



Rain Forest Field Studies

Environmental Education and the Wilderness Experience

Education/EDUC 480 • 4 semester units

BRIEF COURSE DESCRIPTION

The assumption in this class is that the program as a whole is the laboratory in which the academic concepts are experienced directly. In this case that “laboratory” is a canoe trip, a series of backpacking trips, and camping experiences throughout Belize and Guatemala. Thus the activities and complexities of a long-term, small-group camping trip are not merely the context of the class, but to a large extent are the class itself. Students learn by examining and discussing their own experience and relating it to the ideas supplied by lectures, readings, exercises and class discussion.

But the class is not exclusively experiential; it does involve intellectual themes as well. The class begins with a focus on understanding environmental field programs from three vantage points: personal, academic, and social. The separate validities and qualities of those levels will be discussed and experienced.

We will then focus on wilderness education—theories, goals, academic vs. experiential approaches, interdisciplinary models, and learning styles. Special emphasis will be given to the complementary dimensions of ecological literacy (a deepening understanding of the particulars and processes of nature) and the ecological self (a deepening felt sense of one's place in nature). Exercises to cultivate both of these dimensions will be introduced.

Group dynamics in a wilderness setting will be discussed along with a variety of experiential methods to develop group rapport. Points of discussion will include self-disclosure, privacy, individuality, conformity, compromise, and dispute resolution. Various decision-making formats will be introduced, particularly consensus.

For the last section of the course, environmental ethics and cultural and personal values will be explored. We will search for definitions: nature, culture, education, sustainability, etc. The intent is to for students to clarify their personal understanding of these concepts. As we prepare for return, we will review our time together and assess the cumulative experience, evaluating changes in our ecological literacy and our ecological self, and extrapolate from those changes to a general understanding of the wilderness experience.

LEARNING OBJECTIVES

- 1) To develop one's ecological literacy: a deepening understanding of the particulars and processes of nature.
- 2) To develop one's ecological self: a sense of one's place in the large contours of nature.
- 3) To understand the virtues and challenges of in-the-field experiential education by direct participation in such a program.

- 4) To be able to monitor and follow one's learning experience as it is happening, and to share and discuss it with one's peers in class.
- 5) To be able to analyze field education in terms of personal, academic, and social components.
- 6) To learn about group dynamics through participation, discussion and observation.
- 7) To learn communication skills through active participation in formal and informal group sharings.
- 8) To learn and practice consensus decision-making.
- 9) To gain a general sense for the natural history and overall ecology of each of the wilderness areas visited.
- 10) To enter a solo period (optional) for several days and learn about oneself and the wilderness in that way.
- 11) To allow the nine weeks of wilderness time to sink into oneself and to be able to express and discuss that influence.

COURSE OVERVIEW

Week 1

Monkey Bay Nature Reserve

This private nature reserve lies approximately 30 miles west of Belize City in savannah/pine ridge habitat along the Sibun River. We'll start by introducing the course, academic expectations and resources, evaluation criteria, and exploring issues of learning in a field setting (safety guidelines, appropriate behavior, and effective communication). Curriculum topics to be covered include Ecological Literacy, circle (group communication and rapport), approaches to the backcountry classroom: academics, skills development and personal growth.

Week 2

Sibun River Canoe trip and Backpack up Indian Creek

We will spend 3 days canoeing the Sibun River. Following a layover day back at Monkey Bay to regroup, we will backpack for 3 days up Indian Creek, a tributary to the Sibun River, from the Western Highway near Monkey Bay to the Hummingbird Highway. We will end the backpack at Five Blues National Park and be transported to San Ignacio for a layover day. Curriculum topics include learning styles and academics in outdoor classroom, experiential education exercises and circle (group communication and rapport).

Week 3

Las Cuevas Research Station

This remote field research station, managed by a consortium of parties, including the London Museum of Natural History, lies south of San Ignacio in the Chiquibul Forest Reserve. Here we will explore moist deciduous tropical forest in the Macal River watershed deep within the Maya Mountains. A two-night backpacking trip into the headwaters of the Macal River watershed allows students to experience richness of pristine ecosystems.

Curriculum topics include understanding the natural world, the value of wilderness and pristine habitats, experiential education practices, and circle (group communication and rapport). Also at Las Cuevas, students will take their own role within the environmental education experience, leading discussions about diverse topics.

Week 4

Tikal National Park, Guatemala

Tikal, part of the Maya Biosphere Reserve in the Peten region of Guatemala, contains awe-inspiring Mayan ruins within an extensive tropical forest. The Peten area has an increasing pressure on the natural resources due to demographic expansion and touristic activities. Through the cultural experience of the modern Guatemala and the contrast with the ancient Maya civilization, we will gain a better understanding about the impact of an expanding human population on. We also will have an experiential educational practice through a guided hike at Tikal with an professor of Archeology.

Week 5

Tobacco Caye

While on Tobacco Caye, an island in Belize's Barrier Reef, located 30 kilometers from the coastal town of

Dangriga, we will dive into coral reef ecology and conservation. Basic snorkeling techniques will be taught and used to explore the rich and complex coral reefs, mangroves and sea-grass beds. Through different exercises and talks we will discuss about the natural principles on the biological systems.

Week 6

Maya Center and Cockscomb Basin Wildlife Sanctuary

In the village of Maya Center, we will experience a multi-day homestay with Mayan families and learn about their co-management of this local protected area. The wildlife sanctuary where jaguar research is conducted lies on the east side of the Maya Mountains. Here we will witness the great impact of environmental education and the difficult balance between conservation and human needs. Students will be introduced to the concept of co-management of a protected area, involving government, NGO's and local communities. Curriculum topics include: conservation and sustainability, cultural values and ethnobotany and circle (group communication and rapport).

Week 7

Located south of Cockscomb, the Belize Foundation for Research and Environmental Education (BFREE) is a private research and educational facility located on an 1153 acre reserve next to the Bladen Nature Reserve. Includes a six-day backpacking trip into the Bladen Nature Reserve, a protected area with access restricted only to researchers and selected groups of students. Guided by expert local Mayans and sometimes assisted by rangers, the backpacking trip in this remote reserve is an extraordinary contact with the wilderness, and once again, through talks from the staff of BFREE, we will continue learning about sustainability and co-management.

Week 8

Barranco

Barranco is a small, remote Garifuna village in southern Belize. For 3 days we will intertwine our lives with the Garinagu people, exploring their village and lifeways, traveling up the Temash River and learning about their culture, beliefs and lifestyle. In this small village, we will have another first-hand example of the co-management of a protected area. Curriculum includes guided hike through village and the traditional cassava-bread processing.

Week 9

Belize Agroforestry Research Center (BARC)

At BARC, located in the southern Maya Mountains, we will use the study of rainforests as a model to learn about sustainable landscape design. Guest instructors will lead us in discussions of permaculture, agroforestry, and other sustainable uses of forests. Students will participate in a number of farm tours, and critical thinking exercises related to the incorporation of ecological patterns and processes into food production systems. This whole week is about a practical approach to ecological literacy. Curriculum includes, talks and guided walks with local Mayan farmers, and the participation in the traditional cacao processing.

We will also explore ways to transfer the knowledge and wisdom gained from our tropical field studies to our lives back at home by considering the choices we make and opportunities we create.

COURSE OUTLINE

<p>I. History and Purpose of Wilderness Education</p> <p> A. Approaches to the backcountry classroom</p> <p> 1. personal</p> <p> 2. academic</p> <p> 3. social</p> <p> B. Goals of wilderness education</p> <p> 1. academic content and standards</p> <p> 2. ecological literacy</p> <p> 3. ecological self and the wilderness effect</p> <p> 4. group communication and rapport</p> <p>II. Facilitating Learning in Wilderness</p> <p> A. Learning styles and academics in the outdoor classroom</p>	<p>B. Experiential education: theory</p> <p> 1. learning by doing</p> <p> 2. education of the whole person (body, mind, spirit)</p> <p>C. Experiential education: practices</p> <p> 1. getting out of the way: nature as teacher</p> <p> 2. cultivating the wilderness effect</p> <p> 3. games, exercises, processes, rituals</p> <p>D. Working with field journals</p> <p> 1. integrating field observations and assignments</p> <p> 2. creativity and personal reflection</p> <p>III. Group Dynamics</p>
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- A. The individual and the group: rights and responsibilities
 - B. Stages of group development
 - C. Communication
 - 1. privacy and self-disclosure
 - 2. direct feedback: giving and receiving
 - D. Cooperative learning
 - 1. instructor as member of group
 - 2. learning from peers and small groups
 - E. Decision-making and facilitating group
- consensus
 - F. Interpersonal difficulties and dispute resolution
- IV. The Spirit of Wilderness Education
 - A. The mythic journey: separation, initiation, return
 - B. Deep ecology: an individual experience
 - C. Environmental ethics: marrying philosophy and practice

REQUIRED TEXTS

Reader

- Covey, Stephen R. "Principle-Centered Leadership". *Principle-Centered Leadership*, Summit Books, New York, N.Y. 1991
- Devall, Bill and George Sessions. *Deep Ecology*. Salt Lake City, UT: G.M. Smith, 1985. (selections)
- Environmental Ethics: Readings in Theory and Application. Louis P. Pojman. Wadsworth Publishing; 5th edition, March, 2007. (selections)
- Fleischer, Thomas L. "Integrating Science and Passion in Conservation Education", *Conservation Biology*, Vol 4, # 4, 1990.
- Hawken, Paul. "Commerce and Wilderness", *Wild Earth*, Fall 2002.
- Lopez, Barry "The Naturalist", *Orion Magazine*, autumn 2001
- Noss, Reed, *Saving Natures Legacy*, Island Press, Washington D.C., 1994. (selections)
- Orr, David. "Intro: The Problem of Education"; "What is Education For?", from *Earth in Mind*. Covelo: Island Press, 1994.
- Orr, D. W. 1992. *Ecological Literacy*. New York: State University of New York Press. (selections)
- Orr, David. "For the Love of Life", *Conservation Biology*, Vol 6, # 4, 1992.

In addition, a substantial filed library of texts is made available for students from which they draw material for their environmental education research project.

EVALUATION

Students will be evaluated according to the following requirements:

- 30%: Lead Discussion (assigned reader article)
- 25%: Inquiry into Culture Exercise (Maya Center, Barranco)
- 20%: Self-Assessment (mid-course oral evaluation; written evaluation at end of course)
- 20%: Participation
- 5%: 9-week practicum

The grades used in this course will be as follows:

A+	98-100	B+	87-89	C+	77-79	D+	67-69	F	Below 60
A	93-97	B	83-86	C	73-76	D	63-66		
A-	90-92	B-	80-82	C-	70-72	D-	60-62		

COURSE SCHEDULE

The course overview section above details the course schedule in the context of the locations where we will be studying. The following table indicates the planned class meetings for this course throughout the program:

<i>week</i>	<i>Topics</i>	<i>Readings</i>	<i>Assignments</i>	<i>Class hours</i>
#1	orientation to course Goals of Wilderness Education Academic expectations, evaluation criteria Circle (group communication and rapport) Approaches to the Backcountry classroom: academics, skills devt., personal growth Ecological Literacy	Orr, Ecological Literacy Orr, For the Love of Life		12
#2	Learning styles and academics in outdoor classroom Experiential Educ. Exercise Experiential Education: getting out of the way Circle (group communication and rapport)	E.O Wilson: What is Nature Worth?	Student Presentation (experiential ed. Practice)	10
#3	Understanding the natural world The value of wilderness and pristine habitats Experiential Ed Practice: Silent day (first)	Orr, What is Education For?	Student Presentations (experiential ed. Practice)	16
#4	Guided hike through contemporary Mayan market Circle (group communication and rapport) observation exercise: bird diversity and behavior Experiential Ed Practice: guided hike through Tikal and cultural interpretation	Fleischer, Integrating Science and Passion in Conservation Education	Student Presentation - (experiential ed. Practice)	6
#5	Circle (group communication and rapport) snorkel; guided field journal exercise Experiential Ed Practice: Nature principles	Benyus, Why Biomimicry Now?	Student Presentations - (experiential ed. Practice)	6
#6	Conservation and sustainability Cultural values and ethnobotany Circle (group communication and rapport)	Hawken, Commerce and Wilderness	Student Presentation - (experiential ed. Practice)	6
#7	Experiential Ed Practice: Silent day (second) Circle (group communication and rapport)	Covey, Principle-Centered Leadership	Student Presentation - (experiential ed. Practice)	4
#8	guided hike through village; local natural and cultural history Experiential Ed Practice: Traditional cassava-bread processing		Student Presentation - (experiential ed. Practice)	4
#9	Ecological literacy: nature as a model Experiential Ed Practice: Traditional cacao processing Final Circle		Student Presentation - (experiential ed. Practice)	6
			total	70