Master Syllabus

BIOL 2420 Introduction to Microbiology

Name:	Section #:
	Synonym:
Phone #:	Course hours:
Email:	
Web site:	Office location:
	Office hours:
	Appointments:

Course Description:
Introduction to Microbiology (4-3-3) is an introduction to the microbial world including the basic characteristics of fungi, algae, bacteria, and viruses. Special emphasis is placed on applications to hmans. This course will not count as credit toward the Associate of Science degree in Biology. **Prerequisites:** BIOL 2402 or BIOL 2304/2101 with minimum grade of C (or equivalent with lab).

Course Rationale:
This course provides a survey of microorganisms, their environments, and their interactions with multicelllar organisms, especially humans, and it concentrates on the microbes that are pathogenic to humans. The goal of Introduction to Microbiology is to adequately prepare students for the health science programs at ACC. Specific skills and competencies are expected of students who successfully complete this course, including the ability to:

- Explain microbiological processes in detail and on an appropriate level
- Develop observation skills
- Record, analyze and infer from data
- Demonstrate higher level thinking skills, including problem solving
- Construct graphs from data and obtain information from graphs
- Manipulate equipment
- Work effectively in a group
- Work safely in a lab setting
- Develop computer literacy skills

Required Textbook/Materials:
Textbook and lab manual from the approved departmental list.
Safety goggles or glasses with a safety rating of ANSI Z87.1

Common Course Objectives:
The common course objectives for Introduction to Microbiology are available at the departmental website http://www.austincc.edu/biology/ccobjectives.

Grading System [Faculty: Insert your own as desired]

Grade Components

4 unit lec exams (100 pts. each; units 1-4)	400
Unit 5 combination lec/lab exam over eukaryotes	100
Bridging Exercises (homework)	100
Disease Poster	50
Case Studies	50
*Laboratory	300
Maximum Total > 895 = A 795 - 894 = B 695 - 794 = C 595 - 694 = D < 595 = F	1000

*Laboratory grade (300 pts.) consists of:
3 lab exams @ 80 pts each
4 Unknowns: Unk #1 (10 pts.), Unk #2 (15 pts.), Unk #3 (15 pts.), Unk #4 (20 pts.)

KEEP A RECORD OF YOUR GRADES HERE: Please do not call me for grades!

Lec Exams (100 pts. each)	1	2	3	4
Lab Exams (80 pts. each)	1	2	3	
Unit 5 lec/lab exam (100 pts.)				
Bridging Exercises (100 pts.)				
Disease Poster (50 pts.)				
Case Studies (50 pts.)	1 (25 pts.)		2 (25 pts.)	
Lab Unknowns	1 (10 pts.)	2 (15 pts.)	3 (15	4 (20 pts.)

			pts.)	

Please Note: The grades are NOT curved and there is no extra credit in this course. In the case of a borderline final course grade (i.e., 69%, 79%), I will make a decision based on your exam grades and attendance.

Course Outline

Unit	Unit Description	Textbook Chapters
1	Fundamentals of Microbiology, A Survey of Microbes, Microbial Genetics, & Genetic Engineering	1, 4, 6, 9, 10
2	Microbial Metabolism, Growth, & Control	7, 8, 11, 12
3	The Disease Process: Interactions Between Microbe & Host	13, 14, 15, 16, 17
4	Bacterial & Viral Diseases of Humans	18, 19, 20, 21, 22, 23
5	Parasitic Eukaryotic Organisms: Fungi, Protistans, & Helminths	5

ATTENDANCE POLICY: Students are expected to attend class in order to progress satisfactorily toward completion of course objectives. Attendance will be taken at each class meeting (lecture & lab). Missing more than 30 minutes of class constitutes an absence. Students who miss the first two days of class will not be allowed to continue in the course. Students who miss 7 days of class over the semester will not be allowed to continue in the course. Students that miss three consecutive class periods without contacting me will not be allowed to continue in the course. Let me know if you will have to be absent from class or if there is anything going on in your life that impacts your performance so we can make arrangements. You are responsible for all materials, activities, assignments, or announcements covered in class, regardless of your reason for being absent.

PARTICIPATION: Biology requires your participation because you learn better when you participate and also because we will be learning about things that directly impact your life and how you think about our world. Besides, it's much more fun when you're part of the discovery! Students are encouraged and expected to participate in classroom discussion. I ask questions during lecture and lab and expect students to be able to answer me! Be prepared for lecture and lab by reading lecture notes, textbook, and lab activities before coming to class.

You will have opportunities to ask questions of me in lecture, but please remember that our time is limited. Please don't be offended if I ask you to see me during my office hours. Remember that there are no stupid questions! If something doesn't make sense to you, it probably doesn't make sense to others in the class, too. Be considerate of others when they are sharing their ideas. Every student deserves to express his or her own opinions without interference.

EMAIL: Students are encouraged to become part of an email listserve I will set up. When a student asks me a question via email, I will answer the question and forward it to the group. Please email me at home during the first week of class so that I may add your email to my address book and create the group. Please indicate which micro section you are attending (regular or distance learning).

LECTURE EXAMS: Five lecture exams will be administered. The 5th unit lec exam will actually be a lec/lab combination exam covering the eukaryotic organisms. Exams are multiple choice and T/F. Study your notes and bridging exercises! No exams will be dropped or curved!

TESTING CENTER: Some lecture exams will be administered in the testing center (see lecture schedule for approximate dates). Students generally have 5 days to take the exam. You must present both a valid student id. and a driver's license to take the exam. A red scantron answer sheet will be provided by the testing center. Bring a No. 2 pencil with you to every exam. ACC Testing Center policies can be found at: http://www2.austincc.edu/testctr/ and on my website.

MISSED LECTURE EXAMS: No makeup exams are administered. Please let me know if you need to take an exam early.

LAB EXAMS: A total of 3 lab exams will be given during the semester. The first exam will mainly cover staining techniques and basic colony morphology, the second will cover effects on bacterial growth and selective/differential media for G(+) bacteria, and the third will cover selective and differential media for G(-) bacteria. The 5th unit lec exam will actually be a lec/lab combination exam covering the eukaryotic organisms. Exams will usually be both written and practical in nature (ex. identify a bacterium by looking under a microscope, etc.). Lab exams are administered during lab. There will be no make-up lab exams. Lab exams must be taken in pencil. You will not be allowed to take the exam if you are more than 10 minutes late.

RETURN OF EXAMS: Lecture exams will be graded by the testing center personnel. I will usually return lab exams within one week of the exam date. Students are allowed to review, but not keep exams.

BRIDGING EXERCISES: Bridging exercises consist of a list of review questions for each chapter (they act as a bridge from one lecture to the next). These will be completed after each lecture and must be turned in at the beginning of the following class day (NO EXCEPTIONS!). If you can't come to class, email or fax the bridging exercise to me by

the beginning of class time. Those received after class will NOT be accepted under any circumstances - please do not ask! Bridging exercises will be graded for completion. Incomplete exercises will not be accepted (every question must be answered!)

CASE STUDIES: I will provide examples of infectious diseases in the way you will encounter them in your life or clinical practice. After practicing, you will determine the diagnosis of several case studies and write up a rationale. Some case studies will be a cooperative effort and some will be an individual effort. More to come later!

DISEASE POSTER: see separate handout

LATE WORK: Grades for late assignments other than bridging exercises will be reduced by ten percent of the maximum possible points on that assignment for each day that the assignment is late up to the day of the unit exam. Late work will not be accepted after the end of the unit for which it is assigned.

LECTURE NOTES:. I supply you with the notes so that you will spend less time trying to write down every word that I am saying & more time listening & thinking about the material. Please keep up with your studying, read your text, and read your notes before coming to class! You will need to take some additional notes in class to supplement your printed notes. During lecture, you should be writing down examples, explanations, and diagrams. If I say it, you are responsible for it! If you are absent, get these additional notes from a classmate. You are responsible for everything in the notes, whether or not it is covered in lecture. The purpose of lecture is to clarify difficult points, not to cover every little detail in the notes.

WITHDRAWAL POLICY:

Student-initiated withdrawal:

- You are responsible for withdrawing yourself from the course if you don't intend to or cannot complete the course requirements.
- If you forget to withdraw, you may receive a grade of "F" on your transcript.
- Keep your copy of the withdrawal form!

Instructor-initiated withdrawal:

- I may withdraw any student that misses the first two days of class without contacting me.
- I may withdraw any student that misses 7 days of class over the semester.
- I may withdraw any student who fails to attend three successive class periods without contacting me.
- I may withdraw any student who misses an exam and fails to take a makeup exam within the stated period of one week following the exam.
- If you are dropped for one of these two reasons you will not be reinstated.

You should be aware of the Texas law before you decide to drop:
Students who entered a Texas public college for the first time in or after the fall of 1999 are subject to a Texas statute that limits the number of courses a student may take for which the state will pay the college. At the community college, the limit is 1.5 times the credits required for the two-year degree. Students who exceed the number of credits required for a degree by 50% may be charged additional fees. Courses for which students receive a grade of W (withdrawal) are included in the total credits calculation. Developmental courses are not included in the total credits calculation. This rule applies to university students and to community college students who transfer from ACC to Texas public colleges and universities. Students who leave ACC with excess hours may have to take fewer courses at the Texas institution to which they transfer or pay higher tuition for the extra hours.

REINSTATEMENT: In order to be reinstated in the class, the student must have been enrolled in the course on the state reporting date, as demonstrated by the twelfth-day class roll, must have been withdrawn from the course in error, must show evidence of being capable of passing the course within the time remaining in the semester, and the instructor must have documentation that the student is eligible to be reinstated in the course.

INCOMPLETE GRADES: Incomplete grades will be given only when extenuating circumstances have prevented the student from completing the course. In order to be considered for an "I", a student must have successfully completed a minimum of four units in the course. The incomplete must be completed by approximately two weeks before the end of the succeeding semester, including the summer term. If not completed by that time, the incomplete grade becomes a failing grade.

CELL PHONE USE DURING CLASS: Please turn off cell phones during class or set them to "vibrate" mode. It is extremely inconsiderate to leave class to answer a phone call. Thank you for your understanding!

SCHOLASTIC DISHONESTY: "Acts prohibited by the college for which discipline may be administered include scholastic dishonesty, including but not limited to, cheating on an exam or quiz, plagiarizing, and unauthorized collaboration with another in preparing outside work. Academic work submitted by students shall be the result of their thought, research or self-expression. Academic work is defined as, but not limited to, tests, quizzes, whether taken electronically or on paper; projects, either individual or group; classroom presentations; and homework."

STUDENTS WITH DISABILITIES: "Each ACC campus offers support services for students with documented physical or psychological disabilities. Students with disabilities must request reasonable accommodations through the Office of Students with Disabilities on the campus where they expect to take the majority of their classes. Students are encouraged to do this three weeks before the start of the semester. Students who are requesting accommodation must provide the instructor with a letter of accommodation from the Office of Students with Disabilities (OSD) at the beginning of

the semester. Accommodations can only be made after the instructor receives the letter of accommodation from OSD."

OFFICIAL BIOLOGY DEPARTMENT POLICY CONCERNING STUDENT USE OF ORGANISMS IN THE CLASSROOM AND LABORATORY: Most ACC biology classes, particularly those with laboratory components, use actual organisms during instruction in addition to images and models. ACC students generally are preparing for real world careers requiring workers with hands-on experience. These careers include health care, veterinary work, horticultural and agricultural work. Other students plan to transfer to four-year colleges and will be participating in biological research where hands-on experience is equally important. Organisms used at ACC are fundamental in biology instruction and they are utilized to teach specific skills and knowledge. Their condition and usage varies from course to course. Students will be expected to actively participate in these activities. Students with particular concerns in this matter should consult with their instructor and/or departmental officials before enrolling in a laboratory course so that they can know what will be required of them. Some organisms are observed alive while others are dead and preserved in various ways. Student manipulation of organisms ranges from culturing living organisms to dissecting preserved ones. Some examples include, but are not limited to: bacterial culturing for microbiology courses; cat, pig or rat dissection for anatomy courses; skeleton and pelt examination for field biology; and use of frogs in physiology experiments.
http://www2.austincc.edu/biology/organismspolicy.html

ACADEMIC FREEDOM: "Institutions of higher education are conducted for the common good. The common good depends upon a search for truth and upon free expression. In this course the professor and students shall strive to protect free inquiry and the open exchange of facts, ideas, and opinions. Students are free to take exception to views offered in this course and to reserve judgment about debatable issues. Grades will not be affected by personal views. With this freedom comes the responsibility of civility and a respect for a diversity of ideas and opinions. This means that students must take turns speaking, listen to others speak without interruption, and refrain from name-calling or other personal attacks."

STUDENT SERVICES: The web address is: http://www3.austin.cc.tx.us/evpcss/rss/Default.htm. The ACC student handbook can be found at: http://www3.austincc.edu/evpcss/handbk/toc.htm.

INSTRUCTIONAL SERVICES: The web address is: http://www3.austincc.edu/evpcss/memos/reference.htm, then click on "Campus Based Student Support Overview".

***ACC POLICY CONCERNING COPYRIGHTED MATERIALS*:** All class materials provided on the instructor's web page, electronic reserves, on diskette, on CD, and in printed form (labs, study questions, assignments, etc.) are copyrighted and may not be reproduced without the written consent of the copyright holder (this may be the instructor, ACC, or a publisher). Reproduction consists of photocopying, scanning and