

# Minnesota State University Moorhead

## BIOL 335: Tropical Field Biology

### A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 2

Lab Hours/Week: 3

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: Goal 10 - People/Environment

Two lectures per week during the spring semester discuss general concepts of ecology applied to tropical ecosystems. Topics covered include: global climate patterns that produce tropical conditions, evolution of biodiversity, rain forests, cloud forests, dry forests, mangrove swamps, coral reef ecology, principles and application of conservation biology to tropical flora and fauna, and balancing human resource use with habitat preservation and restoration. The "lab" component of this course is a mandatory, 10-day class trip to Costa Rica over spring break. In Costa Rica, students and faculty spend 4 days in an ecolodge in dry forest in Cabo Blanco on the Pacific Ocean, another 4 days in cloud forest near Monteverde. A special fee is required to cover the costs of travel, food, and accommodation. Prerequisite: one course in the sciences. MnTC Goal 10.

**B. COURSE EFFECTIVE DATES:** 10/30/2005 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. The concept of sustainability.
2. Pathways and trade-offs to a sustainable future.
3. The structure, function, and processes of tropical ecosystems (climatic, hydrologic, soils, social, and biological systems).
4. Understand how socio-cultural variables affect the ways in which environments are perceived and managed, and the ways in which people or societies react to environmental challenges.

### D. LEARNING OUTCOMES (General)

1. Biodiversity-Description, Ecological Conditions, and conflicts between Human Activity and Biodiversity.
2. Conservation Biology
3. Ecopsychology
4. Ecology
5. Sustainability

## **E. Minnesota Transfer Curriculum Goal Area(s) and Competencies**

### Goal 10 - People/Environment

1. Explain the basic structure and function of various natural ecosystems and of human adaptive strategies within those systems.
2. Discern patterns and interrelationships of bio-physical and socio-cultural systems.
3. Describe the basic institutional arrangements (social, legal, political, economic, religious) that are evolving to deal with environmental and natural resource challenges.
4. Evaluate critically environmental and natural resource issues in light of understandings about interrelationships, ecosystems, and institutions.
5. Propose and assess alternative solutions to environmental problems.
6. Articulate and defend the actions they would take on various environmental issues.

## **F. LEARNER OUTCOMES ASSESSMENT**

As noted on course syllabus

## **G. SPECIAL INFORMATION**

None noted