NOVA COLLEGE-WIDE COURSE CONTENT SUMMARY
ENV 122 – GENERAL ENVIRONMENTAL SCIENCE II (4 CR.)

Course Description

Explores fundamental interactions between human populations and natural systems of the earth. Introduces the basic science behind the causes, effects, and mitigation of major environmental issues. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

General Course Purpose

This course is to provide students with an opportunity to acquire fundamental knowledge of human's relationship to the environment and the science behind the causes, effects, and possible mitigation of major environmental issues. This course is designed for both science and non-science majors. The course may serve as a prerequisite for advanced science courses, a laboratory science graduation requirement, or as transfer credit for a four-year institution.

Course Prerequisites/Co-requisites

Satisfactory placement score for ENG 111. General Environmental Science I is recommended.

Course Objectives

Upon completion of this course, the student will be able to:

- Discuss major global environmental issues.
- Understand the basic natural science underlying these major environmental issues.
- Describe the role human population plays in environmental issues, and potential solutions to those issues.
- Gain an appreciation of how the complexity of natural systems can complicate human efforts to manage the environment.
- Read and interpret data.
- Interpret both primary and secondary sources.
- Demonstrate their knowledge of both quantitative and qualitative methods.
- Demonstrate an awareness of communication as an integral part of the scientific way of knowing, both between and among scientists, and between scientists and the rest of society.
- Demonstrate the ability to understand and value the role of science in both personal and public/societal decision making.
- Distinguish between issues subject to scientific analysis and those appropriate to other modes of inquiry.

Major Topics to be Included

- Human population issues and relation to environmental issues
- Resources - Energy – patterns of consumption
- Resources - Energy – fossil fuels
- Resources - Energy – nuclear
- Resources - Energy – renewable/alternative
- Resources - Energy – conservation
- Resources - Soil, land, forests
- Resources - Biodiversity
- Resources - Water – freshwater
- Resources - Water – saltwater
- Resources - Air – outdoor and indoor pollution, acid deposition
- Addressing environmental issues – ethics, economics, policy
- Addressing environmental issues – health, toxicology
- Environmental issues – feeding the world
- Environmental issues – climate change
- Environmental issue – ozone depletion
- Environmental issue – waste management
- Environmental issue – sustainability