

**J. Sargeant Reynolds Community College
Course Content Summary**

Course Prefix and Number: BIO 107

Credits: 4

Course Title: Biology of the Environment

Course Description: Presents the basic concepts of environmental science through a topical approach. Includes the scientific method, population growth and migration, use of natural resources and waste management, ecosystem simplification and recovery, evolution, biogeochemical cycles, photosynthesis and global warming, geological formations, atmosphere and climate, and ozone depletion, pollution examples and anti-pollution laws, and acid deposition. Environmental Sustainability Designation: Course content related to the study of sustainable development. Prerequisite: Completion of ENF 2, if required by placement test or instructor/advisory approval. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

General Course Purpose: This course provides content covered in an introductory environmental course and can be used for credit toward the AS in Science degree.

Course Prerequisites and Co-requisites:

Prerequisite: Completion of ENF 2, if required by placement test or instructor/advisory approval.

Course Objectives:

Upon completing the course, the student will be able to

- a. Understand environmental science using a multidisciplinary approach;
- b. Use critical thinking skills to evaluate scientific and technical issues both personally and more globally;
- c. Understand key concepts of biology, chemistry, and physics, and relate them to social, political, and ethical issues; and
- d. Express scientific concepts in both oral and written form.

Major Topics to Be Included:

- a. Scientific method
- b. Population growth and migration
- c. Use of natural resources and waste management
- d. Ecosystem simplification and recovery
- e. Evolution
- f. Biogeochemical cycles
- g. Photosynthesis and global warming
- h. Geological formations
- i. Ozone depletion and acid deposition

Effective Date of Course Content Summary: February 16, 2009