

Chesapeake Bay Governor's School / Rappahannock Community College
Syllabus for Foundations of Science (SCT 111/112), 4 credits/semester, 8 total
Bethany Smith
Warsaw Campus, Fall/Spring 2015-2016

CBGS-Warsaw: (804) 333-1306; Monday-Friday 7:30 am – 3:00 pm

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Course Website: RCC Blackboard

Course Description and Objectives

This sophomore level course will explore earth systems science with an emphasis on the Chesapeake Bay watershed and Virginia geology. Students will also explore concepts related to global population dynamics, climate change, and sustainable living. The course will be technology based and use data collection labs and applications of computer technology to facilitate student understanding of various ecological concepts. Students will participate in several field trips, gaining experiential knowledge of the Chesapeake Bay watershed and Virginia geology through camping and hiking on day and overnight trips. Additionally, students will learn water quality testing procedures and water quality indicators through weekly water quality monitoring trips to local creeks, streams, and rivers.

Finally, this class will require the student to participate. Environmental sciences are particularly well suited for “doing”; meaning that the student will have plenty of opportunity for hands-on experiences, as well as active discussions and debates and a variety of topics. You should prepare yourself to look at the “big picture” and think about concepts and relationships in ways that may be unconventional.

Course Syllabus:

Unit 1: *Earth Systems Processes and Virginia Geology:* Scientific theory, Earth systems processes and cycles, a geologic history of Virginia with special focus on Chesapeake Bay.

Unit 2: *Water Quality and Watershed Ecology:* water quality indicators, water quality monitoring, groundwater, soil types and percolation.

Unit 3: *The Properties of Water:* basic water chemistry, adhesion, cohesion, density and freezing, heat capacity, viscosity and dissolution. Origins of seawater, human alteration of the water cycle, anthropogenic inputs.

Unit 4: *Human Population, Global Implications and Responsibility:* Human population dynamics, population growth, climate change, environmental impacts, sustainable land use practices.

Texts: Living in the Environment, Miller (14th Edition)
 Nature's Fortune, Mark Tercek & Jonathan Adams

Required Materials: A 3-ring binder devoted solely to Foundations. You should have dividers so you can separate sections for notes/handouts, graded papers, and research. You should have a notebook or loose-leaf paper that can be added to your binder to take notes on. You should also have pens & pencils and a calculator handy. You will also need a composition bound notebook

to serve as your journal and a “write in the rain” notebook (this will be your field notebook), this MUST be taken on all field trips. After certain field trips/activities I will collect and grade your journal and/or field notebook.

Course Expectations:

- 1.) Be respectful of your fellow students and instructor. Listen carefully to your colleague’s thoughts and ideas. We will foster a learning community through which we can all learn from each other. Additionally, be careful stewards of the environment and the organisms living in it while on field trips.
- 2.) Follow school rules, treat equipment carefully, and follow instructor’s safety rules in the lab and field.
- 3.) Come to class every day ready to participate! You should be prepared for all class discussions and debates and ready to take notes and ask questions as they arise.
- 4.) In the field, you should be prepared to get wet and dirty, and make sure to bring your adventurous attitude.

Grading: Your quarter/semester grade will be based on a point system. You can determine your average by taking the points you earned and dividing them by the total possible points. The CBGS grading scale is listed in the CBGS Handbook. Your grades on assignments will be posted in the course Blackboard. Late work is frowned upon! There will be a 2 point per day late penalty for all work turned in late. Projects turned in more than 1 week late, or classwork turned in after we have gone over it in class will result in a completion grade of 50%.

Attendance: Attendance is required in both class and on field trips. If you are absent, it is your responsibility to find out what you missed. Get any notes you missed from a friend, and be sure to ask me for any handouts and assignments. Generally, if you are absent, I will try to make sure anything you missed gets placed in your student mailbox. But, it’s always a good idea to check with me.

Assignments that were due the day of your absence are due the day you return to school. If I don’t see you for class that day, you may leave your work in my mailbox. Make-up exams and quizzes are due within 1 week of your return. It is your responsibility to schedule a time for a make-up exam or quiz. If you have an extended absence, I am flexible, but you will need to contact me so we can discuss your options.

Attendance will be reported to parents on interims and grade reports. In the event of five (5) or more absences that are non-school related within a marking period, a parent conference will be requested.

Cell Phone Policy: All cell phones and other electronic devices should be silenced and stowed during lecture/lab/field trips. They are not to be taken out or used during any of these times as well, unless you are instructed to by me. Repeated abuse of this policy will result in further disciplinary action.

Honor Code: Academic honesty, respect, trust, integrity, and responsibility are underlying core values that support the Honor Policy and Honor Pledge of the Chesapeake Bay Governor’s

School. Failure to abide by the Honor Policy will result in disciplinary action as detailed in the Honor Policy in the Student Handbook.

CBGS Statement on Safety

What to know and do to be prepared for emergencies at CBGS/RCC:

- Sign up to receive RCC text messaging alerts Keep your information up-to-date (<https://alert.rappahannock.edu/index.php?CCheck=1>)
- Know the safe evacuation route from each of your classrooms. Emergency evacuation routes are posted in campus classrooms.
- Listen for and follow instructions from CBGS/RCC or other designated authorities.
- Know where to go for additional emergency information.
- Report suspicious activities and objects

Statement on Americans with Disabilities Act

Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 require Schools to provide an 'academic adjustment' and/or a 'reasonable accommodation' to any qualified individual with a physical or mental disability who self-identifies as having such. Students should contact/ inform CBGS faculty for appropriate academic adjustments or accommodations.