SYLLABUS FOR BIOLOGY 2420 LECTURE
INTRODUCTION TO MICROBIOLOGY
SPRING SEMESTER 2009

SECTION 018 LECTURE M/W 7:45 AM TO 9:00 AM SAC, RM 1302,
(SYN.28695) Lab RM 1306, 9:10 AM TO 10:25 AM

SECTION 004 LECTURE T/TH 9:10 AM TO 10:25 AM RVS, RM 2221,
(SYN. 10690) Lab RM 2223, 10:35 AM TO 11:50 AM

INSTRUCTOR: CHARLIE BEAMAN
ACC VOICE MAIL: 223-6049
Website: www.austincc.edu/cbeaman (UNDER CONSTRUCTION) EMAIL cbeaman@austincc.edu
RVS OFFICE: BIOLOGY STUDY LAB, RM. 2233, Across the hall from the Faculty Mail – Duplication room
SAC OFFICE: Rm. 1310,
HOME PHONE: 892-2046 (please do not call after 9:00PM – I can get quite grumpy)
OFFICE HOURS: SAC M/W. 7:15 AM to 7:45AM, RVS: 8:30 AM – 9:00 AM, OTHER TIMES BY APPOINTMENT. The best way to contact me is by email – I make it a point to check it regularly.

TEXTBOOK: MICROBIOLOGY, A SYSTEMS APPROACH, 2nd EDITION COWAN AND TALARO
LAB MANUAL: MICROBIOLOGY LABORATORY THEORY AND APPLICATION, 2006 LEBOFFE AND PIERCE (Note, this is a fairly new edition)

COURSE INFORMATION: BIO 2420 IS AN INTRODUCTORY COURSE INTO MICROBIOLOGY. IT INCLUDES STUDY OF THE MICROBIAL WORLD INCLUDING THE BASIC CHARACTERISTICS OF FUNGI, ALGAE, BACTERIA, AND VIRUSES. SPECIAL EMPHASIS IS PLACED ON APPLICATIONS TO HUMANS. THIS COURSE WILL NOT COUNT TOWARD THE ASSOCIATE OF SCIENCE DEGREE IN BIOLOGY. AS OF THE FALL SEMESTER, 2004, THERE IS A PREREQUISITE FOR ATTENDING THIS CLASS THAT IS STRICTLY ENFORCED - PROOF OF PREREQUISITE REQUIRED BY 2ND CLASS – NO EXCEPTIONS - BIOLOGY 2404/BIOLOGY 2101 OR EQUIVALENTS)

IF YOU DECIDE TO DROP THIS COURSE, YOU ARE RESPONSIBLE FOR COMPLETING THE DROP PROCEDURE. IF YOU DO NOT OFFICIALLY DROP, YOU WILL RECEIVE A FAILING GRADE. THE LAST DAY TO DROP IS APRIL 27, 2009. *****IF A STUDENT MISSES 4 OR MORE LABS FOR ANY REASON THEY MUST DROP THE CLASS OR THEY WILL RECEIVE A FAILING GRADE.*****

THE GOAL OF THIS COURSE IS TO PROVIDE THE STUDENT WITH A BASIC KNOWLEDGE OF MICROORGANISMS AND THEIR SIGNIFICANCE TO HUMAN POPULATIONS.

THE COMMON COURSE OBJECTIVES FOR BIOLOGY 2420 ARE AVAILABLE ON LINE AT

http://www2.austin.cc.tx.us/~biology/ccobjectives

GENERAL OBJECTIVES:
LECTURE - AT THE COMPLETION OF THIS COURSE, THE STUDENT WILL
1. KNOW THE BASIC CHARACTERISTICS AND STRUCTURES OF BACTERIA, VIRUSES, FUNGI, AND HUMAN PARASITES
2. UNDERSTAND THE FUNDAMENTALS OF MICROBIAL FUNCTION AND THE RELATIONSHIP BETWEEN THE FUNCTIONS AND DISEASE-PRODUCING CAPABILITIES
3. DESCRIBE THE MEANS OF CONTROL OF INFECTION BY (A) PHYSICAL AND CHEMICAL MEANS (B) AND CHEMOTHERAPY
4. UNDERSTAND THE MECHANISMS OF DISEASE AND THE HOST RESPONSE: IMMUNOLOGY
5. BE ABLE TO DESCRIBE THE MEDICAL SIGNIFICANCE OF THE MAJOR DISEASE-PRODUCING MICROORGANISM

SPECIFIC OBJECTIVES WILL BE GIVEN AT THE BEGINNING OF EACH UNIT AND EACH CHAPTER. THESE WILL SERVE AS A STUDY GUIDE AND AS A REVIEW FOR EXAMS.

LABORATORY - THE GENERAL OBJECTIVES FOR THE LABORATORY WILL BE TO INTRODUCE MICROSCOPY AND TO DEVELOP SKILLS IN USE OF THE MICROSCOPE, TO LEARN BASIC TECHNIQUES SUCH AS CULTURE OF BACTERIA, STAINING OF MICROORGANISMS, IDENTIFICATION OF BACTERIA, AS WELL AS A GENERAL SURVEY OF FUNGI, PROTOZOA, AND HELMINTHS.

ATTENDANCE: SINCE YOUR SUCCESS IN THIS COURSE WILL BE DETERMINED BY YOUR ATTENDANCE IN LECTURE AND LABORATORY, ATTENDANCE WILL BE TAKEN FOR EACH. BECAUSE OF THE EXTRA PREPARATION TIME, ONLY TWO LABORATORY PERIODS CAN BE MADE UP. YOUR LABORATORY GRADE IS PARTICULARLY DEPENDENT ON YOUR PARTICIPATION. EXCESSIVE LAB ABSENCES WILL RESULT IN POINTS BEING DEDUCTED FROM YOUR LABORATORY GRADE, AND WILL ALSO BE REFLECTED IN LAB PRACTICAL GRADES, IN SKILLS AND TECHNIQUES, AS WELL AS UNKNOWNS. ***** If a student misses 4 or more labs for any reason they must drop the class or they will receive a failing grade. *****

GRADING: LECTURE IS 2/3 OF YOUR GRADE

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<thead>
<tr>
<th>Component</th>
<th>Points</th>
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<tr>
<td>4 EXAMS EACH WORTH 100 POINTS</td>
<td>400</td>
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<tr>
<td>4 OUTSIDE ASSIGNMENTS* – 25 POINTS EACH</td>
<td>100</td>
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<td>500</td>
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1. EXAMS
A. THE LECTURE EXAMS WILL COVER LECTURE AND OCCASIONALLY LABORATORY DISCUSSION (THIS WILL BE ANOUNCED AHEAD OF TIME), READING ASSIGNMENTS IN THE TEXTBOOK, LAB MANUAL, AS WELL AS HANDOUTS. EXAMS WILL BE GIVEN DURING CLASS TIME AND ARE COMPOSED OF 50% TO 75% OBJECTIVE ITEMS (MATCHING AND MULTIPLE CHOICE) AND 25% TO 50% SHORT ANSWER AND ESSAY.

B. MAKE UP EXAMS MUST BE ARRANGED WITH THE INSTRUCTOR AND WILL BE GIVEN ONLY IF A STUDENT HAS A VALID REASON FOR MISSING THE SCHEDULED EXAM TIME. MAKE UP EXAMS MAY BE ALL ESSAY TESTS AND WILL BE TAKEN AT THE TESTING CENTER WITHIN A WEEK OF THE ORIGINAL TEST DATE.

C. *THE OUTSIDE ASSIGNMENTS ARE DESIGNED TO COVER MATERIAL THAT IS NOT DISCUSSED IN CLASS. THESE ASSIGNMENTS WILL BE GIVEN AT THE TIME THE OBJECTIVES FOR A UNIT ARE HANDED OUT OR POSTED ON THE WEBSITE. Outside Assignments will not be accepted or graded if received after the scheduled due date.

2. OPTIONAL COMPREHENSIVE FINAL EXAM – ON THE LAST DAY OF CLASS AN OPTIONAL COMPREHENSIVE FINAL WILL BE OFFERED. IF TAKEN, THE GRADE WILL SUBSTITUTE FOR THE LOWEST GRADE EXAM TAKEN BY A STUDENT. IF YOU WANT TO TAKE THE COMPREHENSIVE FINAL, YOU MUST NOTIFY THE INSTRUCTOR IN ADVANCE OF THE LAST CLASS PERIOD. PLEASE NOTE THAT THIS TEST CAN ONLY SUBSTITUTE FOR A TEST THAT HAS BEEN ATTEMPTED AND
CANNOT BE USED TO SUBSTITUTE FOR A MAKE UP TEST. THE COMPREHENSIVE FINAL EXAM WILL BE SIMILAR IN FORMAT TO THE REGULAR UNIT EXAMS AND ANY INFORMATION COVERED IN CLASS AND ON THE UNIT TESTS MAY BE ON THE FINAL. (NO OPTIONAL COMPREHENSIVE FINAL FOR 11 WEEK SUMMER SESSIONS)

A LABORATORY SCHEDULE WILL BE DISTRIBUTED IN LAB THAT GIVES THE EXERCISES FOR EACH LAB PERIOD AS WELL AS THE DATES FOR THE LABORATORY PRACTICALS. YOU NEED TO READ THESE EXERCISES CAREFULLY BEFORE LAB. I WILL NOT TAKE TIME TO GO OVER EVERY DETAIL AND EXPECT YOU TO COME PREPARED FOR A COLLEGE – LEVEL LAB PERIOD. BEFORE EACH LAB PRACTICAL, A REVIEW SHEET WILL BE PROVIDED. EXAMPLES OF POSSIBLE TEST ITEMS PLUS A REVIEW OF THE FORMAT FOR THESE TESTS WILL BE GIVEN PRIOR TO THE FIRST PRACTICAL.

SAFETY: THE MICROBIOLOGY LABORATORY HAS SPECIFIC SAFETY REQUIREMENTS. THESE ARE EXPLAINED IN DETAIL IN THE LABORATORY RULES HAND OUT, ATTACHED TO THE LAB SCHEDULE. TO INSURE THAT EACH STUDENT LEARNS THESE RULES AND PRACTICES SAFE LABORATORY TECHNIQUES, A SAFETY QUIZ WILL BE GIVEN, AND BOTH THE FIRST LECTURE EXAM AND ANY OR ALL OF THE LABORATORY PRACTICALS WILL INCLUDE ITEMS RELATED TO SAFE LAB PRACTICES. SLOPPY TECHNIQUES OR VIOLATION OF RULES PUT THE ENTIRE CLASS AT RISK AND ARE GROUNDS FOR DISMISSAL FROM THE CLASS.

DETERMINING YOUR GRADE:

LECTURE – ADD THE POINTS FROM 4 TESTS AND THE OUTSIDE ASSIGNMENTS (MAXIMUM 500 POINTS) (2/3 OF GRADE)

4 EXAMS WORTH 100 PTS. EACH
4 OUTSIDE ASSIGNMENTS WORTH 25 POINTS EACH

LAB - ADD THE POINTS FOR THE PRACTICALS AND UNKNOWNS, SKILLS AND SAFETY TECHNIQUES (MAXIMUM 250 POINTS)

4 LAB PRACTICALS (35 POINTS EACH) 140 POINTS
MORPHOLOGICAL UNKNOWN 25 POINTS
GENERAL UNKNOWN 35 POINTS
SKILLS AND LAB TECHNIQUES, ATTENDANCE 35 POINTS
SAFETY QUIZ 15 POINTS
250 POINTS TOTAL

ADD THE LECTURE POINTS AND THE LAB POINTS TO GET TOTAL POINTS

675 TO 750  90% TO 100% = A
600 TO 674  80% TO 89% = B
525 TO 599  70% TO 79% = C
450 TO 524  60% TO 69% = D
BELOW 450 = F

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