Degree Applicable

Glendale Community College
November, 2009

COURSE OUTLINE

Environmental Technology 150
Introduction to Environmental Technology

I. Catalog Statement

Environmental Technology 150 introduces students to a range of fields that encompass the rapidly expanding environmental technology industries. This course will cover basic principles and skill sets applicable to "green" technology sectors. Students will learn about "green- collar" employment and career opportunities.

Units – 3.0
Lecture Hours – 3.0

Prerequisite: None.

II. Course Entry Expectations

Skill Level Ranges: Reading 5; Writing 5; Listening/Speaking 5; Math 3.

III. Course Exit Standards

Upon successful completion of the required coursework, the student will be able to:

1. explain environmental challenges facing today's world;
2. identify off-the-shelf technology used for residential and commercial building uses;
3. identify incentives for adopting green technologies in their home or business;
4. identify green-collar career opportunities;
5. describe various sectors in green technology industries.

IV. Course Content

A. Principles of Climate Change Science 3 hours
   1. Pollution
   2. Drought

B. Energy Generation 9 hours
   1. Solar photovoltaic energy
   2. Solar thermal energy
   3. Wind
   4. Biofuels

C. Energy Storage 6 hours
   1. Fuel cells
   2. Hybrids
   3. Batteries

D. Energy Efficiency 6 hours
   1. Lighting
   2. Green building

E. Transportation 3 hours

F. Water 3 hours
   1. Water treatment
   2. Water conservation
   3. Drought tolerant landscaping

G. Materials and Manufacturing 6 hours
   1. Green materials in architecture
   2. Green packaging
   3. Smart production

H. Recycling 3 hours

I. Agriculture 3 hours
   1. Land management
   2. Natural pesticides

J. Business Services 6 hours
   1. Green marketing
   2. Green P.R.
   3. Monitoring air and environmental compliance

V. Methods of Presentation

The following instructional methodologies may be used in the course:
1. lecture/discussion;
2. demonstration;
3. multimedia presentations;
4. guest speakers;
5. field trips.

VI. Assignments and Methods of Evaluation

1. Quizzes.
2. Mid-tern examination.
3. Written assignments.
4. Final examination.

VII. Textbook

Hand-outs and internet readings only.

VIII. Student Learning Outcomes

1. Students will be able to understand and explain the environmental challenges facing the world today.
2. Students will be able to describe, compare and contrast green technology industry sectors.
3. Students will be able to identify green-collar career opportunities.