ZOO CONSERVATION BIOLOGY

Florida International University
1 credit

INSTRUCTORS:

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COURSE DESCRIPTION:

Zoo Conservation Biology is a hands-on examination of the role of zoos in conservation science, conservation action, and conservation education. This course, based at Zoo Miami and taught by instructors from Zoo Miami's Conservation and Research Department, will examine the history and modern mission of zoos. This course will use Zoo Miami's *in situ* and *ex situ* conservation projects and zoo-based education programs as opportunities to explore the shifting role - and vast potential - for zoos to take a major role in preventing global biodiversity loss.

This course is appropriate for students interested in conservation biology, population ecology, or conservation education.

Course Prerequisites:
Graduate Standing

Course Overview:

The number of species threatened with extinction is rising and will continue rising in the foreseeable future. As institutions with capacity for both *ex-situ* conservation breeding and *in-situ* conservation action, zoos hold strong potential for promoting conservation efforts and preventing extinctions. As highly visited public attractions, zoos also have strong potential to communicate conservation messages to the lay audiences.

This course will be organized around four four-hour class sessions. The first session will provide an overview of the history of zoos, the role of zoos in modern conservation efforts (both *in situ* and *ex situ*), will present the structure of zoo organization, and will overview zoo-university partnerships.

The second session will focus on *in situ* conservation research and conservation action, using Zoo Miami's local conservation programs as focal projects. Course participants will learn techniques in field conservation for diverse groups of organisms (pine rocklands plants and butterflies, Florida Bonneted Bats, Gopher Tortoises, etc).

The third session will focus on *ex situ* conservation programs, including captive breeding, species reintroductions, and the role of ambassador animals. Zoo Miami's conservation breeding and *ex situ* conservation activities (including South Florida's imperiled butterflies, Puerto Rican Crested Toads, Cuban Crocodiles, Harpy Eagles, and Black Rhinoceros) will serve as focal lessons to demonstrate a range of *ex situ* conservation programs.

The fourth session will focus on conservation education. Course participants will learn evidence-based strategies for formal and informal education used by zoos. Zoo Miami's conservation education programs will serve as focal points for communicating science.

LEARNING OUTCOMES:

This course is designed specifically around several learning outcomes. All course activities are designed to help students achieve these learning outcomes or evaluate student performance in light of these specific outcomes.

Learning Outcome 1. Demonstrate an understanding of the current role and potential for zoos in global conservation efforts

Learning Outcome 2. Demonstrate an understanding of *ex situ* conservation strategies used by zoos, and their relevance for conservation, including the advantages and challenges of *ex situ* conservation

Learning Outcome 3. Demonstrate an understanding of *in situ* conservation strategies as applied by zoos, both on a global scale and in South Florida

Learning Outcome 4. Demonstrate an ability to communicate science to lay audiences, and appreciate the importance of informal education in communicating conservation messages.

COURSE OBJECTIVES:

Course participants will:

-- Recognize the role of zoos in promoting conservation efforts.

-- Apply learned techniques in field conservation for diverse groups of organisms.

-- Examine *in situ/ex situ* conservation programs.

-- Identify evidence-based educational strategies used by zoos and analyze how Zoo Miami's conservation education programs utilize these tools for communicating science..

TEXTBOOKS:

There is no textbook; students will be provided publications from the primary scientific literature.