits imposed by technology: The tools available.

Exam II

Part III: Biogeochemistry and metals in the environment: The primary-text reading for this unit 14-17

Biogeochemical cycles
Microbial interactions with metals
Bioremediation

Exam III

Part IV: Agriculture and public health aspects: The primary-text reading for this unit 18-22

Microbe plant relationships
Waste and waste management
Drinking water microbiology

Exam IV and comprehensive