SCI100 Water; An Interdisciplinary Study
Summer Session 2014

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 describe 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 have eight face-to-face meetings on Summer Session, 2014. Other class meeting times are designated as online, though you do not need to be online during your normal class time. However, there are homework assignments and online activities to complete throughout the week as well as between class meeting times.

IV. Books

Each student will need to purchase the SimBio custom SimUText lab materials **online** ($15.00 per student). This material includes 3 ecological simulations with corresponding workbooks. You will need to print out the workbooks and do the online lab simulations. The workbooks will be collected and graded in class. You MUST hand in the hard copy of the workbook in class to receive credit. Due dates and directions to purchase and access these simulations will be explained in class.

V. Method of Evaluation

A. Exams
Midterm (15%) and Final (20%) 35%
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 Midterm exam will be an online exam. The Final Exam (in class) will be cumulative but will stress the last half of the course.

B. Lab Reports 15%
There will be two formal lab reports due during the course of the session, each worth 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 a lab report. Reports are turned in as hardcopies in addition to a link on BlackBoard.

C. Lab Group Research Project 20%
This assignment will include the following:

- Annotated Bibliography 5%
- Group Project Lab Report 7.5%
- Oral Presentation 5%
- Peer Evaluation 2.5%

Details and guidelines for each of these group project assignments can be viewed on the course website.

D. Quizzes 10%
There will be 5 online quizzes on Blackboard worth 2% each. This does not include the first quiz covering the syllabus and grading methods in this course. Quizzes may be taken only once, and must be completed within one hour of starting them.

E. Assignments/ Lab Attendance/ Homework 20%
You will have a variety of assignments to complete and post on Blackboard in the assignments folder. This portion of your grade also includes participation in class & lab, as well as the Simbio SimUText workbooks.

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:

89.5% and higher	=	A
79.5% - 89.4%	=	B
69.5% - 79.4%	=	C
59.5% - 69.4%	=	D
Less than 59.4%	=	F

VII. Materials for Lecture and Lab:
In addition to the SimBio SimUText virtual labs, 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 other necessary materials prior to coming to class! Assuming a cost of $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, Late Work, and Cancelled Classes:
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. In a hybrid class with only 8 meetings, attendance at each session is mandatory. Students are not 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.

Late Work

Assignments are routinely due at the start of either lecture or lab as stipulated in the schedule. Late work is penalized, and all parts of an assignment and submission (both as hardcopy and/or electronically) must be completed in order for an assignment to be graded. If all parts are not submitted, the assignment is considered late/incomplete and may not be accepted for grading (if accepted there will be a grade penalty). While the instructor will remind you when assignments are coming due, it is your responsibility to complete work on time and as required.

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 on the next day of our scheduled class. For instance, if UMBC closes on a Wednesday any assignments due on that day, would now be due on Friday (assuming campus is open on Friday).

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/undergrad_ed/ai/

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 me 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.