



# Natural Resource Management

## **Have the ability to think critically in solving problems addressed in natural resources management**

Describe what critical thinking is, how evidence is used to develop an argument, and how to avoid errors in critical thinking

Evaluate the extent to which critical thinking is employed in a group research project related to environmental science, forestry/fisheries/wildlife science and management, natural resource management, environmental policy and decision making, or similar fields related to environmental sustainability

Apply critical thinking to a real-world environmental issue in which the role of the soil is central, such as food security, land degradation, carbon cycle/global change, downstream water quality

Critically assess forestry, fisheries, and wildlife resources present on an evaluation site by identifying current conditions, management opportunities and constraints, and desired future condition

Demonstrate critical thinking in solving environmental problems

## **Know how to apply theoretical concepts of natural resource management to address contemporary environmental and natural resource issues**

Relate concepts from social science theories to describe human dimensions of real-world environmental challenges

Apply theoretical concepts, empirical data, and practical knowledge of forestry, fisheries, and wildlife sciences and natural resources management for developing, evaluating, and recommending management alternatives designed to address contemporary forest, fisheries, and wildlife management and other resource conservation issues or problems

Apply theory to professional practice in solving environmental problems

## **Communicate effectively in oral and written forms**

Demonstrate a basic level of sufficiency in written communication

Demonstrate a basic level of sufficiency in oral communication

Demonstrate proficiency with summarizing, analyzing, and interpreting research results presented in tables and figures prepared for oral and written forms of communication

Convey technical information with correct spelling and grammar, logically organized, and with technical style and format that is appropriate to the discipline for oral and written forms of communication

Communicate effectively in written and oral forms in professional settings following graduation

## **Understand natural systems with breadth across biotic and abiotic components**

Apply theoretical concepts in environmental science to understand how Earth's biotic and abiotic systems function, how humans affect the environment, and how to achieve global sustainability

Demonstrate an understanding of abiotic components of natural systems, such as illustrating elements of the hydrologic cycle, and integration of the abiotic and biotic systems, such as illustrating elements of the carbon and nitrogen cycles

Demonstrate a comprehension of the structure and dynamics of populations and communities in relation to sustaining resource production and biological diversity

Apply understanding of natural systems with breadth across biotic and abiotic components in professional settings





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## **Understand human systems with breadth across individual, community, and polity levels of organization**

Identify concepts, theories and examples relevant to understanding human systems across individual, community, and polity levels of organization

Appraise the nature and values of organizations and polities and their importance in social problem solving and policy making related to environmental and natural resource issues

Apply understanding of human systems with breadth across individual, community, and polity levels of organization in professional settings

## **Understand coupled systems, human and natural, and their relevance to natural resources management**

Demonstrate an understanding of the links between human and natural systems in the context of Limits of Acceptable Change planning frameworks

Apply the integration of information related to natural and human dimensions of contemporary resource conservation while managing problems and making professionally appropriate recommendations to address those problems

Illustrate the integration of information related to natural and human dimensions of contemporary environmental issues while making professionally appropriate recommendations to address those issues

## **Manifest professional competency for career-track employment or graduate work in natural resource management**

Demonstrate basic knowledge of the role of spatial information and information systems in addressing environmental and natural resource issues

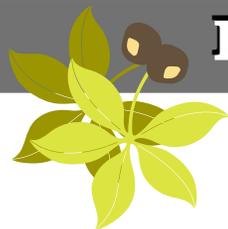
Analyze spatial information relevant to natural resource and ecosystem management and resource planning by utilizing digital vertical image interpretation and geographic information systems

Demonstrate professional competency through job placement and success in professional certification exams (soil, water, forestry, fisheries, wildlife, other)

Demonstrate professional competencies

Proficiency in use and application of tools, instruments, and analytical techniques that are used to inventory forests and measure terrestrial and aquatic wildlife populations and habitats

Practice working effectively as member of interdisciplinary teams to accomplish assigned tasks or projects



# **Environmental and Natural Resources**



**THE OHIO STATE UNIVERSITY**

COLLEGE OF FOOD, AGRICULTURAL,  
AND ENVIRONMENTAL SCIENCES