

GRAYS HARBOR COLLEGE
SYLLABUS
BIOL& 260 - INTRODUCTION to MICROBIOLOGY
5 CREDITS
2011

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- I. COURSE DESCRIPTION: Basic microbiological concepts and techniques. The role of microorganisms in health and disease. Four lecture hours. Four lab hours. Satisfies science or lab requirement area A distribution or specified elective for the AA degree. Prerequisites: A grade of "C" or better in Biol&160 or Biol&221.

The emphasis of this course is on health science application. Throughout the course there will be consideration of the immune activity and an overview of the immune response as it relates to AIDS.

- II. COURSE OBJECTIVES AND OUTCOMES: This course contributes to the Desired Student Abilities of Grays Harbor College as follows:
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|--|-------------------------|
| Competency in the Discipline (4) | Critical Thinking (3) |
| Information Use (3) | Scientific Literacy (3) |
| Social and Personal Responsibility (1) | |

Competency in the Discipline and Scientific Literacy: The student will

- demonstrate knowledge of the history of microbiology as a science;
- identify the several categories of cellular/acellular agents known as "germs;"
- identify and describe a selection of diseases of bacterial and viral etiology
- identify mechanisms that enhance pathogenicity;
- identify mechanisms of resistance and immunity to infectious disease;
- identify methods of physical and chemical control of microbes; and
- demonstrate correct application of aseptic/sterile lab techniques.

Critical Thinking: The student will

- demonstrate problem solving skills by correctly identifying 2 bacterial "unknowns."

Information Use: The student will

- apply knowledge of testing and data collection to solving of bacterial unknowns.

Social and Personal Responsibility: The student will
-apply basic concepts of microbiology to personal behavior outside of class

III. TEXTBOOK AND MATERIALS:

Alcamo's Fundamentals of Microbiology, 9th Ed., by Pommerville
A Photographic Atlas for the Microbiology Laboratory, 3rd Ed (or latest) by
Leboffe and Pierce

A lab journal. These can be purchased for under \$1 but must have sewed-in pages.

IV. COURSE CONTENT AND ORGANIZATION:

Ch. 12 - Bubonic Plague

Ch. 2 - Read on your own. It is assumed that you are familiar with this information (see course prerequisite(s): a grade of C or better in BIOL. 160 or BIOL. 221.)

Ch. 3 - Concepts and Tools for Studying Microorganisms

Ch. 4 - Prokaryotic Cell Structure and Function

Ch. 5 - Prokaryotic Growth and Nutrition

Ch. 1 - Microbiology: Then and Now

Ch. 9 - Gene Transfer, Genetic Engineering

Ch. 24 - Antibiotics & Resistance

Ch. 14 - The Viruses and Viruses-like Agents

Ch. 15 - A selection of viral diseases, to be announced

Ch. 16 - A selection of viral diseases, to be announced

Ch. 19 - Infection and Disease

Ch. 20 - Resistance and the Immune System: Innate Immunity

Ch. 21 - Resistance and the Immune System: Acquired Immunity

Ch. 22 - Active and Passive Immunity/Vaccines

Ch. 11 - Foodborne and Waterborne Disease

Because we work with living organisms, which don't grow on the college class schedule, you should expect to visit lab at times other than scheduled lab hours to check on bacterial growth or perform tests.

IV. EVALUATION/ASSESSMENT METHODS: Assessment is a continuous process that will go on throughout this learning experience. Students will accumulate points as they complete a variety of assigned tasks including three lecture tests and a course final, "pop" quizzes, a lab midterm, weekly lab activities, and a lab project that centers on the solving of bacterial unknowns.

The approximate weight (subject to change at the instructor's discretion) given to the graded activities is as follows:

3 lecture tests = ~ 40% of the total grade Lab activities, quizzes & tests= ~ 30%

Final exam = ~ 25%

Clicker Quizzes

= ~ 5%

The grading scale is as follows:

A (94%-100%),	A- (90%-93%)	
B+ (87%-89%),	B (84%-86%),	B- (80%-83%)
C+ (77%-79%),	C (74%-76%),	C- (70%-73%)
D+ (64%-69%),	D (60%-64%)	F (0-59%)

I do not grade on a curve.

I do not "give" grades; the student must earn them.

Students are expected to take tests as scheduled. If you miss a test, it is your responsibility to get in touch with the instructor immediately.

Reviewing Past Tests: You are encouraged to carefully review your test results as soon after the test as I can reasonably make them available to you. Appeals for grade changes should be made within a week of the test. No end-of-quarter grade changes. No points will be given because a student failed to answer a question. Double-checking work is part of quality control. It's the responsibility of the student to do this before submitting the test.

At the end of the quarter, your tests will be "bundled" and you may review them in preparation for the final exam.

In all cases, when you review tests, the following rules apply:

You may not copy in any way any words from the test. This includes, but is not limited to, photographing or photocopying the test, making an audio tape of terms from the test, highlighting test terms in your text or other books or on your notes, or directly taking notes on the content of the tests.

You may bring to the final review downloaded copies of my study sheets on which you have made no notes of your own. Using these "blank" sheets, you may check (✓) key words that are found on both the tests and the study sheets.

Failure to follow these rules will be viewed as a breach of class policy and, if I feel it is warranted, you will be referred to the Vice President of Instruction for further discussions of your actions.

Study Aids:

I have placed a copy of the textbook study guide at the reserve desk of the library. If it is not there, please let me know.

Copies of my past tests are available at the reserve desk of the library. You can photocopy them but please don't write on them. Remember, these are copies of

past tests. Current assignments may not necessarily be the same as past assignments.

To get my study guides, point your browser to <http://www.ghc.edu/faculty/carter>. Find the list of courses I teach and click on the Microbiology listing. Follow that link to the study guides, then bookmark and print

Attendance: It is essential that students attend all classes as scheduled and are prepared to participate in class activities. I do not lecture from a set of lecture notes; rather, the "lecture" derives from student needs as voiced by students at the beginning of each class.

Students are expected to attend all labs. Because lab lessons include demonstrations of correct techniques for growing, transferring, testing and staining bacteria, students may not progress in lab until previous labs have been completed.

Inclement Weather: You must make your own decisions; call me as soon as possible. Also, check my website or phone message for information about class schedules.

Telephones: The disruption of a ringing telephone will not be tolerated. Either turn them off or don't come to class!

Text Messaging: Text messaging diverts student attention from class activities and is distracting to other students. Text messaging is not allowed during class.

Photographing lab equipment, slides: Photographing lab equipment, models, slides, etc. is not permitted. Lab is an opportunity for active, hands-on interaction with course curriculum. As such, labs are designed to enhance student learning through methods other than passive reading and memorization. To photograph models, slides, etc. and then study these pictures at home, rather than actively engage in the lab experience, circumvents the purpose of lab and is unfair to other students.

Videotaping/Podcasting classes or labs is not permitted. You may use tape recorders or the special pens that record audio while taking notes.

Tardiness: I'd rather have students late than not in class, but be considerate. WE don't want to hear the rustle of polyester coats or the unzipping of backpacks. Enter quietly and prepared, and take a back seat. Do not walk between the rest of the class and me. Similar courtesy is requested if you have to leave early.

Code words: Each student will be assigned a "code word." I will use these codes when posting grades outside my office.

Disability Support Service: Any individual who has a documented disability, which might interfere with his or her ability to fully participate in class, may be eligible for accommodations. Feel free to contact me after class or contact the Disability Support Service program located in Student Services, Room 119. Any information regarding disability will be kept confidential.