

CHEM-135-H01 Freshman Honors Colloquium
Introduction to Research – Energy, Water, and the Environment
Fall 2009

GENERAL INFORMATION

Instructor: Dr. Ed Brush – Chemical Sciences
CHEM-135-H01
Monday, 1:50 – 2:40 PM, LIBR 116
Office: Conant Science Building 318
508-531-2116
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Classroom: LIBR 116, Maxwell Library

COURSE DESCRIPTION, GOALS, and OBJECTIVES. CHEM-135-H01 is a one-credit, one-semester Honors Colloquium designed as an “Introduction to Research in the Sciences,” and the theme or focus for this section is on Environmental Sustainability (Energy, Water and the Environment). **This course is open to all students majoring in biology, chemistry, earth sciences, geography and physics** who may be interested in participating in the undergraduate research opportunities at Bridgewater State College. CHEM-141 is the pre- or co-requisite to CHEM-135.

Why should I consider participation in research? Participation in undergraduate research allows students to apply the knowledge and skills learned in the classroom and teaching laboratory, to investigate a practical problem in the research lab or in the field. You will have the opportunity to work closely with a faculty mentor and a team of other undergraduate students in developing a hypothesis, proposing and conducting experiments, analyzing data, and solving problems. Of equal importance, you will report your research at local, regional, and national conferences and receive input from other researchers in your field. Research participation will open up many doors for you, especially if you are considering graduate school as the next step in your science career.

Goals of this Course. The primary goals of this course are to remove the “mystery” surrounding science research, and to help prepare students to undertake a research project with a science faculty mentor by taking you through the process of starting a research project. Students enrolled in this course will learn about the many research opportunities available to science students at BSC or at other colleges, universities, and research institutions. You will also learn about the process involved in starting a research project in the sciences:

- 1) Identifying a research problem or question related to environmental sustainability;
- 2) You will propose a hypothesis to explain the scientific basis behind the problem;
- 3) You will use the internet and library resources to research the current background information related to your research question, and to justify the significance of your research problem to the science discipline and to society;
- 4) You will propose an experimental solution;
- 5) You will present your research proposal for review to the BSC community at the mid-year symposium.

GRADING POLICY

	<u>% of final grade</u>
• Attendance	100 points
• Weekly Assignments (3-5)	500 points (max)
• Poster presentation of your proposal at the Mid-Year Symposium	150 points
• Formal written proposal of 3-5 pages	150 points
• TOTAL	900 points (max)