

ANTHP 401.XX-- Wildlife Conservation, Ecology and Health (3 cr.)

Instructor:

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Location:

This course takes place over winter session (approx. Jan 4-19) in Uganda, a landlocked country in sub-saharan Africa. The specific locations are Kibale National Park (10 nights), Murchison Falls National Park (3 nights), Entebbe (2 nights).

Program Fees:

Additional fees apply as this is a study abroad course. Please contact Education Abroad for more details.

Course Description:

This program offers an experiential course in the study of wildlife ecology and conservation and its relationship to human health. The majority of the course takes place in an African rainforest that hosts some of the highest densities of primates in the world, and students also gain experience in a savannah and wetland habitats. Students learn the basic ecology of African mammals and plants; how to identify them, measure their abundance and distribution. As well, they learn how ecology and human health interact through an examination of ecosystem services (including climate regulation, water management, wildlife resources) provided by wildlife habitats as well as the role of tourism on local economies. Field exercises include: tracking wild chimpanzees and learning about ecotourism, learning to identify medicinal plants from local healers, understanding watershed management on the Nile River, visiting carbon sequestration projects (via carbon credits) to learn how forests are restored, and deciphering how wetlands are managed with a viewing of the famed shoebill stork. Students will conduct a 3-day independent project on a topic of their choice with the help of expert Ugandan field assistants. Students will have the opportunity to view several species of wildlife in rainforests, including wild chimpanzees, black and white colobus monkeys, baboons, as well as in the savannahs, including elephants, giraffe, buffalo, hippos, rhinos among others. Conservation lectures are given by Uganda Wildlife Authority officers and others who are actively involved in wildlife management and human health in the area.

Course Objectives

This immersive course will provide an understanding of planetary health by the interconnected nature of human health, wildlife conservation and the environment through practical field experiences in the rainforest, savannahs and wetlands of African ecosystems.

Learning Outcomes

Through this course, students will be able to:

1. Define the holistic concept of 'Health Ecology', how ecosystems affect our health

2. Identify the components of three different African ecosystems and the wildlife that inhabit them
3. Assess challenges to conserving and managing wildlife, specifically within forests, savannahs and wetlands
4. Demonstrate mastery of methods used to measure the abundance and distribution of wildlife
5. Design and conduct a short independent research project focusing on wildlife

Readings

There are two optional books for background information. Readings listed in the syllabus will be provided via pdf before the class begins.

Primack, Richard, and Johnny W. Wilson. *Conservation biology in sub-saharan Africa*. Open Book Publishers, 2019.

Myers, Samuel, and Howard Frumkin. *Planetary health: protecting nature to protect ourselves*. Island Press, 2020. (approx. cost is \$28)

Primack & Wilson is a free, online textbook is a useful reference and while not required, does provide information about many topics discussed in this class.

Myers & Frumkin also provide details on many of the major concepts in health ecology.

Course Requirements and Grading

Completion of field exercises. 40%

Power point presentation of independent research 20%

Final Exam based on lectures. 30%

Participation during lectures 10%

Course Content and Schedule

Day 1	Topic: Arrival in Entebbe Uganda. Brief orientation, reminders on health and safety.
	Other notes: Lodging is standard hotel at Protea Hotel, Entebbe for Day 1 (one night)
Day 2	Topic: Transit to Kibale National Park (7-8 hours), Review of Syllabus, rules and regulations, meet team.
	Other notes: Lodging is dormitory style at Makerere University Biological Field Station (MUBFS) for Day 2-12 (10 days)

Day 3	Topic: Rainforest ecology
	Field activity: 5-hour hike to discover the natural history of the rainforest, identification of primates, birds, and plants. Led by local experts and park ranger.
	Evening: Lecture on the History of Kibale National Park (MUBFS Director) and Primate Ecology (Prof Rothman)
	Readings: course packet materials on primate and mammals in Kibale
Day 4	Topic: Censusing mammals in rainforests
	Field activity: Measuring large mammal abundance, counting primates guided by Ugandan research assistants and park rangers
	Evening: Lecture on Human-Wildlife Conflict (Warden, Community Conservation), Challenges to conservation in Rainforests (Warden, Research and Monitoring)
	Reading: Chapman, C. A., Struhsaker, T. T., Skorupa, J. P., Snaith, T. V., & Rothman, J. M. (2010). Understanding long-term primate community dynamics: implications of forest change. <i>Ecological Applications</i> , 20(1), 179-191.
Day 5	Topic: Rainforest plant communities
	Field activity: Measuring tree abundance, phenology and vegetation transects guided by Ugandan research assistants and park rangers.
	Evening: Lecture on ecosystem services from rainforests, ethnobotany (Resource User, Community Leader, and local healer from community)
	Readings: Chapters 3 & 4 in Setchell, Field methods in Primatology 2012
Day 6	Topic: Ecotourism and endangered apes
	Field activity: Track wild chimpanzees as a tourist to learn about the experience. Guided discussion by Prof Rothman will make aware certain key issues such as the economic importance of tourism, revenue sharing, community benefits, ape health, zoonotic disease, and the impact of tourist satisfaction
	Evening: Lecture on the economic role of tourism in conservation (Warden, Tourism)
Day 7	Topic: Ecosystem services, Carbon Credits and Communities
	Field activity: Visit the Carbon Credits and the Face project (2 hrs), Wetlands & Community walk (4 hrs) lecture/discussion by Warden in Charge of FACE project in Uganda, Faculty doing research on Forest Restoration, as well as guided wetlands and community walk by community leader.
	Evening: free time
	Readings: Wheeler et al. 2016 Carbon sequestration and biodiversity following 18 years of active tropical forest restoration. <i>Forest ecology and management</i> . 373: 44-55. Chapter 2 of Millennium Assessment Goals by United Nations
Day 8	Topic: Group Independent Project

	Field exercise: various
	Evening: time for data entry and analysis, Prof Rothman guides discussions
Day 9	Topic: Group Independent Project
	Field exercise: various
	Evening: time for data entry and analysis, Prof Rothman guides discussions
Day 10	Topic: Group Independent Project
	Field exercise: various
	Evening: time for data entry and analysis, Prof Rothman guides discussions
Day 11	Presentation of data and Evening Presentations
	Evening: presentations by each student and/or group
Day 12	Topic: Travel day, no activities planned (8 hr drive)
	Evening: Orientation to Murchison Falls National Park from Prof Rothman
	Other: Lodging for days 12-15 (3 nights) is at Sembeya River Lodge
Day 13	Topic: Savannah wildlife diversity, poaching and the bushmeat problem
	Field exercise: Early morning dawn and late afternoon dusk drive through Savannah Ecosystems for wildlife viewing, learn to spot animals and identify antelope, visit to Murchison falls waterfall.
	Evening: Roundtable with Warden Tourism and Warden Research
Day 14	Topic: Watershed management, hydroelectric power, oil and human health Location: Murchison Falls National Park
	Field exercise: boat ride down Nile River and visit to Murchison falls waterfall, with Community Conservation Warden
	Evening: Roundtable discussion with Chief Warden of Murchison Falls National Park
	Readings: MacKenzie, C. A., Fuda, R. K., Ryan, S. J., & Hartter, J. (2017). Drilling through conservation policy: oil exploration in Murchison Falls Protected Area, Uganda. <i>Conservation and Society</i> , 15(3), 322-333.
Day 15	Topic: Restoring animal populations, rewilding Africa
	Field exercise: early morning tracking rhinos in a game sanctuary with discussion talk with Sanctuary guide, travel to Entebbe (5 hrs)
	Evening: FINAL EXAM
	Readings: Egoh, B. N., Nyelele, C., Holl, K. D., Bullock, J. M., Carver, S., & Sandom, C. J. (2021). Rewilding and restoring nature in a changing world. <i>PloS one</i> , 16(7), e0254249.
	Other: Lodging in Protea Hotel Entebbe (1 day)
Day 16	Topic: Wetland ecology and watershed protection
	Field exercise:
	Evening: depart for the USA (please book departure flight for 3 pm or later)

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Other notes

Required: You will receive a detailed orientation packet and a detailed pre-trip in person orientation will be conducted at least one month prior to the trip. This includes information about rules, regulations, safety and conduct that is expected on this trip. You also need to complete required Sexual Harassment training in order to travel abroad. These will be communicated prior to registration for the trip. You also must comply with the rules and regulations of Uganda while in the country. Additional information on health, safety and security of Uganda will be provided to you prior to departure.

Academic Integrity

Hunter College regards acts of academic dishonesty (e.g., plagiarism, cheating on examinations, obtaining unfair advantage, and falsification of records and official documents) as serious offenses against the values of intellectual honesty. The College is committed to enforcing the CUNY policy on academic integrity and will pursue cases of Academic Dishonesty according to the Hunter Academic Integrity Procedures. Please see the Hunter College Catalog for the college's policies on academic dishonesty and plagiarism, which will be adhered to in class.

Student Services

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