SCI 100 First Summer Session 2012

I. Instructor:

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II. Goals and Objectives:

The purpose of this course is to offer those students not majoring in the natural or physical sciences, an interdisciplinary lab science experience, integrating principles of biology, chemistry, physics and earth sciences around the central theme of water. Unlike traditional courses, this course will take an inquiry-based approach, and will be somewhat flexible in the topics covered. The laboratory portion will emphasize collaborative work. Students will work in groups throughout the course designing, implementing, analyzing and presenting the results of experiments in a variety of formats. Further, it is expected that students will have the motivation necessary to complete the online activities to the best of their abilities and in a timely fashion.

This course will provide students with the opportunity to develop the following skills and abilities:

- To experience firsthand the scientific process: development of hypotheses, experimental design and implementation, collection and analysis of data, and communication of results
- To increase knowledge of the importance of water to living organisms, from sub-cellular to ecosystem level processes
- To increase knowledge of the chemical, physical, and biological factors that affect water quality
- To increase knowledge and awareness of water issues at local, national and international levels
- To gain experience in the basic computer skills necessary to succeed in academia as well as the current business world
- To improve oral and written communication skills
- To gain experience working in a group setting

This course fulfills the university distribution requirement for a science + lab course and it addresses the following competencies as defined by the Maryland Higher Education Commission: Scientific and Quantitative Reasoning, and Technological Competency.

III. Structure of the Course:

Class will meet on Tuesdays and Thursdays during Summer Session I, 2010. There are homework assignments and online activities to complete between class meeting times.

IV. Books

Each student will need to purchase the Simbio custom lab packet from the bookstore (located under SCI 100). The packet contains software to run 3 ecological simulations, and corresponding workbooks. The workbooks will be collected and graded in class. You MUST purchase the workbook and software in order to receive credit.

V. Method of Evaluation

A. Midterm (15%) and Final (15%) 30%

Exams will consist of a variety of question types including short answer, essay, definitions, graphing etc., and will cover material from both the lecture/ discussion and lab portions of the class. The Final Exam will be cumulative but will stress the last half of the course.

B. Annotated Bibliography 5%

You will be required to submit an annotated bibliography as part of your group project research. See the hand out in BB for specifics and the course schedule for the due date.

C. Lab Reports 15%

There will be two formal lab reports due during the course of the session, each worth 7.5% of your grade. Details on writing a lab report, including grading rubrics, are available online. You are highly encouraged to read this material prior to writing the first lab report.

D. Lab Group Research Project 20%

Details on the group project can be viewed on the course website.

E. Quizzes 10%

There will be 5 quizzes on Blackboard worth 2% each. This does not include the syllabus/course quiz covering the syllabus and grading methods in this course. Quizzes may be taken only once, and must be completed within an hour of starting them.

F. Assignments/ Attendance/ BB Participation 20%

You will have a variety of assignments to complete and post about on Blackboard on either a specific Discussion Board, or in an assignments folder. You will also be

using a group discussion board in order to develop and complete your group research project. This portion of your grade also includes participation in class & lab, as well as the Simbio workbooks

Total =100%

VI. Final Letter Grade Assignment:

There are a total of 1000 points available to earn in the entire course. Final letter grades will be assigned according to the following scale:

895 and higher = A
795 - 894 = B
695 - 794 = C
595 - 694 = D
Less than 594 = F

VII. Materials for Lecture and Lab:

In addition to the Simbio custom lab packet, a variety of other materials (lecture handouts, lab handouts and readings) will be placed online on the course website. **It is each student's responsibility to print out the lab exercises and any necessary lecture materials prior to coming to class!** Assuming a cost of about $0.10 per page, the total cost should not exceed $20.00, which is substantially less than the cost of the average textbook. Please note that this does NOT include the cost of printing out any written work to be turned in for a grade. Also note that there are no "open" computer facilities in the Physics Bldg.

VIII. Absences:

All Absences from examinations must be reported **immediately to me,** either in person or by phone along with the reason(s) for the absence. There are **NO MAKE UP EXAMS!** Missed exams will count as a zero, unless you have a valid medical or legal excuse. You should be prepared to provide documentation supporting the reason for your absence. (i.e. note from your physician, police report, notice from funeral home, etc.)

Each unexcused absence from class will subtract **five (5) *percentage* points from the total final course grade.** For example, if you miss 3 classes I will deduct 15% off of your final course average. Students will not be able to turn in assignments or reports based on data collected in a lab they did not attend or participate fully in. If you are late to class and miss an exercise I reserve full right to count you as absent that day. There is no option to make an exercise up. ***Generally speaking, if you are sick enough to miss class, lab or an exam, you are sick enough to go see a doctor.***

Cancelled Classes:

Lectures and labs will always be held, unless UMBC closes due to inclement weather. If UMBC closes, any work that was to be turned in that day will be due by noon on the next day UMBC is open. Please note that this does NOT mean the next day that

you might have class. For instance, if UMBC closes on a Tuesday any assignments due on that day, would now be due by noon on Wednesday (assuming campus is open on Wed.)

IX. Writing, Acknowledging Sources, and Plagiarism:

By enrolling in this course, each student assumes the responsibilities of an active participant in UMBC's scholarly community in which everyone's academic work and behavior are held to the highest standards of honesty. Cheating, fabrication, plagiarism, and helping others to commit these acts are all forms of academic dishonesty, and they are wrong. Academic misconduct could result in disciplinary action that may include, *but is not limited to*, suspension or dismissal. Information about the Academic Conduct Policy may be read online at http://www.umbc.edu/provost/integrity/questions.html

Throughout this course you will be writing lab reports which will include facts obtained from other written sources. Ideas and facts drawn from source materials must be acknowledged in the text of your paper at the point of mention and a full citation must be listed in the references or literature cited section. Refer to the information on the course website for specifics on proper citation. Although the focus of this course is on group work and collaboration, make sure that the written work you turn in is an *individual* effort. Even though every member of a particular lab group will have the same raw data, this does not mean that the finished reports will be identical. **Any paper or assignment containing passages copied from another source will receive a zero, and will result in an additional letter grade reduction in the course.** This includes copying passages from websites and other students' papers. Plagiarism will also result in documentation being submitted to the UMBC Academic Conduct Committee. If it is discovered that a student has been reported to the committee before, plagiarism will result in automatic failure of this course. Please see your instructor if you do not have a complete understanding of what plagiarism entails.

Additional Note: The work submitted for this course is expected to be original work for this class. You **may not submit work previously submitted either in this course, or in another course. Any such work discovered will receive a grade of a zero**.

X. Miscellaneous

Please be advised that if you are taking this course to satisfy a GFR/GEP requirement you MUST take this class with the traditional letter grading options; if you convert your grading option to Pass/Fail, this course will no longer satisfy the GFR/GEP requirement.

If you require accommodations from the office of Student Support Services, please let me know. I am more than willing to work with you.

Note: Syllabus may be modified if necessary at the instructor's discretion.