



Iowa Wesleyan University

ASCI-2929: Wildlife Health, Ecology and Conservation

Summer 2020

June 3- June 17

Credit Hours: 3 credit hours

Instructor Contact Information

Instructor: Erica Ward, DVM

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Instructor: Amanda Guthrie, DVM,

DACZM

Required Text:

1. Barcott, Bruce. The Last Flight of the Scarlet Macaw, 2008. New York: Random House.
2. Beletsky, Les. Travelers' Wildlife Guides Belize and Northern Guatemala, 2005; Interlink Publishing Group, Inc. ISBN 1-56656-568-5 (TWG)
3. Rabinowitz, Alan. Jaguar: One Man's Struggle to Establish the World's First Jaguar Preserve.

Iowa Wesleyan University Mission Statement

Iowa Wesleyan University is a transformational learning community whose passion is to educate, empower, and inspire students to lead meaningful lives and careers.

Iowa Wesleyan University is a historic, faith-inspired, four-year university. The university is affiliated with the United Methodist Church with which it shares a commitment to spiritual values, social justice and human welfare.

IW Life Skills

- **Communication:** Students will show proficiency in acquiring, processing, and transferring information in a variety of ways, including written communication, oral communication, and information literacy.
- **Critical Reasoning:** Students will strategically apply critical thinking and problem-solving skills.
- **Civic Engagement:** Students will develop the knowledge, skills, values, and motivation to actively engage in communities to promote social justice and human welfare.

Course Description

This 10 day course is designed for undergraduate students with an interest in wildlife from a pre-vet, biology or conservation perspective. Through a combination of classroom lectures, field trips and activities, students will be introduced to tropical ecology, local conservation efforts, Belizean wildlife and wildlife research techniques, and zoo and wild animal health issues and medicine. This intensive, introductory course will help students understand the many factors that affect the management, conservation, habitat and health of wild animals.

Students will be based at the Tropical Education Center, located at Mile 29 on the George Price Highway, across the road from the Belize Zoo. There they will have the opportunity to work alongside zookeepers in the world renowned Belize Zoo. The central focus of the course is on wildlife conservation and research methods. The course will travel to Runaway Creek Nature Reserve to experience field research conditions. Students will gain insight on several field research techniques including specialized snare traps, cage traps, GPS and VHF tracking, camera trapping, chemical immobilization and remote drug delivery, avian mist netting, bird banding, and nest searching and monitoring. Students will also get the opportunity to observe and collect data on captive and wild animals and observe wildlife veterinary situations, as appropriate and when available.

Course Goals and Learning Objectives

At the end of the course students will be able to:

- Discuss, in general terms, ecology and conservation in Belize.
- Discuss general issues related to wildlife, particularly in Belize.
- Understand the role and purpose of zoos as they relate to conservation.
- Discuss the ecology and conservation of key wildlife species including the jaguar, raptors, tapir, crocodiles, and howler and spider monkeys.
- Discuss various wildlife research techniques and understand the role of different methods in wildlife research and conservation.
- Become familiar with general health issues facing wildlife

In addition, the following Learning Outcomes will be addressed or assessed as part of the course:

Communication Skills

- Oral Communication: Students will deliver a prepared, purposeful presentation designed to increase knowledge, to foster understanding, or to promote change in the listeners' attitudes, values, beliefs, or behaviors.
- Information Literacy: Students will show the ability to know when there is a need for information, to be able to identify, locate, evaluate, and effectively and responsibly use and share that information for the problem at hand.

Critical Reasoning

- Critical Thinking: Students will design, evaluate and implement a strategy to answer open-ended questions or achieve desired goals.
- Problem Solving: Students will comprehensively explore issues, ideas, artifacts, and events before accepting or formulating an opinion or conclusion.

Civic Engagement

- Civic Engagement: Students will demonstrate their ability to make a difference in the civic life of communities and develop the combination of knowledge, skills, values and motivation to make a difference in the quality of life of those communities.
- Global Learning: Students will become informed, open-minded, and responsible people who are attentive to diversity across the spectrum of differences, seek to understand how their actions affect both local and global communities, and address the world’s most pressing and enduring issues collaboratively and equitably.

Course Policies

Attendance and Participation Policy

In accordance with the IW Catalog and the IW Undergraduate Student Attendance Policy, students are expected to attend all class meetings for which they are registered. This is regarded as a matter of individual student responsibility. As mandated by federal law, all faculty members are expected to keep accurate records of class attendance. The only excused reasons for absences will be illness that impairs ability to attend and function within the classroom setting; unavoidable personal emergency, or participation in a University-sponsored event.

Students are expected to attend all class sessions on all days of class. It will be the responsibility of the student to contact the course instructor, preferably before the absence, to provide the appropriate documentation and verification for the reason for the absence, and to make arrangements with the course instructor for missed work. Students missing a class session without following this protocol will be subject to limited participation in hands-on practice at the instructor’s discretion.

Regardless of the reason for absences, both absences from class will count toward the percentage of allowed absences. A “class” is one class session- some days, there are multiple class sessions. Students are responsible for all missed class material. Students may be subject to limited participation in hands-on practice at the instructor’s discretion if they have missed the underlying material needed to safely perform the task at hand.

A warning to the student and student’s home university point person may result if the student is absent 12.5% of the total number of class meetings. If a student is absent 25% of the total number of class meetings, the course instructor must notify the Registrar’s Office which will initiate the withdrawal of the student from the class with a grade of WF (Withdrawn-Fail).

Grading Scale:

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93-100%	= A	73-76.99%	= C
90-92.99%	= A-	70-72.99%	= C-
87-89.99%	= B+	67-69.99%	= D+
83-86.99%	= B	63 -66.99%	= D
80-82.99%	= B-	60- 62.99%	= D-
77-79.99%	= C+	59 and below	= F

Assignments and Points

Your course grade will be determined as follows:

Writing Assignment: 20%
Exam: 20%
Student Presentation: 10%
Program Participation: 50%

The exam and writing assignment will be due 10 days after completion of the program. The exam will be online and open book format. The student presentation will occur during the program and you will receive all assignment details and grading rubrics on the first day of the program.

Your supervising veterinarian/instructor will complete a detailed student participation evaluation for your program participation grade. For this evaluation, you will be scored on the following criteria throughout the program:

- *Level of engagement.* You are expected to proactively contribute to class by offering ideas, asking questions, and volunteering answers multiple times each session.

- *Quality of contributions.* A majority of your contributions must be relevant and reflect understanding of the topic, provide insight, draw connections regarding the material, build upon remarks of another student, and/or demonstrate critical thinking skills.

- *Listening Skills.* You are expected to actively and respectfully listen to your peers and instructor, maintaining full engagement throughout the class session or activity.

- *Preparation.* You should always be prepared for class or the scheduled activity with necessary class materials. You should complete all homework assignments on time and be ready to discuss when appropriate.

- *Behavior.* You should never display disruptive or inappropriate behavior during a class session or activity. You should be polite and cooperative with students and the instructor.

Time and Commitment

Class sessions and volunteer activities will take up a large portion of your day. This course will cover a large volume of terms, techniques, and information. We expect that you will find the time you invest to be productive and helpful, both in this class and going forward.

Supplies

We have the opportunity to have this course in a field setting that allows for hands-on observation, practice, and study. This setting provides a unique hands-on opportunity to see what you are learning in practice. Each student should be prepared for a variety of weather and field conditions. Loosefitting clothing with long sleeves and pants are essentially for dealing with insects. Bring both sneakers and rubber boots as well as rain gear, a headlamp with extra batteries, and a water bottle. In addition, please have a supply of bug repellent, sunscreen and anti-itch ointment cream. Please refer to equipment list provided with pre-course paperwork and ask if there are any questions/concerns.

Technology

You are welcome to use a laptop to take notes in class if you prefer. It is certainly not required. Please ensure that your phone is off during class sessions.

Diversity and Disability Statement

Iowa Wesleyan values diversity and inclusion; we are committed to a climate of mutual respect and full participation. Our goal is to create learning environments that are usable, equitable, inclusive and welcoming. If there are aspects of the instruction or design of this course that result in barriers to your inclusion or accurate assessment or achievement, please notify me as soon as possible. Students with disabilities are eligible for accommodations to help remove learning barriers in the course.

Academic Honesty

Iowa Wesleyan has developed a strict policy to deal with those students who commit acts of academic dishonesty such as plagiarism and/or cheating. Such acts will not be tolerated in any form by the faculty and staff, and will carry stiff penalties. For more information regarding this policy, please consult the most current version of the IW Catalog.

Course Schedule (subject to change):

Date	Activity	Location	Readings/Notes
Arrival Day			
Transfer from airport			
Orientation	Lecture	TEC	
Optional zipline and tubing (summer only)			
Day 1 Introduction to Wildlife Issues			
Overview of course, schedule, expectation	Lecture	TEC	
Belize wildlife: conservation, ecosystems, issues	Lecture	TEC	Young, 2008
LUNCH		TEC	
Nature walk: flora and fauna	Field activity: Rey Cal	TEC	
Wildlife veterinary medicine and One Health	Lecture	TEC	Workforce Needs in Veterinary Medicine,

approach			Chapter 7
DINNER		TEC	
Introduction to the Belize Zoo: history and philosophy	Lecture: Sharon Matola	Belize Zoo	Cuaron 2005
Night tour of Belize Zoo	Field Activity	Belize Zoo	
Day 2 Wildlife Captive Care			
Problem jaguar program	Tour: zoo staff	Belize Zoo	Quigley et al. 2015
Bone Lab	Activity	Belize Zoo	
LUNCH		Belize Zoo	
Tapir physical exam	Activity	Belize Zoo	Split into two groups
Observation exercise Activity			
The role of zoos in conservation	Lecture: Jamal Andrewin	Belize Zoo	Mason 2000
Day 3 Field Research			
Wildlife research methods	Lecture	TEC	
Crocs of Belize	Lecture: Marissa Tellez	TEC	
Drone nest survey	Field activity	TEC	Cristie et al. 2016
LUNCH			
Tapir research	Lecture: Wilber Martinez	TEC	

Radio collar practice	Field activity	TEC	
Day 4			
Remote drug delivery	Lecture	TEC	Printed material will be handed out
Remote drug delivery practical	Field activity	TEC	
LUNCH			
Necropsy lab	Activity	Belize Zoo	Split into two groups
Enrichment planning	Activity and discussion	Belize Zoo	Skibiell et al. 2007
Day 5 Field Work			
Maps and GPS	Lecture	TEC	
Travel to Runaway Creek		RCNR	
LUNCH		packed	
Set up trail camera and cave hike	Field activity	RCNR	Harmsen et al. 2017
Summer course has weekend free Winter course has New Years Day free (optional ziplining and tubing)			
Day 6 Community Conservation			
Intro to Primatology	Lecture	TEC	McKinney et al. 2015
Travel to Community Baboon Sanctuary		CBS	
History of CBS	Lecture: CBS staff	CBS	Horwich et al. 2011
LUNCH		CBS	
Finding and identifying monkeys	Field activity	CBS	
Day 7 Conservation Projects: San Ignacio			
Visit Mayan ruins	Field activity	Xunantunich	
LUNCH		San Ignacio	

Belize Raptor Center	Activity	San Ignacio	Wimberger et al. 2010
Day 8 Field Work			
Early travel to RCNR		RCNR	
BREAKFAST		packed	
Mist netting and bird banding	Field activity	RCNR	Derlindati and Caziani 2005
LUNCH		packed	
Zoo rounds or spider monkey hike	Field activity	Belize Zoo/RCNR	Choose one option; Fedigan 2011
Day 9 Animal care			
Enrichment activity	Activity	Belize Zoo	Melfi 2009
LUNCH			
TBD			Salas and Manteca 2016
Day 10 Course review, exam, and presentations			
Review camera trap photos		TEC	
Exam		TEC	
LUNCH		TEC	
Presentations		TEC	
Course review	Staff	TEC	
Departure day			
Travel to airport	Time TBD		