



## I. General Information

1. Course Title:

Introduction to Natural Resources

2. Course Prefix & Number:

NATR 1200

3. Course Credits and Contact Hours:

Credits: 3

Lecture Hours: 3

Lab Hours: 0

4. Course Description:

Students will develop a holistic awareness of our Natural Resources. Includes information in Forestry, Fisheries, Wildlife and Parks & Recreation, as well as Soils and Water. Ideas and attitudes that revolve around Conservation and Preservation and their historical background are discussed, and each area of resource concern is followed up with careers in that particular field often with guest speakers that work in those areas or students that have participated in summer internships.

5. Placement Tests Required:

6. Prerequisite Courses:

There are no prerequisites for this course.

9. Co-requisite Courses:

There are no corequisites for this course.

## II. Transfer and Articulation

1. Course Equivalency - similar courses from other regional institutions:

<i>Name of Institution</i>	<i>Course Number and Title</i>	<i>Credits</i>
University of Minnesota Crookston	NatR 1233 Introduction to Natural Resources	3
University of Wisconsin Stevens Point	Natural Resources 150	3

2. Transfer - regional institutions with which this course has a written articulation agreement:

<i>Name of Institution</i>	<i>Date of Acceptance</i>	<i>Discipline/Area/Program of Transfer</i>
University of Minnesota Crookston	2010 updated	Natural Resources
University of Wisconsin Stevens Point	2007-2009	Natural Resources

### III. Course Purpose

1. Program-Applicable Courses – This course is required for the following program(s):

<i>Name of Program(s)</i>	<i>Program Type</i>
Natural Resources Technology	AAS
Natural Resources Conservation Services	Certificate

### IV. Learning Outcomes

1. College-Wide Outcomes

<b>College-Wide Outcomes/Competencies:</b>	<b>Students will be able to:</b>
Demonstrate written communication skills.	Demonstrate written communication skills through various assignments such as Cover Letters and Resumes.
Demonstrate reading and listening skills.	Demonstrate reading and listening skills by answer questions from the Sand County Almanac and by listening to guest speakers on the various Natural Resource Topics and creating questions.
Discuss/compare characteristics of diverse cultures and environments.	Develop and understand through discussions on Native American Culture and beliefs as well as how things we do in Minnesota affect people in Louisiana and their culture.

2. Course Specific Outcomes - Students will be able to achieve the following measurable goals upon completion of the course:

- Students will be able to compare and contrast different natural resources.
- Students will be able to compare and contrast conservation and preservation.
- Students will be able to assess the ecological relationships between and among natural resources.
- Students will be able to develop a discussion from Aldo Leopold's Sand County Almanac – and our Land Ethic and describe important relationships he was trying to develop.
- Students will be able to describe the importance of our basic resource of soil.
- Students will be able to compare and contrast different kinds of soil erosion.
- Students will be able to assess different rangeland management practices and identify management strategies.
- Students will be able to classify wetlands and describe the various management concerns.
- Students will be able to discuss the overall need for land use planning and describe how it is used to manage our cities and resources.
- Students will be able to describe the characteristics water and the water cycle and important conservation practices.
- Students will be able to compare and contrast forests, forestry and the various management issues.
- Students will be able to appraise and discuss issues related to fish and wildlife in America and some of their management strategies.
- Students will be able to examine marine fisheries issues and concerns in our oceans.
- Students will be able to examine issues and concerns within fresh water fisheries and some of the management strategies.
- Students will be able to examine parks and recreation concerns and issues and the importance that our local, state, and national parks plays in America.

### V. Topical Outline

Listed below are major areas of content typically covered in this course.

1. Lecture Sessions

## I. Our Natural Resources

- A. What is a Natural Resource
- B. Soil and Water
- C. Fish and Wildlife
- D. Forest Resources
- E. Other Resources

## II. History of Conservation in the United States

- A. Wildlife Management
- B. Forest Management
- C. Soil and Water Conservation

## III. Concepts of Natural Resource Management

- A. The Nature of a Resource
- B. Ecological Outlook
- C. The Human Population
- D. Conservation and Preservation

## IV. Soils Characteristics

- A. What is Soil
- B. Soil Formation and Weathering
- C. Organic Matter
- D. Soil Classification
- E. Soil Surveys

## V. Soil Erosion

- A. When is Erosion a Problem
- B. Results of Erosion

## VI. Controlling Erosion on the Farm

- A. Land Capability and Land Use
- B. Control Measures for Water
- C. Vegetative Control Measures

## VII. Non-Farm Erosion

- A. Mechanical Erosion Controls
- B. Vegetative Controls
- C. Highway Erosion controls

## VIII. Rangeland Management

- A. The Grasslands
- B. History of the Range
- C. The Taylor Grazing Act
- D. Types of Vegetation
- E. Range Management Techniques

## IX. Landfills and Solid Waste Management

- A. Types of Solid Waste
- B. Disposal of Solid Waste
- C. What is a Landfill
- D. Landfill Design

## X. Wetland Preservation and Management

- A. What are Wetlands
- B. Historical Perspective of Wetlands

C. Wetland identification

D. Types of Wetlands

XI. The Importance of Land-Use Planning

A. Non-Farmland-Use Planning

B. Farmland Use

C. Regional Land-Use Planning

XII. Water Supply and Water Users

A. The Water Cycle

B. Water Users

XIII. Water Pollution

A. Classification of Pollution Sources

B. Urban and Industrial Pollution

C. Agricultural Pollution

D. Water Pollution Control Measures

XIV. Water –Use Planning

A. Dams, Reservoirs, and Ponds

B. Waterway Use

C. Desalination

D. User of Water

E. Weather Control

F. Transporting Water

XV. Forest Resources

A. Our Forests

B. The Forest as an Enemy and as a Friend

C. Forest in America Today

D. Trees and their Growth

E. Forest Products

XVI. Woodland Management

A. Measuring the forest

B. Intermediate Cuttings

C. Harvest techniques

D. Reproducing the Forest

E. Steps in Forest Management

XVII. Fish and Wildlife Resources

A. Historical Perspective

B. Wildlife Populations

C. Extinct, Rare, Threatened and Endangered Species

XVIII. Game Management

A. Habitat Requirements

B. Game Management Procedures

C. Working with Landowners

D. Legislation and Game Management

XIX. Marine Fisheries Management

A. Ocean Physical Characteristics

B. The Biological Ocean

C. The Estuarine System

- D. Artificially Cultivating the Ocean
- E. Ocean Laws and Regulation

XX. Fresh Water Fishery Management

- A. The Lake Habitat
- B. Farm Ponds
- C. Common Freshwater Game Fish
- D. Fisheries Management

XXI. Recreation

- A. Importance of Recreation
- B. Federal Programs
- C. State and Local Recreation Areas
- D. Abuses of Recreation Areas

XXII. Discussions from the Sand County Almanac – Aldo Leopold