Course Objectives/Course Outline
Spokane Community College

Course Title: Environmental Science
Prefix and Course Number: ENVS& 101

Learning/Performance Expectations:
By the end of this course, students will be able to:

- Understand the function of and interactions between the five spheres of earth that comprise our environment.
- Be proficient with the use of maps to orient and inform including knowledge of Geographic Information Systems (GIS) and Google Earth applications.
- Make fundamental and repeatable observations of the environment using a variety of technical tools and collect detailed scientific observations with rigorous documentation in a field notes journal.
- Use critical thinking skills to pose environmental questions and propose plausible solutions
- Learn about past and present management practices of the earth’s natural resources and connection to societies locally, regionally, nationally, and globally
- Define and analyze the scientific foundations that apply to environmental management issues and potential solutions,
- Be practiced at discerning credible information about environmental sciences from varying sources, and
- Prepare written scientific summary reports following accepted scientific standards

Course Outline:

I. Introduction to Environmental Science
   A. Scientific method
   B. Field observations and notes

II. Interaction of Earth spheres
   A. Lithosphere
   B. Biosphere
   C. Hydrosphere
   D. Cryosphere
   E. Atmosphere

III. Lithosphere - Geology
    A. The rock cycle & plate tectonics
    B. Geomorphology
    C. Connection with all other spheres
    D. Environmental Science applications

IV. Lithosphere - Soils
    A. Soil characteristics and development
    B. Soil mapping
    C. Connection with all other spheres
    D. Environmental Science applications

V. Hydrosphere - Oceans
   A. World oceans and water quality
B. Scientific monitoring – including real time ocean buoy networks
C. Connection with all other spheres - emphasis on the atmosphere & climate
D. Environmental Science applications

VI. Hydrosphere – surface and groundwater
A. Rivers, streams, and lakes
B. Watersheds and scientific monitoring – including real time data collection
C. Groundwater
D. Connection with all other spheres
E. Environmental Science applications

VII. Biosphere – plants
A. Introduction to plants
B. Photosynthesis
C. Connection with all other spheres
D. Environmental Science applications

VIII. Biosphere – fish and wildlife
A. Biodiversity
B. Endangered species
C. Scientific monitoring
D. Connection with all other spheres
E. Environmental Science applications

IX. Atmosphere
A. Composition and structure
B. Climate
C. Biomes
D. Connection with all other spheres
E. Environmental Science applications

X. Cryosphere
A. Ice caps and glaciers
B. Scientific monitoring – emphasis on ice core data
C. Connection with all other spheres
D. Environmental Science applications

XI. Remote Sensing
A. Introduction to Earth observations to gather data and information
B. Connection to all spheres
C. Environmental Science applications