MASTER SYLLABUS
(Generic Outline)

Administrative Unit: Science

Course Prefix and Number: ENVS 115

Course Title: Introduction to Environmental Science

Number of Credit Hours: 3  Lecture Hours: 3  Laboratory Hours: 0

Catalog Description: Survey of environmental science, ecosystems and human impact. Cross-listed as BIOL 115. G.E.

Prerequisite(s)/Corequisite(s): None.

Text(s): Textbook(s) listed is/are not necessarily the textbook(s) used in the course.


Course Objectives:

• To identify specific principles that help explain interaction in the natural environment.
• To explain the basic principles of ecology and apply them to natural and artificial systems.
• To identify the major environmental issues confronting society.
• To critically evaluate the role and impact of humans on natural systems.

Measurable Learning Outcomes

• Define sustainability.
• Describe the relationships between climate and biomes.
• Illustrate how matter and energy cycle in ecosystems.
• Identify how species interact with each other and the environment.
• Outline human population characteristics and analyze their past and future impacts.
• Connect basic economic principles to human population dynamics.
• Describe basic geochemical cycles.
• Assess major patterns of food production and distribution.
• Appraise the value of wild species and biodiversity.
• Describe the costs and benefits of conservation, preservation and restoration.
• Describe sources, uses and problems of energy sources including fossil, nuclear, renewable and alternative fuels.
• Analyze causes and effects of land, air and water pollution.
• Describe causes and effects of global climate change.
• Model sustainable economic, social and political methods.

Topical Outline (major areas of coverage):
• Essential biological principles.
• Population and community ecology.
• Nonbiotic issues – air, water, geology, energy, waste.
• Sustainability.
• Human impacts and environmental policy.

Recommended maximum class size for this course: 35

Library Resources: Online databases are available at http://www.ccis.edu/offices/library/resources.asp. You may access them from off-campus using your eServices login and password when prompted.

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NOTE: The intention of the master syllabus is to provide an outline of the contents of this course, as specified by the faculty of Columbia College, regardless of who teaches the course, when it is taught or where it is taught. Faculty members teaching this course for Columbia College are expected to facilitate learning pursuant to the course objectives and cover the subjects listed in the topical outline. However, instructors are also encouraged to cover additional topics of interest so long as those topics are relevant to the course’s subject. The master syllabus is, therefore, prescriptive in nature but also allows for a diversity of individual approaches to course material.

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