

NCLC 475: Conservation Behavior
Spring 2015, M & F 10:30am-1:10pm

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Course Description:

This course will introduce students to the fundamentals of Conservation Behavior, a discipline that seeks to apply theories of animal behavior towards solving biological conservation and wildlife management problems. The course will consist of interactive lectures, readings (including a text and primary literature), and discussion. Additionally, students will get hands-on, inquiry-based experiential learning while working in groups at the National Zoo to design and conduct independent behavioral-based research on endangered species.

(6 Credits: 4 Learning Community credits + 2 Experiential Learning credits)

This learning community places special emphasis on the following NCC competencies: *communication, critical thinking, global understanding, and group collaboration.*

Required readings:

Students are expected to have read assigned texts **before class** and to be prepared to discuss the readings in class.

- *A Primer in Conservation Behavior*, by Daniel T. Blumstein & Esteban Fernandez-Juricic (Sinauer Associates Inc., 2010)
- *Measuring Behaviour: An Introductory Guide*, Third Edition, by Paul Martin & Patrick Bateson (Cambridge University Press, 2007)
- Primary (peer-reviewed) literature and other course texts as assigned, which will be posted on Blackboard.

Learning Objectives: By the end of the course, the successful student will be able to:

- Describe how behavior research can advance the conservation of species
- Describe the steps involved in conducting an independent research study
- Identify and explain key concepts in behavioral biology relevant to conservation biology
- Explain how behavioral mechanisms affect the conservation of biodiversity

Course Requirements and Evaluation:

- 1) **Student-Led Literature Discussion** (50 points): This activity involves working in groups to present an article for discussion by the entire class. Your group will be required to summarize the main points of the article and relate them to class themes during class discussion. A grading rubric will be provided to help guide you through the assignment.
- 2) **Conservation Journal** (100 points): The journal is a vital component of this course and will assist in preparing you for class discussions of peer-reviewed literature. For **four** of the student-led discussions that you do NOT lead, you will be expected to summarize the articles, write down 2-3 main points from each text and one question you wish to share during discussion. The prompts and your entries will be posted on Blackboard.
- 3) **Midterm Exam** (100 points): Students and instructors will collaborate to develop exam questions based on learning objectives during a pre-exam review session.
- 4) **Endangered Species Study** (100 points): You will be required to write a short scientific paper (maximum of 1000 words) describing the conservation status of the endangered species you are observing at the National Zoo. The paper must describe: 1) the biology and ecology of the species - including food habits, reproduction, habitat preferences, competitors and predators; 2) current conservation status – distribution, estimates of numbers, and information on captive propagation; and, 3) causes of decline/threats to survival.
- 5) **Behavioral Research and Presentation** (250 points): Student groups will be required to conduct an independent, behavior-based research project at the National Zoo. At the beginning of the semester, you will be guided through the process of creating a study. Using this knowledge, you will complete the following assignments: You will submit a brief write-up about the preliminary observation phase of the study (10 points). Your group will propose a project (25 points), which will be approved by your instructors. Over six weeks, your group will collect data at the zoo. Part way through the data collection, your group will submit a progress report/update (15 points). Once all of the data are collected, your group will submit a summary of the analyses of your data (25 points). The whole project will be wrapped up with a group presentation of your findings at a research symposium held at the end of the semester (150 points). All members of the same group will receive the same grade for the project and presentation (215 points). Your individual write-up about preliminary observations (10 points) and evaluations by your fellow group members (25 points) will contribute the final 35 points out of 250.
- 6) **Ethogram Assignment** (50 Points): Each student will prepare an individual ethogram that includes descriptions of behaviors that will be relevant to your proposed research question.
- 7) **Participation** (100 points): You are expected to come to class prepared for discussion of readings and concepts, zoo activities, and group project meetings. Participation is assessed over the entire semester and can take many forms, e.g., responding to and presenting thoughtful questions, helping with course logistics, being fully involved in group projects, etc. Participation also involves doing everything you can to represent yourself, our class, and NCC well when we are engaged in activities off campus. Note that perfect attendance will only earn you 40 points. The other 60 points will be assigned at the discretion of the instructors.

Success in the class depends on your ability to keep up with the readings, critically reflect on what you read, and communicate your thoughts and reactions to others in the class. **All perspectives and opinions are welcome.**

NOTE: Students will be required to provide their own transportation to the National Zoo.

Late Work

Assignments are to be turned into Blackboard by the beginning of class on the day due, unless otherwise noted. Late work will be reduced by 10% if it is up to 24 hours late, by 20% if it is between 24 and 48 hours late. No work will be accepted if it is more than 48 hours late without prior approval of the instructors and written documentation for the delay (e.g. a valid written medical excuse or notice of death in the family).

Grading Scale

A+	750-727	C+	599-578
A	726-698	C	577-548
A-	697-675	C-	547-525
B+	674-653	D	524-450
B	652-623	F	449-0
B-	622-600		

Course Policies

Attendance and Preparation

Students are expected to attend every class session and to be prepared by completing the required readings and other assignments before class meets. ***Come to class prepared to discuss the readings.*** To "discuss" means you've: a) read the texts and thought about them (e.g., what are the key points and arguments?); and b) identified questions/concerns, new terms, weak/strong arguments, etc.

Excused Absences and Makeup Work

If unforeseen circumstances prevent you from attending class and/or handing in assignments (death in family, severe illness, etc), contact us ASAP (e.g., within 24 hours). Excused absences (i.e., collegiate sports, religious events) must be documented **in advance**. In accordance with George Mason University policy, we will make every reasonable effort to allow members of our diverse university community to observe religious holidays without academic penalty. However, it is your responsibility to provide us with advanced written notice of the dates of any major religious holidays on which you will be absent. It is also your responsibility to keep up with the work covered in class.

No makeup work will be given unless you have made prior arrangements with the instructor. Makeups for the Midterm and the Behavioral Research Presentation will only be approved for

students that fall ill (and present a doctor's note that states the students cannot attend class) or if there is a documented death or grave injury in the student's immediate family.

Statement on the Honor Code and Academic Integrity

The integrity of the University community is affected by the individual choices made by each of us. GMU has an Honor Code with clear guidelines regarding academic integrity. Three fundamental and rather simple principles to follow at all times are that: (1) all work submitted be your own; (2) when using the work or ideas of others, including fellow students, give full credit through accurate citations; and (3) if you are uncertain about the ground rules on a particular assignment, ask for clarification. No grade is important enough to justify academic misconduct.

Using someone else's words or ideas without giving them credit is plagiarism, a very serious offense. It is very important to understand how to prevent committing plagiarism when using material from a source. In this course, we ask that you do not to quote course texts verbatim, but instead paraphrase the source. That means conveying the author's ideas in your own words, while giving him/her credit for the information with a properly formatted parenthetical citation. Furthermore, anytime you write an idea that is not original to you or is not considered 'common knowledge', you must give the source of your information credit with a parenthetical citation.

Some projects are designed to be undertaken individually. For these projects, you may discuss your ideas with others or ask for feedback; however, it is not appropriate to give your paper to someone else to revise. You are responsible for making certain that there is no question that the work you hand in is your own.

Your group assignments to be completed collaboratively by your whole study group. Names of all the group members should appear on the work. Over the semester you may find that it is necessary for different group members to take the lead on various assignments leading up to the Behavioral Research Presentation. However, your instructors do expect that all group members will equally contribute time and ideas that are conceptually integrated in the final presentation.

NCC Commitment to Diversity

New Century College, an intentionally inclusive community, promotes and maintains an equitable and just work and learning environment. We welcome and value individuals and their differences including race, economic status, gender expression and identity, sex, sexual orientation, ethnicity, national origin, first language, religion, age and disability.

Student Services:

1. Office of Disability Services (<http://ods.gmu.edu>; 703-993-2474; 2500 SUB I). Assists students with learning or physical conditions affecting learning. If you qualify for accommodation, the ODS staff will provide a form to give to your instructor.
2. Counseling Center (<http://caps.gmu.edu>; 703-993-2380; Suite 3129 SUB I). Provides individual and group sessions for personal development and assistance with a range of emotional and relational issues.
3. Student Technology Assistance and Resources (STAR) (http://itservices.gmu.edu/services/view-service.cfm?customel_dataPageID_4609=5693; 703-993-8990; 229 Johnson Center). Provides support for web and multimedia design. STAR has

video cameras and other equipment for student check out.

4. Writing Center (<http://writingcenter.gmu.edu>; 703-993-1200; 114 Robinson A). Provides free tutors who can help you develop ideas and revise papers. Also available online
5. On-line Writing Guide (<http://writingcenter.gmu.edu/writing-resources>)

Email Policy

GMU faculty and staff may only correspond with students through the students' GMU assigned email accounts. This is a legal requirement, so emails sent from other accounts will not be answered.

Cell Phones, Laptops and the Paperless Classroom

Please turn your cell phone off while in class. If your phone rings while in class, you will get one free pass; the next time, we will answer it for you. No texting or tweeting while in class.

You are welcome to bring a laptop to class and use it for class-related purposes (e.g. taking notes, referring to course texts). Using your laptop for non-class purposes (e.g. email, IM, FB, surfing the Internet) will decrease your participation score.

We will use the Blackboard online course management system to minimize paper use. Our aim is to collaboratively adopt policies that will balance academic needs with resource conservation concerns.

Possible Changes to the Syllabus

There may be times where unforeseen events arise that warrant a change in the syllabus. For example, sometimes the availability of guest speakers will mean things need to be rearranged. Also, occasionally a new item will be published or discovered, or our discussions will suggest that a different reading(s) is important and should be added or substituted. I reserve the right to make any such change. You will be given as much advanced warning as possible. However, due dates for written assignments normally should be considered fixed and final.

Course Calendar

Date	Location	Topics	Assignments (due before class, unless otherwise noted)
Fri. Jan. 23	GMU	Course overview, forms	
Mon. Jan. 26	GMU	What is Conservation Behavior?	Blumenstein & Fernandez-Juricic Ch 1 Martin & Bateson Ch 1
Fri. Jan. 30	GMU	Why Do Behavioral Mechanisms Matter? How to conduct a literature search, form hypotheses	Blumenstein & Fernandez-Juricic Ch 2 Reed 1999 Martin & Bateson Ch 2
Mon. Feb. 2	GMU	Evolution of Behavior & Comparative Studies	Blumenstein & Fernandez-Juricic Ch 3 <i>SL discussion: Cook & Blumstein, 2013</i>
Fri. Feb. 6	NZP – VC Classrooms 1&2 Then exhibits	How to design a behavioral study & select observational methods Discuss zoo research opportunities Visit potential research sites	Martin & Bateson Ch 3 - 5 & 8
Mon. Feb. 9	GMU	Assessing Food, Habitat, and Mate Preferences	Blumenstein & Fernandez-Juricic Ch 4 <i>SL discussion: Marchand et al, 2014</i>
Fri. Feb. 13	NZP - VC Boardroom (2 nd floor)	Groups to conduct preliminary observations of study subjects Group meetings to develop proposal ideas	<i>Preliminary Observation Write-Up (Due by 11:59pm)</i>
Mon. Feb. 16	No Class	Work on Group Proposal	
Fri. Feb. 20	NZP- VC Classrooms 1&2 Then exhibits	Discussion of proposal ideas How to create an ethogram Ethogram development activity	Martin & Bateson Ch 7 <i>Research Proposal (Due by 5pm)</i>
Mon. Feb. 23	GMU	Understanding Habitat Selection	Blumenstein & Fernandez-Juricic Ch 5 <i>SL discussion: Youngquist & Boone, 2014</i>
Fri. Feb. 27	NZP - VC Classrooms 1&2 Then exhibits	Group meetings to finalize ethograms and develop data sheets Discuss project logistics w/ zoo staff	<i>Ethogram Assignment</i>
Mon. Mar. 2	GMU	<i>Mid-Term Exam</i>	
Fri. Mar. 6	NZP – VC Classrooms 1&2	Data collection practice Guest speaker – Betsy Herrelko	
Mar 7-15	Spring Break		
Mon. Mar. 16	GMU	Understanding Antipredator Behavior Guest speaker – Paul Marinari	Blumenstein & Fernandez-Juricic Ch 7
Fri. Mar 20	NZP	Data collection	

Mon. Mar. 23	GMU	Understanding Foraging Behavior How to enter data	Blumenstein & Fernandez-Juricic Ch 6 <i>SL discussion: Pirotta et al, 2015</i>
Fri. Mar. 27	NZP	Data collection	
Mon. Mar. 30	GMU	Individuality and Personalities	Blumenstein & Fernandez-Juricic Ch 9 <i>SL discussion: Lee & Moss, 2012</i>
Fri. Apr. 3	NZP	Data collection	<i>Research Progress Report</i>
Mon. Apr. 6	GMU	Demographic Consequences of Sociality	Blumenstein & Fernandez-Juricic Ch 10 <i>SL discussion: Archie & Chiyo, 2011</i>
Fri. Apr. 10	NZP	Data collection	
Mon. Apr. 13	GMU	How to perform basic data analysis Interpreting and presenting results Guest Speaker – Marieke Kester	Martin & Bateson Ch 9-11
Fri. Apr. 17	NZP	Data collection	
Mon. Apr. 20	GMU	Consequences of Sexual Selection & Reproductive Behavior	Blumenstein & Fernandez-Juricic Ch 11 <i>SL discussion: Stuart-Fox & Goode, 2014</i>
Fri. Apr. 24	No Class	Work on data analysis	<i>Data Analysis Summary (Due by 5pm)</i>
Mon. Apr. 27	GMU	Using Behavior to Set Aside Areas for Wildlife Protection	Blumenstein & Fernandez-Juricic Ch 12 <i>Endangered Species Paper (Due by 11:59pm)</i>
Fri. May 1	GMU	<i>Research Symposium</i>	
Mon. May 4	GMU	<i>Research Symposium</i>	
Wed. May 6		Peer Evaluations	<i>Peer evaluations (Due by 5pm)</i>