

**Microbial World With Lab
BIOLOGY 1320
FALL 2009**

Class Information

Lecture: Thursday: 11:30 A.M-1:30 P.M. at CBW1.101
Lab: Tuesday : 11:30 A.M-1:30 P.M. at MP 2.202.

Instructor Contact Information

- Dr. Wenju Lin, wenju@utdallas.edu

Instructor Office hours and location:

- Tuesday 1:30-2:00 P.M. at MP2.202 and Thursday1:30-2:00 P.M. at FN 3.102(by appointment)

Your Section's Teaching Assistants

Name	Email Address

COURSE PRE-REQUISITES: There are no pre-requisites for this course

COURSE DESCRIPTION

In this course, we will explore microorganisms and how they affect the biochemical processes that influence Earth as an ecosystem as well as human life. Involvement of microbes in many aspects of our daily lives, from helping to create the air we breathe to the production of foods (such as bread, cheese) and beverages (beer, wine) will also be discussed. A general overview of microbiology and an introduction to the diversity of microbial life will also be part of the course as also microorganisms affecting human health. In the accompanying laboratory, hands-on experimentation will introduce students to the microbial world and demonstrate the versatility of these organisms. This course is specifically designed for non-majors.

STUDENT LEARNING OBJECTIVES/OUTCOMES

1. In exploration of the microbial world, students will able to identify and explain biochemical processes, the structure and function of microbial systems and their application to human life.
2. Be able to apply and implement basic lab techniques related to microbiology such as study of microbial enzymatic and biochemical ability, ecology and applied microbiology including food microbiology and serology.
3. Students will be able explain how microbiology is applied in the modern world, these topics include water and sewage treatment, microbiological aspects of both. They will also be expected to be familiar with microbial genetics.
4. Students will be able to describe and explain topics concerning food microbiology such as principles of food intoxication as well as food borne diseases.
5. Students will explain characteristics of diseases as well as the essential influence of microorganisms on human life and all ecosystems on Earth.
6. Students will be introduced to virology and study of disease causing organisms smaller than viruses such as prions.

REQUIRED COURSE MATERIAL

Laboratory Manual : *Laboratory Exercises in Microbiology* by Robert A. Pollack, Lorraine Findlay, Walter Mondschein, R. Ronald Modesto Paperback, (Third Edition, 2009, ISBN 978-0-470-13392-7)

Text: *Microbiology: Principles and Explorations* by J.G. Black (6th edition, 2001, ISBN 978-0-471-42084-2) or (7th edition, 2008, ISBN 978-0-470-10748-5).

COURSE EVALUATION/GRADING SCHEMES

Students may earn a maximum of 500 points. The following table lists the details of assessment items and the point distributions. The final grades for the course will be assigned as follows: (note partial grades such as A- or B+ etc will be issued and each letter grade listed below includes these partial grades)

A:	450-500;
B:	400-449;
C:	350-399;
D:	300-349;
F:	0-299

Assessment Activity	Points
Four lecture Exams (@70 pts each)	280
First and Final lab practical	110
11 Lab Reports (@10 pts each)	110
Total	500

Lab Reports: The format of lab reports will vary from week to week depending upon the type of experiment that was performed. Although lab exercises will be done in groups of two or more students, each student must turn in his or her own report for grading. Your report should reflect your **independent** processing and presentation of data and answering related questions. Do not copy material from other students. Do not allow any other student to see or copy your work. Any form of scholastic dishonesty will not be accepted. Your work will be graded based on neatness, accuracy and completeness. **If you are not physically present during a particular lab, you are not entitled to turn in a lab report for credit.**

COURSE POLICIES

- Attendance and Class Participation: Attendance of all lecture and laboratory sessions **ON TIME** is extremely important and thus mandatory, and will be recorded for each lab period. Your performance in the course is dependent on your attendance, so please make every effort to attend all classes as scheduled. Moreover, you are also expected to actively participate in all class activities.
- Pre-read: Before you come to each lab, read the procedural handout for background information and procedures for the experiment you will be doing. This **saves you time** and avoid unnecessary mistakes during the lab.
- Late work:
Any lab reports that are late will be assessed a **3-point** penalty for each **DAY** they are late. Arrange the time and location with the graduate TA to turn in your reports. It is your responsibility to confirm that your TA actually received your late reports.
- Exam:
Exams will be a combination of multiple choice and essay type questions which will be based on material covered up to the last lecture before the exam. Unless there is a documented medical emergency, no make-up exams will be administered.
- Lab Safety: See a separate handout

COURSE OUTLINE/CALENDAR

- **THE FIRST FRIDAY MEETING STARTS ON Aug27 IN CBW1.101.**
- **There is no lecture on AUG20 and are no labs on Aug 25.**

Week of	Tuesday Lab Exercises and Exams	Report Due	Friday Lecture Topic
Aug 20-21			Aug 20:No lecture
Aug 24-28	No labs on Aug 25		Aug 27: Ch1 & 2
Aug31- Sep4	E1: Introduction to the Microscope (p3)		Sep3: Ch3 &4
Sep 7-11	E2: Transfer and Isolation Techniques (p17)	R1	Sep10: Exam I (first hour), Ch6
Sep14-18	E3: Cultural and Cellular Morphology (p33)	R2	Sep17: Ch 9
Sep21-25	E4: Gram stain (p53)	R3	Sep24: Ch 10, Ch 11
Sep28-Oct2	E5: Fungi, Algae and Protozoa (p71)	R4	Oct 1: Ch12
Oct5-9	first lab practical (E1-E5)	R5	Oct 8: Exam II , Ch13
Oct 12-16	E6: Microbial Sensitivity Testing (p98)		Oct15: Ch 7,8
Oct 19-23	E7: Bacterial Transformation	R6	Oct 22: Ch14,15
Oct26-30	E8: Epidemiology(p145)	R7	Oct 29: Exam III,Ch17
Nov 2-6	E9: Serology (p175)	R8	Nov 5: Ch 25
Nov 9-13	E10: Microbes in a water sample (p221)	R9	Nov12 : Ch 26
Nov16-20	E11: Microbes in Beef and Poultry (p227)	R10	Nov 19: review
Nov 23-27	No labs on Nov 24	R11	Nov 26: No lecture
Nov 30-Dec4	Exam IV/Lab Practical (E6-E11)		

Abbreviations: E= Experiment; R=Report

Student Conduct & Discipline

The University of Texas System and The University of Texas at Dallas have rules and regulations for the orderly and efficient conduct of their business. It is the responsibility of each student and each student organization to be knowledgeable about the rules and regulations which govern student conduct and activities. General information on student conduct and discipline is contained in the UTD publication, *A to Z Guide*, which is provided to all registered students each academic year.

The University of Texas at Dallas administers student discipline within the procedures of recognized and established due process. Procedures are defined and described in the *Rules and Regulations, Board of Regents, The University of Texas System, Part 1, Chapter VI, Section 3*, and in Title V, Rules on Student Services and Activities of the university's *Handbook of Operating Procedures*. Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations (SU 1.602, 972/883-6391).

A student at the university neither loses the rights nor escapes the responsibilities of citizenship. He or she is expected to obey federal, state, and local laws as well as the Regents' Rules, university regulations, and administrative rules. Students are subject to discipline for violating the standards of conduct whether such conduct takes place on or off campus, or whether civil or criminal penalties are also imposed for such conduct.

Academic Integrity

The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrate a high standard of individual honor in his or her scholastic work.

Scholastic dishonesty includes, but is not limited to, statements, acts or omissions related to applications for enrollment or the award of a degree, and/or the submission as one's own work or material that is not one's own. As a general rule, scholastic dishonesty involves one of the following acts: cheating, plagiarism, collusion and/or falsifying academic records. Students suspected of academic dishonesty are subject to disciplinary proceedings.

Plagiarism, especially from the web, from portions of papers for other classes, and from any other source is unacceptable and will be dealt with under the university's policy on plagiarism (see general catalog for details). This course will use the resources of turnitin.com, which searches the web for possible plagiarism and is over 90% effective.

Email Use

The University of Texas at Dallas recognizes the value and efficiency of communication between faculty/staff and students through electronic mail. At the same time, email raises some issues concerning security and the identity of each individual in an email exchange. The university encourages all official student email correspondence be sent only to a student's U.T. Dallas email address and that faculty and staff consider email from students official only if it originates from a UTD student account. This allows the university to maintain a high degree of confidence in the identity of all individual corresponding and the security of the transmitted information. UTD furnishes each student with a free email account that is to be used in all communication with university personnel. The Department of Information Resources at U.T. Dallas provides a method for students to have their U.T. Dallas mail forwarded to other accounts.

Withdrawal from Class

The administration of this institution has set deadlines for withdrawal of any college-level courses. These dates and times are published in that semester's course catalog. Administration procedures must be followed. It is the student's responsibility to handle withdrawal requirements from any class. In other words, I cannot drop or withdraw any student. You must do the proper paperwork to ensure that you will not receive a final grade of "F" in a course if you choose not to attend the class once you are enrolled.

Student Grievance Procedures

Procedures for student grievances are found in Title V, Rules on Student Services and Activities, of the university's *Handbook of Operating Procedures*.

In attempting to resolve any student grievance regarding grades, evaluations, or other fulfillments of academic responsibility, it is the obligation of the student first to make a serious effort to resolve the matter with the instructor, supervisor, administrator, or committee with whom the grievance originates (hereafter called “the respondent”). Individual faculty members retain primary responsibility for assigning grades and evaluations. If the matter cannot be resolved at that level, the grievance must be submitted in writing to the respondent with a copy of the respondent’s School Dean. If the matter is not resolved by the written response provided by the respondent, the student may submit a written appeal to the School Dean. If the grievance is not resolved by the School Dean’s decision, the student may make a written appeal to the Dean of Graduate or Undergraduate Education, and the dean will appoint and convene an Academic Appeals Panel. The decision of the Academic Appeals Panel is final. The results of the academic appeals process will be distributed to all involved parties.

Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations.

Incomplete Grade Policy

As per university policy, incomplete grades will be granted only for work unavoidably missed at the semester’s end and only if 70% of the course work has been completed. An incomplete grade must be resolved within eight (8) weeks from the first day of the subsequent long semester. If the required work to complete the course and to remove the incomplete grade is not submitted by the specified deadline, the incomplete grade is changed automatically to a grade of **F**.

Disability Services

The goal of Disability Services is to provide students with disabilities educational opportunities equal to those of their non-disabled peers. Disability Services is located in room 1.610 in the Student Union. Office hours are Monday and Thursday, 8:30 a.m. to 6:30 p.m.; Tuesday and Wednesday, 8:30 a.m. to 7:30 p.m.; and Friday, 8:30 a.m. to 5:30 p.m.

The contact information for the Office of Disability Services is:
The University of Texas at Dallas, SU 22
PO Box 830688
Richardson, Texas 75083-0688
(972) 883-2098 (voice or TTY)

Essentially, the law requires that colleges and universities make those reasonable adjustments necessary to eliminate discrimination on the basis of disability. For example, it may be necessary to remove classroom prohibitions against tape recorders or animals (in the case of dog guides) for students who are blind. Occasionally an assignment requirement may be substituted (for example, a research paper versus an oral presentation for a student who is hearing impaired). Classes enrolled students with mobility impairments may have to be rescheduled in accessible facilities. The college or university may need to provide special services such as registration, note-taking, or mobility assistance.

It is the student’s responsibility to notify his or her professors of the need for such an accommodation. Disability Services provides students with letters to present to faculty members to verify that the student has a disability and needs accommodations. Individuals requiring special accommodation should contact the professor after class or during office hours.

Religious Holy Days

The University of Texas at Dallas will excuse a student from class or other required activities for the travel to and observance of a religious holy day for a religion whose places of worship are exempt from property tax under Section 11.20, Tax Code, Texas Code Annotated.

The student is encouraged to notify the instructor or activity sponsor as soon as possible regarding the absence, preferably in advance of the assignment. The student, so excused, will be allowed to take the exam or complete the assignment within a reasonable time after the absence: a period equal to the length of the absence, up to a maximum of one week. A student who notifies the instructor and completes any missed exam or assignment may not be penalized for the absence. A student who fails to complete the exam or assignment within the prescribed period may receive a failing grade for that exam or assignment.

If a student or an instructor disagrees about the nature of the absence [i.e., for the purpose of observing a religious holy day] or if there is similar disagreement about whether the student has been given a reasonable time to complete any missed assignments or examinations, either the student or the instructor may request a ruling from the chief executive officer of the institution, or his or her designee. The chief executive officer or designee must take into account the legislative intent of TEC 51.911(b), and the student and instructor will abide by the decision of the chief executive officer or designee.

Off-Campus Instruction and Course Activities

Off-campus, out-of-state, and foreign instruction and activities are subject to state law and University policies and procedures regarding travel and risk-related activities. Information regarding these rules and regulations may be found at the website address given below. Additional information is available from the office of the school dean. (http://www.utdallas.edu/Business Affairs/Travel_Risk_Activities.htm)

These descriptions and timelines are subject to change at the discretion of the Professor.