SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY
SAULT STE MARIE, ON

COURSE OUTLINE

Course Title: ENVIRONMENTAL ISSUES

Code No.: LIB 102 Semester: I OR II

Program: GENERAL ARTS & SCIENCE

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Date: JANUARY 1998 Previous Outline Date: DEC 1994

Approved: L. DeRosario Jan. 6/98
Dean Date

Total Credits: 3
Length of Course: 16

Prerequisite(s): NONE
Total Credit Hours: 48

ENVIRONMENTAL ISSUES
COURSE NAME

LIB 102
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I. COURSE DESCRIPTION:

This is an introductory course covering the basic knowledge for the student to develop an awareness of current environmental issues. This will be presented in a Canadian context where possible.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

(Generic Skills Learning Outcomes placement on the course outline will be determined and communicated at a later date.)

Upon successful completion of this course the student will demonstrate the ability to:

1) Explain basic ecological concepts, including energy flow, food chain and food web.

Potential Elements of the Performance:

-define basic terms including ecosystem, environment, community, habitat, niche;
-describe the energy flow in ecosystems;
-distinguish between a food chain and food web;
-trace the flow of nutrients in the primary nutrient cycles;
-describe the elements of limnology;
-define eutrophication and explain its cause;
-state the ecosystem approach to describing the interactions in the environment;

2) Discuss the environmental impacts of population growth, urbanization and industrialization.

Potential Elements of the Performance:

-trace Canada's environmental development;
-describe the effects of population growth on the environment;
-explain how urbanization and industrialization impact on the environment;
-project the outcome of the combined effects of these factors;
-define sustainable development and explain steps to achieve it;

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE (Continued)

3) Describe the major sources of energy and discuss the environmental impact of energy consumption.

Potential Elements of the Performance:

-list the sources of primary energy;
-distinguish between renewable and nonrenewable energy sources;
-describe the current energy consumption patterns;
-project future availability and consumption of energy;
-list the environmental impacts of increased energy demand;
-identify sustainable energy practices;

4) Discuss major human environmental disturbances, including reduction of biological diversity, the greenhouse effect, acid rain, "holes" in the ozone layer and smog.

Potential Elements of the Performance:

-state the meaning and importance of biological diversity;
-explain the terms endangered species and diversity;
-identify endangered species in Canada and methods to protect them;
-describe the basic structure and composition of the atmosphere;
-discuss the causes and potential dangers of the greenhouse effect;
-define and explain stratospheric ozone depletion;
-list the main sources of acid precipitation;
-define photochemical smog and state its cause;
-explain the pollution prevention approach ;

5) Discuss technological considerations and planning requirement for water resources management.

Potential Elements of the Performance

-identify the major sources of water pollution;
-list the principles of water resources management;
-state the important technical and planning requirements in water management;
-use the Ontario water quality guideline to access water quality;
-recognize the impacts of industrialization and resource extraction on water quality;
-list and explain the legislative controls that govern water use and quality;

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE (Continued)

6) Discuss the identification and management of hazardous wastes, including nuclear, biomedical and chemical wastes.

Potential Elements of the Performance

-define the term hazardous waste;
-list the types and sources of hazardous wastes generated in industrial and commercial operations;
-state the current principles for the management of hazardous wastes;
-describe the treatment and disposal of hazardous wastes;
-draw a representation of a secure landfill for dangerous wastes;

III. TOPICS:

1) Principles of ecology

2) Population and economic growth

3) Energy growth and sustainable development

4) Human environmental disturbances

5) Water resources management

6) Hazardous waste management

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

V. EVALUATION PROCESS/GRADING SYSTEM

There will be three tests during the semester and assignments or projects on various topics. A final grade will be determined based on the aggregate score of all work according to the following weighting;

Three tests at 25% each = 75%
Assignments and projects = 25%
Total 100%

Grades:

A+ 90 - 100%
A 80 - 89%
B 70 - 79%
C 60 - 69%

Students who have achieved less than 60% but more than 55% on all of the assignments have the opportunity to write a supplemental test covering all of the course material. This is only granted where all of the assignments have been completed and attendance is satisfactory.

VI. SPECIAL NOTES:

- Special Needs
  If you are a student with special needs (e.g. physical limitations, visual impairments, hearing impairments, learning disabilities), you are encouraged to discuss required accommodations with the instructor and/or contact the Special Needs Office, Room E1204, Ext. 493, 717, 491 so that support services can be arranged for you.

- Retention of Course Outlines
  It is the responsibility of the student to retain all course outlines for possible future use in acquiring advanced standing at other post-secondary institutions.

- Disclaimer for Meeting the Needs of the Learners

- Substitute Course Information is available at the Registrar's Office.

- Any Other Special Notes appropriate to your course.

VII. PRIOR LEARNING ASSESSMENT

Students who wish to apply for advanced credit in the course should consult the instructor. Credit for prior learning will be given upon successful completion of the following: