

**SEWARD COUNTY COMMUNITY COLLEGE
COURSE SYLLABUS**

I. TITLE OF COURSE: PS1322 - Environmental Science Lab

**II. COURSE DESCRIPTION: 2 credit hours
0 credit hours of lecture and 2 credit hours of lab per week.**

This course encompasses the study of current environmental conditions, issues, and problems. Students will study the different types of ecosystems, the use and availability of natural resources, population dynamics, and environmental risks. Students will also explore possible solutions to such environmental issues such as global warming, acid rain, extinction of species, and energy waste by examining current specific and political thought.
EduKan course number:PH131

Pre-requisite:
None

III. PROGRAM AND/OR DEPARTMENT MISSION STATEMENT:

[Dept_Mission]

IV. TEXTBOOK AND MATERIALS:

Environmental Science: Active Learning Laboratories and Applied Problem Sets. 2e by Travis Wagner and Robert Sanford, January 2010. 256 Pages • Paper Back ISBN 9780470087671

V. SCCC OUTCOMES:

1: Read with comprehension, be critical of what they read, and apply knowledge gained to real life
2: Communicate ideas clearly and proficiently in writing, appropriately adjusting content and arrangement for varying audiences, purposes, and situations.

5: Demonstrate the ability to think critically by gathering facts, generating insights, analyzing data, and evaluating information

VI. COURSE OUTCOMES:

1. A working knowledge of the structure and function of ecosystems and the various kinds of ecosystems on Earth.
2. A working knowledge of population dynamics (including exponential growth) and the reasons why the increase of the human population rests at the heart of many environmental concerns.

3. A working knowledge of the need to preserve biodiversity.
4. A working knowledge of the problems associated with the quantity and quality of water, food, fiber, and other natural resources.
5. A working knowledge of how human behavior (including political and social forces) influence environmental health the quality of life.
6. A working knowledge of various forms of pollution and how excessive pollution is either prevented or treated to minimize its effects on the quality of life.
7. A working knowledge of energy conversion processes and the advantages and disadvantages of the major types of energy (fossil fuels, solar, nuclear, etc.).
8. To explore the use of scientific instrumentation and measurements including use of a metric system, parts of a microscope, and graphic analysis.

VII. COURSE OUTLINE:

Introduction to the Light Microscope
 The Scientific Method: Observation, Hypotheses, Results, and Discussion
 Quantification of Environmental Problems
 Ecosystem Diagram
 Biogeochemical Concept
 Science and the Popular Media
 Ecological Footprints and Sustainability
 Human Survivorship Changes
 Radioactive Decay
 Recognizing Human Impacts
 Oil Consumption and Future Availability
 Testing Soil for Its pH
 Simulation of an Oil Spill
 Is Dilution the Solution to Pollution
 Pesticides and Food
 Global Warming, CO₂, and You
 Local Environmental Risk
 Global Climate Change and Automobiles
 Society and Waste
 Pollution Prevention: Solid Waste
 Introduction to Environmental Modeling
 The Greening of Business
 Life Cycle Assessment

VIII. INSTRUCTIONAL METHODS:

1. The method of instruction will include but is not limited to: directed and independent readings, and threaded discussions.

IX. INSTRUCTIONAL AND RESOURCE MATERIALS:

1. Lecture – discussion

2. Laboratory experiments and recitation sessions
3. Report writing and laboratory exercises
4. Problem solving assignments

X. METHODS OF ASSESSMENT:

A. SCCC Outcome #1 will be assessed and measured by class participation in threaded discussions and lab reports.

B. SCCC Outcome #2 will be assessed and measured by posts to threaded discussions and lab reports.

C. SCCC Outcome #5 will be assessed and measured by the student score on lab reports

XI. ADA STATEMENT:

Under the Americans with Disabilities Act, Seward County Community College will make reasonable accommodations for students with documented disabilities. If you need support or assistance because of a disability, you may be eligible for academic accommodations. Students should identify themselves to the Dean of Students at 620-417-1106 or going to the Student Success Center in the Hobbie Academic building, room 149 A.

XII. CORE OUTCOMES PROJECT:

The learning outcomes and competencies detailed in this course outline or syllabus meet, or exceed the learning outcomes and competencies specified by the Kansas Core Outcomes Groups project for this course as approved by the Kansas Board of Regents

KRSN: [KRSN_Num]

Syllabus Reviewed: 02/19/2020 19:51:17