

Date: February 2006

Course Name: Principles of Soils, Waters and Forests

Course Prefix and Number: CON 101

Credit Hours and Contact Hours: 3 credit hours - 3 contact hours

Catalog Description:

To provide students with an introduction to principles of soil science, meteorology, hydrology, forestry and forest ecology. The student should gain knowledge and field experience in the conservation and management of these interrelated natural resources, especially as they apply to outdoor recreation, wildlife, fisheries, and land use planning.

II. Course Outcomes and Objectives

Learning Outcomes:

Our course objectives are to provide each student with introductory knowledge in soils, hydrology, meteorology, forest ecology and forest management. We accomplish this through lecture, guest speakers, class discussions, field experiences and student projects. We intend to stress basic principles as well as the application of resource information to the related areas of outdoor recreation, wildlife management, fisheries science, forestry and environmental planning.

Relationship to Academic Programs and Curriculum:

This course a requirement for students in the A.A.S. Natural Resources Conservation Degree Program. It may also be taken as a conservation elective by Environmental Studies and Natural Resources Conservation: Law students. The course could also be taken as a general elective.

College Competencies Addressed by the Course:

<input checked="" type="checkbox"/> writing	<input type="checkbox"/> ethics / values
<input type="checkbox"/> oral communications	<input type="checkbox"/> citizenship
<input checked="" type="checkbox"/> reading	<input checked="" type="checkbox"/> global concerns
<input checked="" type="checkbox"/> mathematics	<input checked="" type="checkbox"/> information resources
<input checked="" type="checkbox"/> problem solving	<input checked="" type="checkbox"/> professional competency
<input checked="" type="checkbox"/> computer literacy	

III. Methods of Instruction

Types of course materials:

Students will purchase a Soil Science textbook, a course book developed by the course instructors, and will use test kits provided by the Conservation Department.

Methods of Instruction:

This course is lecture based, however class discussions are an important part of the course. Three unit projects also help the students learn using hands-on experiences. Applicable films will also be incorporated into the course.

Assessment Measures:

Each student's understanding of the course material will be assessed by their participation in class discussions, their performance on and completion of three unit projects, through weekly quizzes and three unit exams.

Methods of Evaluation:

The student's final grade in the course will be determined by their performance on the following:

Unit Exams (3) - 50%

Unit Projects (3) - 30%

Weekly Quizzes - 15%

Class Participation - 5%

IV. General Outline of Topics Covered

Soils Unit

Soil formation

Movie: Soil Forming Factors

Physical properties of soils

Movie: Properties of Soil

Movie: The Rock Cycle

Soil organisms, chemical properties

Movie: Soil Biology

Soil water and plant nutrition

Soil management and soil erosion

Soil classification and soil survey

Waters Unit

Introduction to the water cycle, meteorology

Movie: The Hydrologic Cycle

Surface water and stream hydrology

Movie: Waters of Coweeta

Ground water

Movie: Underground Water

Water quality management, special problems

Movie: After the Storm

Movie: Barnyard Blues

Forests Unit

Introduction to forestry:

forest community structure, forest succession

Outdoor collection of forest data

Forest ecology

Woodlot inventory and evaluation

Movie: Lumber Production

Forest management in New York State

Movie: Fuel from the Forest

Fire suppression

Forestry issues