

COURSE SYLLABUS

BIO 3722
MICROBIOLOGY LABORATORY
FALL 2007

BIOLOGY (BIO) 3722 SECTIONS:

SECTION 001: MW 8:00 -10:30 AM* (SB 3.01.40)
SECTION 002: MW 11:30 - 2:00 PM* (SB 3.01.40)
SECTION 003: MW 3:00 - 5:30 PM* (SB 3.01.40)
SECTION 004: MW 6:30 - 9:00 PM* (SB 3.01.42)
SECTION 005: TR 7:30 -10:00 AM* (SB 3.01.42)
SECTION 006: TR 10:30 - 1:00 PM* (SB 3.01.40)
SECTION 007: TR 1:30 - 4:00 PM* (SB 3.01.42)
SECTION 008: TR 4:30 - 7:00 PM* (SB 3.01.42)
SECTION 009: TR 7:30 - 10:00 PM* (SB 3.01.40)
SECTION 901: MW 6:00 - 8:30 PM* (DB 3.314)

ALLIED HEALTH SCIENCE (AHS) 1061 SECTIONS:

SECTION 001: F 8:00 -10:30 AM (SB 3.01.42)
SECTION 002: F 12:00 - 2:30 PM (SB 3.01.42)
SECTION 003: F 3:00 - 5:30 PM (SB 3.01.42)
SECTION 004: S 9:00 -11:30 AM (SB 3.01.40)
SECTION 005: S 12:00 - 2:30 PM (SB 3.01.40)
SECTION 901: T 8:00 -10:30 AM (DB 3.314)

* SEE NOTE 3 BELOW.

INSTRUCTOR: _____

OFFICE HOURS: By appointment and after class.

TEXTBOOK: *SYMBIOSIS, The Benjamin Cummings Custom
Laboratory Program for Biology*

RECOMMENDED TEXT: *A Photographic Atlas for the MICROBIOLOGY
LABORATORY*, third edition, by Leboffe & Pierce.

COURSE OUTLINE: See separate handout.

MATERIALS: Each student is required to obtain the following supplies
for use in the lab.
1) Sharpie pen with black ink
2) Knee-length white lab coat with long sleeves

GRADING SCHEME:

Quizzes	20%
Midterm Exam	20%
Lab Practical Exam	5%
Final Exam	30%
Unknown Identification (single bacterium)	5%
Unknown Identification (Gram positive/Gram negative mixture)	15%
Class Participation, Attitude, and Cooperation	5%
Attendance - See paragraph 9 below	
A=90-100% B=80-89% C=70-79% D=60-69% F=0-59%	

EXAMINATION SCHEDULE: See course outline

NOTES:

1. Quizzes will be given during the first 15 minutes of most lab periods. If you are late to class you will not get more time to complete the quiz. No quiz can be made up. Quizzes may cover material from all lab periods and experimental observations made since the last quiz plus general information from the material for that day's experiment(s). Your two lowest quiz scores will be dropped, except that the score on the first quiz which includes lab safety and other material presented the first period will not be dropped.

2. The midterm exam is a practical exam which covers all material presented during lab periods. It is based on information presented by your lab instructor and material in handouts and the lab manual, including lab procedures, techniques, experimental results, and conclusions. The final exam will be the same format with about 66% of the questions based on material covered after the midterm exam. The lab practical exam will require that you perform a series of laboratory skills from a pre-announced list.

3. Frequently, the observation of experimental results in microbiology must be done during times other than your scheduled lab periods. The microorganisms that we use have no concept of clock time and respond only to their own schedules. You are expected to find the time to observe the results of your experiments during the days and times announced by your instructor. You may observe your results during the lab sessions of other class sections, **except** during the first part of each class when the instructor is providing the directions for the lab period, during quizzes, and during the set-up and administration of scheduled examinations. Please be as quiet as possible and act courteously when another class is in session. (For your planning, the days, times, and room numbers where other sections meet are listed at the top of page 1 of this syllabus.) The lab is available to you during the hours 6:00 a.m. to 9:00 p.m. Monday through Thursday and from 6:00 a.m. to 6:00 p.m. on Friday through Sunday. You may gain access to the lab when it is locked by swiping your UTSA Identification Card through the card reader on the Locknetics security lock on the lab door. This card reader is computerized. It reads your Banner number and records this number and the time of entry whenever you enter the lab. On weekends (except for the time AHS classes are scheduled) you must be accompanied by your partner preferably, or another current micro lab student while you are in the lab. Each student must swipe his/her card to record entry. **(There must be at least 2 persons in the lab always for safety purposes.)**

4. You are expected to read and understand the lab experiments for each day's class before class. Also, your lab manual has an introduction to each part (series of experiments). Read and understand the material in the introduction before doing any experiments from that part. (Quiz questions will come frequently from the introduction.) You cannot perform well by attempting to conduct the experiment as you might follow a recipe. Being ignorant of the day's activities is unfair to your partner also.

5. Your grade on the identification of unknown organisms will be based on your ability to plan, organize, and conduct a series of experiments to identify the unknown organisms. For the Gram positive/Gram negative identification you may need to conduct some experiments that were not conducted during class time but that are found in your lab manual. Coordinate with your instructor or the lab coordinator if you need media in addition to that placed out in the lab. You are expected to make appropriate observations and to draw reasonable conclusions from the experimental data produced, and to prepare written reports describing your findings and conclusions. A format for the reports will be provided. You will find that some amount of research at the library will be required throughout the time you are working on the exercise, both to develop a comprehensive and coherent plan and for confirmation of your findings and conclusions. This is an individual graded project. Your report must include a statement on the cover sheet signed by you stating that all work done to identify the unknown organisms and in the preparation of your report was done by you without collusion or improper assistance from another person or source.

6. Late reports for your unknown identifications will not be accepted. A report is late if it is not submitted by the start of your class on the day reports are due as shown on your course outline. Reports may be submitted earlier.

7. Unless otherwise announced, all work that is handed in for grading must be your own work. (See paragraph 12 below for a discussion of scholastic dishonesty.) This idea should not suggest to you that you may not discuss and compare lab observations, findings, results, and conclusions, however, because you should. Whenever possible, discuss your results with others. Such collaboration is a part of scientific inquiry.

8. Retain all graded work in the event a question arises regarding your grade. Extra credit work will not be assigned.

9. Your attendance is required at each lab session. Laboratory skills cannot be learned in absentia. If you must miss a session coordinate with your instructor, preferably for attendance during another section's lab period, or at another time agreeable to you and your instructor. Several skills with safety precautions are taught, practiced, and then used frequently during the course. You may not be permitted to attempt some procedures if you have missed the class when those procedures were covered. You will lose 3 points from your final course percentage grade for every lab period that you miss and do not make up in a reasonable time. What is reasonable will be determined by your instructor in consultation with the lab coordinator and will be based on the circumstances of your situation and the availability of necessary cultures, media, and equipment. If six or more sessions are missed and are not made up as of 5 o'clock the last Friday before the final exam you will receive an "F" for the course because of inadequate attendance.

10. Pace of work - We expect you to be reasonably industrious and to not waste time. Some things must be done with all due speed. One of the reasons that you must read and understand the experiments before you come to class is so that you will know before class when timing or speed of work is important. However, we would much rather have you spend whatever additional time in the lab that you require than to have you misuse time by going through motions that you do not understand or for which you do not understand the reason. Lab partners usually have to compromise on pace.

11. Part of the basis for your grade includes attendance, class participation, attitude, and cooperation - with fellow classmates, instructors, and lab support personnel. We, and hopefully you, will try to make this class both meaningful and enjoyable. Your learning is important to us and to you. We want the learning of your lab partner and fellow class members to be important to you also. If it is, you will do well with the percentage of your grade that is based on attitude, cooperation, etc.

12. The integrity of a university degree depends on the integrity of the work done for that degree by each student. The University expects a student to maintain a high standard of individual honor in all scholastic work (*Rules and Regulations of the Board of Regents*, Chapter VI,3.(17)). In order to protect the majority of you who do your own work, we require that you know the university stand on scholastic dishonesty. There are several projects and activities that you will accomplish during the semester that are specifically covered by the guidance provided in *UTSA Information* on the subject of "Scholastic Dishonesty," which you should read. If a student is accused of academic dishonesty, the faculty member may initiate disciplinary proceedings through the Division Director, the Dean of the College, and the Student Judicial Affairs Coordinator.

13. You have received a list of lab and safety rules. **KNOW AND OBSERVE THESE RULES.** SAFETY IS EVERYONE'S BUSINESS.

14. The final exam for your section is scheduled for:
Time: _____

Date: _____

To postpone the final exam due to dire circumstances such as personal illness or family emergency, you must follow the "Postponement of Final Examination Procedures" described in *UTSA Information*.

15. If you are, think that you are, or become pregnant during this semester, please notify your instructor of this fact. We will provide you with a list of the organisms that will be used during this lab (or during the remainder of the lab) which you should provide to your doctor. Your doctor can then advise you about additional precautions, if any, that you should take.

16. Cell phones, pagers, and other signaling devices brought into the lab will be turned off or set on silent mode during class AND will be kept in your backpack, not on your person, to prevent possible contamination of your cell phone or other devices.

SCHEDULE FOR BIO 3722, FALL 2007

STUDY THE INTRODUCTION TO EACH PART (OF THE MANUAL) PRIOR TO CONDUCTING ANY EXPERIMENT FROM THAT PART. YOUR KNOWLEDGE OF THIS INFORMATION MAKES THE EXPERIMENTS MUCH MORE MEANINGFUL.

<u>DATE</u>	<u>SUBJECT/EXERCISE(S)</u>
22&23 AUG	INTRODUCTION; SAFETY AND LAB RULES; SCOPE ASSIGNMENT, INTERPUPILLARY DISTANCE AND DIOPTER ADJUSTMENTS, AND LIGHT/LIGHT PATH ADJUSTMENTS AND SETTINGS.
27&28 AUG	PAGES 1-8 AND EX 4
29&30 AUG	TUBED MEDIA PREPARATION - HANDOUT
5 & 6 SEP	PLATED MEDIA PREPARATION - HANDOUT NOTE: NO LAB ON 3 & 4 SEP
10&11 SEP	EX 1 & 2A
12&13 SEP	EX 7, 8, AND 9
17&18 SEP	EX 3 AND 21
19&20 SEP	EX 10
24&25 SEP	EX 14 AND 22
26&27 SEP	EX 28, 29, AND 30
1 & 2 OCT	EX 23, 24, 25, AND 26
3 & 4 OCT	EX 12
8 & 9 OCT	UNKNOWN BACTERIUM IDENTIFICATION – HANDOUTS
10&11 OCT	CONTINUE UNKNOWN ID & MIDTERM REVIEW
15&16 OCT	MIDTERM EXAMINATION
17&18 OCT	EX 43(P), 47(P), AND READ EX 19, (UNKNOWN REPORT DUE)
22&23 OCT	EX 61, 62, AND 63
24&25 OCT	CONTINUE EX 61, 62, AND 63
29&30 OCT	EX 15, 42, AND READ 40
31 OCT&1 NOV	EX 35, 36, AND READ EX 37
5 - 8 NOV	GRAM POSITIVE AND GRAM NEGATIVE UNKNOWN MIXTURE IDENTIFICATION – HANDOUTS
12&13 NOV	EX 53(P), CONTINUE UNKNOWN ID
14 & 15 NOV	PRACTICAL EXAM OF SELECTED LAB SKILLS
19&20 NOV	EX 33 AND 34, REVIEW (UNKNOWN PAPER DUE)
21&22 NOV	NO CLASS (THANKSGIVING)
27&28 NOV	CONTINUE EX 33 AND 34
29&30 NOV	FINAL EXAMINATION (CUMULATIVE)