

Abbreviated Syllabus
APPLIED BIODIVERSITY SCIENCE I
RPTS 689/WFSC 689
(FALL 2012) T,R 11:10-12:25 pm, Nagle 207

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“Conservation cannot be achieved without the soundest information from the natural and social sciences.” Jose Sarukhan, Institute of Ecology, National University of Mexico

OVERVIEW

Efforts to halt the loss of biodiversity must be based on integration between science and practice. Linking theory with conservation requires the engagement of many different actors, including biologists and social scientists, universities and museums, governments and nongovernmental organizations, industries, interest groups, and communities. Such collaboration is critical for establishing conservation priorities, developing ecologically and socially acceptable management plans, building local capacity for stewardship, and guiding effective policy. Currently, a great deal of conservation research is based in universities with few linkages between scientists and practitioners, or between theory and on-the-ground work. Moreover, research on patterns and processes that underlie the loss of biodiversity are often conceptual and discipline specific, with few lessons shared among researchers from diverse disciplines.

Our goal in this course is to build cross-disciplinary understanding of biodiversity science. We ask:

- 1) What is biodiversity? How is it perceived, valued, measured, monitored, and protected?
- 2) What are the main concerns surrounding biodiversity? Who voices these concerns and why?
- 3) What are current perspectives about biodiversity conservation from evolutionary and community ecology, conservation biology, environmental anthropology, and political ecology?
- 4) What can we learn from popular and academic case studies?

REQUIREMENTS

Participation (20 points): The class is a seminar, facilitated by an anthropologist and a biologist. We will draw on our disciplinary backgrounds as we discuss various conservation issues and paradigms. We are relative beginners in each other's field. Each of you too will be a novice in some things, an expert in others. This is the nature of multidisciplinary collaboration. We encourage you to speak up about what you know well and listen carefully to the things that are new. Please prepare for each class by reading the assigned articles, taking notes, and bringing questions, analyses, and critiques.

Facilitation of discussion (30 points): Each of you will be responsible for facilitating one of the weekly topics. You will work in pairs. Preparation will include reading and synthesizing the main messages from that week's readings, building a discussion plan, and guiding our conversation.

Team Project (50 points): We will assemble groups of 3-4 people to carry out a team project. The aim is to provide an academic response to a recent popular media piece on conservation. The project has three parts: a) White Paper, b) Presentation, and c) Reading Selection.

a) White Paper

- Please address the following questions in relation to the popular media piece:
 - What is the conservation concern or challenge?
 - What are the proposed solutions?
 - What is your informed perspective? What theoretical frameworks, scientific research, empirical data, and/or case studies can you bring to bear on this topic? You may include a conceptual framework, a literature review, data tables, and so forth.

- What are the implications of your perspective for policy?
- Limited to 10 pages, double-spaced, not including literature cited.
- The series of “Working Papers” produced by the Wildlife Conservation Society may serve as a model for what you will write (<http://archive.wcs.org/wcspubs/science.html>) The first half of the following example may be especially useful: *Casting for Conservation actors: people, partnerships and wildlife* (<http://archive.wcs.org/media/file/wcswp28.pdf>)

b) Presentation

Each team has two class periods to cover the topic. You may devote some of the time to teaching the class about your conservation issue or presenting the topic generally. Be sure to allow enough time for seminar discussion as well.

c) Reading Selection

Two weeks before your team’s presentation, please provide the class with 2-3 articles we should read in preparation for the discussion.

Grading: A=90-100 points, B=80-89 points, C=70-79 points, D=60-69 points, F=below 60 points

d) Books: Contrasting perspectives on biodiversity conservation

- We will select and read two books that discuss biodiversity conservation from a social science perspective and from an ecological science perspective. In the past we’ve read *Song of the Dodo*, by Quammen, *Conservation Refugees* by Dowie, *Myth of Wild Africa* by Adams and McShane, and *Requiem for Nature* by Terborgh.

SCHEDULE

INTRODUCTION	
	Applied Biodiversity Science
	Defining and Measuring Biodiversity
STUDENT-LED SEMINARS	
	Cultural Diversity
	Assessment and Monitoring of Biological and Cultural Diversity
	Political Ecology
	Crisis of Loss
	Questioning the Commons
	Setting Priorities
TEAM PANELS AND DISCUSSIONS	
Conservation: Popular and Academic	<i>We will choose several controversial topics in biodiversity conservation, for example, wildlife trade, payments for ecosystem services, human-wildlife conflict, community-based conservation, and many others. Teams will dig deeply into the literature to learn what supports or refutes the way these subjects are portrayed in popular media.</i>
GUEST LECTURE	
	Conservation and Citizen Science
BOOK FORUM	
	Contrasting viewpoints from two books
EVALUATION	
	Insights, lessons, new questions