

ZOOLOGY 750: ADVANCED CONSERVATION BIOLOGY

INSTRUCTOR:

Craig Stockwell

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Office HOURS: By appointment

COURSE DESCRIPTION & OBJECTIVES: Conservation biology is an integrative approach to the study and conservation of biodiversity. This field is one of the fastest growing disciplines within the applied environmental sciences. This course will focus on emerging areas of research in Conservation Biology. This semester the course will be designed around a field trip to western Nevada and Southern California. We will also attend an international meeting of conservation biologists focused on the conservation of desert aquatic systems – Desert Fishes Council. 3 Credits.

SCHEDULE: Selected Wednesdays on campus 5:30-8:30pm – Van Es Conference Room

SUGGESTED BACKGROUND: Students should have coursework and/or research background in Ecology and Conservation Biology

TEXT: Assigned readings.

RESEARCH PRESENTATION/DISCUSSION

Students will research a timely topic concerning the conservation biology of desert aquatic systems. A list of topics is provided below. These topics will be researched using peer reviewed and gray literature. . Each student will present a 20-30 minute presentation in powerpoint outlining the given topic. Also, each student is responsible for assigning 2-3 papers for the entire class to read. Selected papers must be cleared with the instructor and must be provided to the class as pdfs or as paper copies at least one week before the class discussion. The presentations/discussions will take place on the following Wednesday. The group leaders will be graded on their ability to generate a good discussion. **ALL** students will be expected to actively participate in the discussion. During each class meeting , a person will be randomly selected to play the role of “Devil’s Advocate”.

ON CAMPUS CLASS SESSIONS

Sept 16 Class Introduction

Sept 30 Cadillac Desert – Aquatic systems endangerment

Oct 7 Mammals on Mountain Tops

Oct 14 Exotics Species and conservation start @ 4 :00pm

Oct 21 Species Interactions

Oct 28 Population Monitoring

Nov 4 Watershed Management – start at 6pm

Nov 11 Translocations

Devils Hole pupfish population viability

Nov 18 Literature critique – during field trip if necessary

Megan Klosterman

Paul Barnhart

Brianna Schneck

Matthew Strassburg

Dave Mushet

Matt Bischof

Dr. Mike Reed

MEETING PARTICIPATION:

All students will be expected to attend the DFC meeting on Nov 21. Each student will provide a formal written review of 3 talks. Each review should be about at least one-half page in length and provide an overview of the topic along with a critique of the talk (12 point font, double spaced).

REVIEW PAPER: Each student will write a review paper concerning their chosen discussion topic. The review should include at least 10 peer reviewed papers and the total written length should be 7-10 pages in length (excluding figures, literature cited). The review paper will be due December 11th . Papers will be graded according to completeness.

POSSIBLE TOPICS

Biogeography, Endemic species and conservation
Exotic species
Watershed Management - Water export
Phlogeography and Evolutionarily Significant Units

Translocations and conservation
Monitoring populations

GRADES: All assignments and tests must be completed to pass this course.

Research Presentation	35%
Research Paper	35%
Review of talks	15%
Discussion and field trip participation	15%

Grades will be assigned as follows:

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

FIELD TRIP: Students will be expected to assist with driving vehicles and actively participating in all field trip activities. We may have an opportunity to participate in a sampling a population of a protected fish species. Please come prepared for all types of weather. The Mojave Desert can be both very warm and very cold this time of year. We will stay at a variety of motels and field stations along the way, but you may wish to bring a light sleeping bag or a floor mat for our stay at the field stations. These facilities are standard dormitory facilities with a shared bathroom and shared kitchen. You will need to bring personnel hygiene items including a towel as none are provided.

FEES: This trip is being largely subsidized by NDSU. Each student will pay a fee of \$250.00. All students will be expected to pay for their own food.

SPECIAL NEEDS: Any students who need special accommodations for learning or who have special needs are invited to share these concerns or requests with the instructor as soon as possible.

ACADEMIC RESPONSIBILITY: All work in this course must be completed in a manner consistent with NDSU University Senate Policy, section 335, Code of Academic Responsibility and Conduct (<http://www.ndsu.nodak.edu/policy/335.htm>). Violation of this policy will result in failure of this course.

**ADVANCED CONSERVATION BIOLOGY FIELD TRIP (ZOO 750)
GREAT BASIN DESERT AND MOJAVE DESERT
NOVEMBER 16-23, 2009**

Questions for Mary Don, Steve parmenter - rissler

- 1) **Springfish at Mina**
- 2) **Walker Lake – Mono Lake Connections**
- 3) **Hawthorne – Lee Vining Hotels**
- 4)

Date	ITINERARY	HOUSING
MON NOV 16	Depart Fargo: 7:05pm Allegiantair Flight 479 - Arrive Las Vegas: 8:15pm	Longstreet Hotel & Casino Confirmation # - 67147 Phone: 775-372-1777
TUE NOV 17	Ash Meadows and Devils Hole pupfish	Longstreet Hotel & Casino Conf # - 67147 Phone: 775-372-1777
WED NOV 18	Great Basin Desert – Big Dune, Mina Springfish	Hawthorne Hotel – TBA
THUR NOV 19	Walker Lake – Mono Lake	White Mtn. Res. Sta. Denise Waterbury (760) 873-4344
FRI NOV 20	Death Valley NP – Dunes and Salt Creek	Furnace Creek Ranch Conf # 1538344; 1538345; 1538346; 1538347
SAT NOV 21	Death Valley NP – Desert Fishes Council Meeting Ash Meadows Symposium	Longstreet Hotel & Casino Conf # - 67148 Phone: 775-372-1777
SUN NOV 22	Mojave Desert National Preserve Mohave tui chub sampling Desert Mule Deer	Camp Cady or Las Vegas
MON NOV 23	Depart Las Vegas Allegiantair Flight 478 Depart 1:30pm; Arrive 6:25pm	
	3 http://nevada.sierraclub.org/conservation/walkerlake/tourshow/WalkerLakeSummitTour.htm	

