DEPARTMENT: Academic Programs
CURRICULUM: Environmental Science
COURSE TITLE: General Ecology
COURSE NUMBER: ENV 201
TYPE OF COURSE: Academic Transfer
Special Requirement Met: None
AREA(S) OF KNOWLEDGE: The Natural World
COURSE LENGTH: 1 quarter
CREDIT HOURS: 5
LECTURE HOURS: 55
LAB HOURS: 0
CLASS SIZE: 30
PREREQUISITES: Qualified for ENGL 098

COURSE DESCRIPTION:

Covers the nature of ecosystems, energy flow, nutrient cycles, population dynamics, organization and dynamics of communities, and identification of environmental problems.
STUDENT LEARNING OUTCOMES ADDRESSED:

1. Communication - Read and listen actively to learn and communicate. Speak and write effectively for personal, academic, and workplace purposes.
2. Human Relations - Use social interactive skills to work in groups effectively.
3. Critical Thinking and Problem Solving – Think critically in evaluating information, solving problems and making decisions
4. Personal Responsibility – Value one’s own skills and abilities and be motivated to continue learning. Take pride in one’s ideas, work and art. Have the ability to adapt to change.

GENERAL COURSE OBJECTIVES:

At the end of the course the student will:

1. Understand the major structural components of ecosystems.
2. Have a basic understanding of how ecosystems work.
3. Understand the biodiversity and why it is important.
4. Illustrate the flow of energy through ecosystems.
5. Illustrate the carbon, nitrogen and hydrologic cycles.
6. Understand the characteristics of soils.
7. Explain biological evolution and speciation.
8. Understand ecological niches and the role of extinction.
9. Understand the factors that affect climate.
10. Explain the roles of the wind and ocean currents.
11. Understand the major differences between life on land and the life in water.
12. Understand the major types of aquatic systems, including marine and freshwater.
13. Explain the roles species play in ecosystems and their interactions with other species.
14. Understand how biological communities respond to changing environmental conditions.
15. Explain the factors that cause populations to increase or decrease.
16. Understand carrying capacity.
17. Understand how human activity affects land and aquatic ecosystems.
18. Explain how biodiversity can be sustained.
19. Explain how understanding ecosystems can promote a sustainable human civilization.
ENV 201 General Ecology
September 2009

TOPICAL OUTLINE:

I. Environmental Problems, their causes and sustainability
II. Ecosystems and how they work
III. Evolution and biodiversity
IV. Climate and biodiversity
V. Community and population ecology
VI. Sustaining biodiversity
VII.

REVISED BY: Tim Walsh
DATE: September 2009
<table>
<thead>
<tr>
<th>SLO #</th>
<th>Included in Course Objective Number</th>
<th>SSCC Student Learning Outcomes</th>
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</thead>
<tbody>
<tr>
<td>SLO 1.1</td>
<td>Communication - Read and listen actively</td>
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<tr>
<td>SLO 1.2</td>
<td>Communication - Speak and write effectively</td>
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<tr>
<td>SLO 2.1</td>
<td>Computation - Use mathematical operations</td>
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<tr>
<td>SLO 2.2</td>
<td>Computation - Apply quantitative skills</td>
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<tr>
<td>SLO 2.3</td>
<td>Computation - Identify, interpret, and utilize higher level mathematical and cognitive skills</td>
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<tr>
<td>SLO 3.1</td>
<td>Human Relations - Use social interactive skills to work in groups effectively</td>
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<tr>
<td>SLO 3.2</td>
<td>Human Relations - Recognize the diversity of cultural influences and values</td>
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<td>SLO 4.1</td>
<td>Critical Thinking and Problem Solving -</td>
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<tr>
<td>SLO 5.1</td>
<td>Technology - Select and use appropriate technological tools</td>
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<td>SLO 6.1</td>
<td>Personal Responsibility - Be motivated and able to continue learning and adapt to change</td>
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<tr>
<td>SLO 6.2</td>
<td>Personal Responsibility - Value one's own skills, abilities, ideas and art</td>
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<td>SLO 6.3</td>
<td>Personal Responsibility - Take pride in one's work</td>
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<td>SLO 6.4</td>
<td>Personal Responsibility - Manage personal health and safety</td>
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<td>SLO 6.5</td>
<td>Personal Responsibility - Be aware of civic and environmental issues</td>
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<tr>
<td>SLO 7.1</td>
<td>Information Literacy - Access and evaluate information</td>
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<td>SLO 7.2</td>
<td>Information Literacy - Use information to achieve personal, academic, and career goals, as well as to participate in a democratic society</td>
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