Description and Learning Goals for Seminar 3:
"Science and Technology in New York City"

Macaulay Honors College
The City University of New York

Revised: May 2011

Seminar Description:

In the third Honors College seminar, students will learn about major scientific concepts and their relationship to technological developments, using New York City as a template for the issues being faced by cities around the world. The topic of this interdisciplinary seminar will vary according to the scientific expertise and field of the instructor and might include one of the following: climate change, ecological issues, energy sources, medicine/public health, computers and information technology, security and counterterrorism technologies, and AIDS or other diseases. Students will read scientific literature and learn the fundamentals of science necessary to understand the key issues in a field – and how they impact public policy issues. Students will learn about the work of scientists and technologists in that discipline, and they will discuss the historical, ethical, legal, social, cultural, economic, and political ramifications of a topic. Collaborative learning through team research projects will culminate in an event with presentations of results.

Learning Goals:

In this seminar, students will:

1. Demonstrate an awareness of the messiness and complexity of the progress of scientific knowledge – as well as sufficient scientific literacy to take an informed standpoint on scientific and technological issues of importance to New York City.
2. Understand how scientists or technologists conduct their work by learning about the practical logistics, procedures/methodologies, quantitative skills, and career considerations of professionals in science and technology fields.
3. Be aware of key literature/data resources and understand sufficient terminology to be able to conduct background research on a topic in a scientific discipline.

4. Investigate scientific and technological issues by analyzing one or more problems relating to New York City in detail.
5. Write about and publicly present information on key topics in a scientific discipline – including explaining research to a general audience or articulating a standpoint on a scientific issue.
6. Explain how a scientific issue or problem can be viewed from multiple disciplinary perspectives: historical, ethical, legal, social, cultural, economic, political, etc.