

INTS 403: Conservation Behavior
Fall 2019, W & F 10:30am-1:10pm
Mason Global Center 1306B

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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.

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

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.
- *Zoo Monitor* (<https://zoomonitor.org/home>) – details about how to access will be provided

Course Requirements and Evaluation:

- 1) **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, 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.
- 2) **Exams** (100 points each): Students and instructors will collaborate to develop exam questions based on learning objectives during a pre-exam review session.
- 3) **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.
- 4) **Behavioral Research and Presentation** (300 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: Your group will propose a project (30 points), which will be approved by your instructors, and develop an ethogram to collect your data (50 points). Over six weeks, your group will collect data at the zoo. Part way through the data collection, your group will meet with the instructors and provide a progress report (15 points). Once all of the data are collected, your group will organize your data and plan for your final presentation (30 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). Note: the presentation will be a coordinated effort between your group and a graduate student studying the same species. All members of the same group will receive the same grade for the project and presentation (275 points). The evaluations by your fellow group members (25 points) will contribute the final points out of 300.
- 5) **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 GMU 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. There is only paid parking at the zoo, so carpooling or public transportation is recommended.

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+	800-776	C+	639-616
A	775-744	C	615-584
A-	743-720	C-	583-560
B+	719-696	D	559-480
B	695-664	F	479-0
B-	663-640		

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.

SIS Commitment to Diversity

School of Integrative Studies, 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.

Sexual Misconduct and Interpersonal Violence

George Mason University is committed to providing a safe learning, living and working environment free from discrimination. The University's environment is meant to be experienced as vibrant and dynamic, and one that includes ample opportunities for exploration of self, identity and independence. Sexual misconduct and incidents of interpersonal violence deeply interrupt that experience, and George Mason University is committed to a campus that is free of these types of incidents in order to promote community well-being and student success.

George Mason University encourages individuals who believe that they have been sexually harassed, assaulted or subjected to sexual misconduct to seek assistance and support. [University Policy 1202 Sexual Harassment and Misconduct](#) speak to the specifics of our process, our resources, and options available to you.

[Confidential resources](#) are available on campus at the Student Support and Advocacy Center (ssac.gmu.edu), Counseling and Psychological Services (caps.gmu.edu), Student Health Services (shs.gmu.edu), and the University Ombudsman (ombudsman.gmu.edu). All faculty, staff and administrators of the University community (except those noted above) are not considered confidential resources and are required to report incidents of sexual misconduct to the University Title IX Coordinator.

For a full list of resources, support opportunities, and reporting options, contact Dr. Jennifer

Hammat, the University Title IX Coordinator, at 703-993-8730, jhammat@gmu.edu, diversity.gmu.edu or stop by Aquia room 373.

Other Student Services:

1. Office of Disability Services (SUB I, Suite 2500; 993-2474; <http://ds.gmu.edu>). Assists students with learning or physical conditions affecting learning. *If you have a documented learning disability or other condition that may affect academic performance you should:* 1) make sure this documentation is on file with Office of Disability Services to determine the accommodations you need; and 2) talk with me to discuss your accommodation needs.
2. Counseling Center (<http://caps.gmu.edu>). Provides individual and group sessions for personal development and assistance with a range of emotional and relational issues.
3. Writing Center (<http://writingcenter.gmu.edu> ; 703-993-1200; Robinson B, Room 213). Provides free tutors who can help you develop ideas and revise papers.

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)
Wed Aug 28	GMU	Course overview Film: Born Wild: The First Days of Life	
Fri Aug 30	GMU	What is Conservation Behavior? Introduce Endangered Species Paper and Research Assignment	Blumenstein & Fernandez-Juricic Ch 1 Martin & Bateson Ch 1
Wed Sept 4	GMU	Why Do Behavioral Mechanisms Matter? How to conduct a literature search, form hypotheses TED: David Gallo – Underwater Astonishments	Blumenstein & Fernandez-Juricic Ch 2 Brakes et al, 2019 Martin & Bateson Ch 2
Fri Sept 6	NZP – VC Classroom 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 <i>Post research species preferences (Due by 11:59pm)</i>
Wed Sept 11	GMU	Evolution of Behavior & Comparative Studies Literature discussion TED: Isabel Behncke – Evol Gift of Play SMSC Introduction	Blumenstein & Fernandez-Juricic Ch 3 <i>Conservation journal (#1): Cook & Blumstein, 2013</i>
Fri Sept 13	NZP - VC Classroom 2 & Exhibits	Discuss project logistics w/ zoo staff Individuals conduct preliminary observations of study subjects Discuss behaviors seen and what is an ethogram Develop proposal ideas	<i>Research Proposal (Due by 9/15 at 11:59pm)</i>
Wed Sept 18	GMU	Assessing Food, Habitat, and Mate Preferences Literature discussion Film: Battle of the Sexes	Blumenstein & Fernandez-Juricic Ch 4 <i>Conservation journal (#2): Suraci et al, 2019</i>
Fri Sept 20	NZP - VC Classroom 2	How to use ZooMonitor How to create an ethogram Ethogram development activity	Martin & Bateson Ch 7
Wed Sept 25	NO CLASS	Work on Ethogram	
Fri Sept 27	NZP - VC Classroom 2 & Exhibits	Program Zoo Monitor Data collection practice	<i>Ethogram Assignment</i> Bring electronic device to Zoo
Wed Oct 2	GMU	Understanding Habitat Selection Review for mid-term exam	Blumenstein & Fernandez-Juricic Ch 5

Fri. Oct 4	NZP – VC Classroom 2	Inter-rater reliability Data collection	
Wed Oct 9	GMU	Mid-Term Exam	
Fri Oct 11	NZP	Data collection	
Wed Oct 16	GMU	How to organize your data Interpreting and presenting results Provide Progress Report on Research	Martin & Bateson Ch 9-11 <i>Progress Report on Research</i>
Fri Oct 18	NZP	Data collection	
Wed Oct 23	GMU	Communication Guest Speakers – Marieke Kester Literature discussion	Blumenstein & Fernandez-Juricic Ch 8 <i>Conservation journal (#3): Veits et al 2019</i>
Fri Oct 25	NZP	Data collection	<i>Endangered Species Paper (Due by 10/27 at 11:59pm)</i>
Wed Oct 30	GMU	Understanding Foraging Behavior Literature discussion	Blumenstein & Fernandez-Juricic Ch 6 <i>Conservation journal (#4): McDonald et al 2018</i>
Fri Nov 1	NZP	Data collection	
Wed Nov 6	GMU	Individuality and Personalities Literature discussion	Blumenstein & Fernandez-Juricic Ch 9 <i>Conservation journal (#5): Brehm et al 2019</i>
Fri Nov 8	NZP	Data collection	
Wed Nov 13	GMU	Demographic Consequences of Sociality Literature discussion Frans de Waal: Moral behavior in animals (TED)	Blumenstein & Fernandez-Juricic Ch 10 <i>Conservation journal (#6): Whiting et al 2018</i>
Fri Nov 15	GMU	Data analysis	<i>Data Analysis Summary (Due by 11/17 at 11:59pm)</i>
Wed Nov 20	GMU	Consequences of Sexual Selection & Reproductive Behavior Literature discussion	Blumenstein & Fernandez-Juricic Ch 11 <i>Conservation journal (#7): Brunton et al, 2016</i>
Fri Nov 22	GMU	Using Behavior to Set Aside Areas for Wildlife Protection Review for 2 nd Exam	Blumenstein & Fernandez-Juricic Ch 12 Ordiz et al 2019
Nov 27-29	Thanksgiving Break		
Wed	GMU	Research Symposium	

Dec 4			
Fri Dec 6	GMU	Research Symposium	
Mon Dec 9		Peer Evaluations	<i>Peer evaluations</i> (Due by 5:00pm)
Wed Dec 11	GMU	Second Exam	