

Large Mammal Ecology and Management

WIS 4424

Spring semester of even years

Tues/Thurs 8:55-10:25 am

3 credits

Instructor:

Vanessa Hull

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Office Hours: Tues/Thurs 10:30 am-11:30 pm (or by appointment)

She/her/hers

Course Prerequisites: junior or senior standing

Course Description:

Large mammals are fascinating creatures that interact with the coupled human and natural systems that they occupy in complex ways. Their dynamics are driven by abiotic and biotic conditions as well as human impacts, while they in turn play significant roles in shaping the diverse landscapes they inhabit. In this course, we will take a critical approach to examining current advances and controversies involving large mammals.

Learning Objectives:

By the end of this course, students should be able to:

1. Articulate key components of large mammal ecology
2. Explain differences in management strategies for large mammals in different countries and contexts
3. Articulate and provide examples of the variety of human threats to large mammals at local and global scales
4. Evaluate the efficacy of real-world conservation strategies to manage large mammals
5. Use multimedia tools to effectively explain large mammal ecology and management issues to others

Target audience:

This course is designed for upper-level undergraduate students. Students from different backgrounds and fields are all welcome. I am happy to provide additional support or readings for those from other departments or fields if needed. Diversity, inclusion, and equity are important to me and I strive to maintain these values in the classroom.

Course components:

Participation

This course relies heavily on active student participation. Class attendance is therefore an essential part of succeeding in this course. Attendance will be taken at the start of each class period via a sign-in sheet. Please email me regarding any absence. More than 2 unexcused absences will result in a 5-point deduction in the participation grade each time.

Course Webpage

The course will be maintained on the Canvas E-learning website <https://elearning.ufl.edu/>. All course materials (including lectures, readings, and assignments) will be posted on this website. Lecture slides will be posted here prior to each class meeting. Grades will also be maintained on the website. Please turn in any assignments via the submission buttons on the website.

Readings

Readings will be assigned and should be completed prior to each class period. They will be made available on the course webpage. You do not need to purchase a textbook for this course.

Quizzes

There will be 5 quizzes throughout the semester which will each include short answer questions directly addressing content in the readings and in-class material. These questions will be straightforward to answer if you have done the readings and been in class.

Graphical Abstract

Students will choose one peer-reviewed journal article of their choice that is published recently on large mammals (last five years). Students will create a graphical abstract to represent the main idea of the paper. I will provide several examples. This is an opportunity to be creative and explore a particular topic or paper that you find interesting.

Padlet

Students will create a Padlet on a large mammal species of their choice. Padlet (<https://padlet.com/>) is a fun and easy to use software (point and click) for presenting diverse media and information on a topic of interest. I will have a clear set of guidelines for information that should be included about the species (e.g., diet, reproduction, population trends, management strategies).

Group Project

The class will be broken up into small groups (3-5 people). Students can choose their own group. Each group will choose a large mammal controversy to present for roughly half of a class period. The group will be assigned the task of choosing an assigned reading for the class, giving a short

lecture/introduction, and involving the class in some type of creative active learning activity. Students will also be required to complete peer evaluations to document the contributions of other members in their group (peer evaluations will count for 15% of the group project grade).

Take-home Essays

A set of two multi-part essays will be given at the end of the course as a final synthesis. Essays are designed to synthesize information learned during the semester.

Grading:

Grades will be calculated as follows:

A (90% or greater), B+ (87%-89.99%), B (80%-86.99%), C+ (77%-79.99%), C (70%-76.99%), D+ (67%-69.99%), D (63%-66.99%), D- (60%-62.99%), E (<60%)

Item	Points
Participation	100
Quizzes (5, 10 pts each)	50
Graphical abstract	50
Padlet	100
Group project	100
Essays	100
Total	500

For information on current UF policies for assigning grade points, see <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>

Requirements for class attendance and make-up exams, assignments and other work are consistent with university policies that can be found at: <https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>

Class Schedule

Date and Topic	Assignments
Week 1 Introduction Ungulates- Trends and Impacts	
Week 2 Carnivores- Trends and Impacts Values	Quiz 1
Week 3 Population regulation Game ranching	
Week 4 Sociality <i>Guest lecture</i>	Quiz 2
Week 5 Hunting <i>Guest lecture</i>	
Week 6 Graphical abstracts discussion <i>Guest lecture</i>	Graphical abstract due
Week 7 Reintroduction <i>Guest lecture</i>	Quiz 3
Week 8 Community based management Mid semester review	
Week 9 Coexistence <i>Guest lecture</i>	
Week 10 Large mammals and science communication <i>Guest lecture</i>	Quiz 4
Week 11 Special topic- Giant Pandas Padlet discussion	Padlet due
Week 12 Special topic- Virunga	
Week 13 Student projects	Quiz 5
Week 14 Student projects	
Week 15 Student projects Agenda for the Future	
Finals	Essays due

Reading List

*additional readings will be added corresponding to guest lectures (based on guests scheduled for a given semester)

Week 1

- Ripple, William J., et al. "Collapse of the world's largest herbivores." *Science advances* 1.4 (2015): e1400103.

Week 2

- Ripple, William J., et al. "Status and ecological effects of the world's largest carnivores." *Science* 343.6167 (2014).
- Manfredo, Michael J., Tara L. Teel, and Alia M. Dietsch. "Implications of human value shift and persistence for biodiversity conservation." *Conservation Biology* 30.2 (2016): 287-296.

Week 3

- Greenville, Aaron C., et al. "Bottom-up and top-down processes interact to modify intraguild interactions in resource-pulse environments." *Oecologia* 175.4 (2014): 1349-1358.
- Butler, Matthew J., et al. "Commentary: Wildlife ranching in North America—arguments, issues, and perspectives." (2005): 381-389.

Week 4

- Macdonald, David W. "The ecology of carnivore social behaviour." *Nature* 301.5899 (1983): 379-384.

Week 5

- Benítez-López, Ana, et al. "Intact but empty forests? Patterns of hunting-induced mammal defaunation in the tropics." *PLoS biology* 17.5 (2019): e3000247.

Week 6

- None

Week 7

- Alston, J. M., et al. "Reciprocity in restoration ecology: When might large carnivore reintroduction restore ecosystems?." *Biological conservation* 234 (2019): 82-89.

Week 8

- Masozera, Michel K., et al. "Assessing the suitability of community-based management for the Nyungwe Forest Reserve, Rwanda." *Forest policy and economics* 8.2 (2006): 206-216.

Week 9

- Lute, M. L., & Carter, N. H. (2020). Are we coexisting with carnivores in the American West?. *Frontiers in Ecology and Evolution*, 8, 48.

Week 10

- Nanni, Veronica, et al. "Social media and large carnivores: Sharing biased news on attacks on humans." *Frontiers in Ecology and Evolution* 8 (2020): 71.

Week 11

- Liu, Jianguo, et al. "Ecological degradation in protected areas: the case of Wolong Nature Reserve for giant pandas." *Science* 292.5514 (2001): 98-101.

Week 12

- Robbins, Martha M., et al. "Extreme conservation leads to recovery of the Virunga mountain gorillas." *PloS one* 6.6 (2011): e19788.

Week 13

- TBD- student choice

Week 14

- TBD- student choice

Week 15

- TBD- student choice

Online Course Evaluation Process

Student assessment of instruction is an important part of efforts to improve teaching and learning. At the end of the semester, students are expected to provide feedback on the quality of instruction in this course using a standard set of university and college criteria. Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals.

Guidance on how to give feedback in a professional and respectful manner is available at: <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at: <https://gatorevals.aa.ufl.edu/public-results/>.

Academic Honesty

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: *"We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity."* You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: *"On my honor, I have neither given nor received unauthorized aid in doing this assignment."*

It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: <http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code>.

Software Use:

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

Services for Students with Disabilities

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic

accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation

0001 Reid Hall, 352-392-8565, <https://disability.ufl.edu/>

Campus Helping Resources

Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

- *University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575, www.counseling.ufl.edu*
Counseling, Services, Groups and Workshops, Outreach and Consultation, Self-Help Library, Wellness Coaching
- U Matter We Care, www.umatter.ufl.edu/
- *Career Connections Center, First Floor JWRU, 392-1601, <https://career.ufl.edu/>.*
- Student Success Initiative, <http://studentsuccess.ufl.edu>.

Student Complaints:

- Residential Course: <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>.
- Online Course: <http://www.distance.ufl.edu/student-complaint-process>