

Department of Fisheries and Wildlife, College of Agriculture and Natural Sciences

FW 480 v1 Southern African Ecology

Part 1: Course Information

Instructor Information

MSU Instructor: Amber K. Peters, PhD

E-mail: peter420@msu.edu

she/her

Other instructors based in Africa:

Mike Job: mike@siyafundaconservation.com – Siyafunda Conservation

Elizke Gouws: info@runningwildconservation.org – Running Wild Conservation

Petronel Niewoudt: petronel@careforwild.co.za – Care for Wild

Dr. Calum Murie: calum@underwaterafrica.org – Underwater Africa

Pre departure and Post Internship meetings will be a combination of in person and remote based on student's need and availability.

Feel free to email me at peter420@msu.edu with questions and/or concerns. I will check emails at least once a day. Please include your name on all emails and **FW 480 in the subject**. Do not send the emails through D2L, use your MSU email.

Course Description

This course is primarily a field based experiential course which will explore distribution, abundance, biogeography, and biodiversity of organisms in Southern African ecosystems. Topics will include animal behavior, physiology, population dynamics, trophic interactions, and nutrient cycling.

Prerequisite

None

Textbook & Course Materials

- *No textbook is required for this course.*
- *All readings will be posted on D2L.*

Course Requirements

- Internet connection (DSL, LAN, or cable connection desirable)
- Access to *Desire2Learn* (D2L).
- Access to Zoom, ability to work on Word, Excel, Google Docs, PowerPoint
- Working webcam and microphone

Course Structure

The first two weeks of this course will be remote a mixture of in person and remote learning based on student availability. The field portion of the course will be completed at one or more of the four locations in Southern Africa. Students can choose which projects and locations they will use to build their internship and the duration of their internship. Upon return, the students will complete 2 more weeks of the course, either in person or remote to complete their paper, reflection, and presentation.

Technical Assistance

If you need technical assistance at any time during the course or to report a problem you can:

- Visit the [Desire2Learn Help Site \(https://help.d2l.msu.edu/\)](https://help.d2l.msu.edu/)
- Visit the [MSU IT Help & Support Site \(https://tech.msu.edu/support/help/\)](https://tech.msu.edu/support/help/), call (517) 432-6200 or toll free (844) 678-6200, or email ithelp@msu.edu

Resource Center for Persons with Disabilities (RCPD)

To make an appointment with a specialist, contact (517) 353-9642 or TTY: (517) 355-1293

- RCPD Get Started Info: <https://www.rcpd.msu.edu/get-started>

Part 2: Course Objectives and Learning Outcomes

Learning how organisms behave, what impacts their population sizes, and how species interact with each other are critical components to understanding how ecosystems function. This course will expose students to the major themes in ecology and then allow students to do hands-on field research in the highly diverse and productive ecosystems of Southern Africa. Finally, students will complete the course with reflection and synthesis of their experiences in Southern Africa with their course work and future career goals.

In this class, we will explore the ecology of Southern African ecosystem.

The primary learning objectives for this course are:

- Analyze animal behavior with respect to increasing individual fitness
- Model population changes based on abiotic and biotic factors and using ecological equations
- Evaluate and create models of trophic interactions and other interspecific interactions that impact ecosystems
- Explain the movement of carbon, nitrogen as it cycles through the ecosystem and how these cycle impact
- Train students with hands-on techniques used by ecologists to study, track, and monitor organisms and populations

Learning outcomes:

By successfully completing this course, you should be able to

- Describe the general principles which govern ecosystem interactions and provide specific examples from Southern Africa
- Identify common organism and their taxonomy
- Explain animal behavior and how it relates to physiological requirements, consumption, predation, and reproduction.
- Use a variety of field techniques to gather data which can be used to address ecological questions

- Use proper techniques to approach and handle wildlife when appropriate
- Communicate ecological ideas and principles to a wide variety of community members and other biologists

You will meet the objectives listed above through a combination of the following activities in this course:

Preparing for the experiential learning portion of the course with readings and mini-lectures before departure. These sessions will also include organism identification, natural history, and biogeography of the area.

Working with wildlife biologists in African ecosystem to study, monitor, track, collect data, and handle wild organisms. The majority of the learning will be done in the field with some preparatory meetings done on. Completion of a reflective journal during this portion of the course will also help meet the learning objectives.

Completing a paper, and creating and delivering a presentation once students have returned from Africa will complete these objectives.

MSU Fisheries and Wildlife Undergraduate Learning Goals:

Below are the learning goals of the Fisheries and Wildlife department for all undergraduates.

Goal 1: Students will be able to apply knowledge of complex socio-ecological systems to develop, implement, and evaluate natural resource management strategies.

Goal 2: Students will understand the range of social values and philosophies that can be applied to natural resource management and possess a professional perspective that recognizes and integrates this range of philosophies into a science-based approach to management.

Goal 3: Students will have broad scientific knowledge from a variety of disciplines necessary to form the foundation for more advanced science-based courses.

Goal 4: Students will value science as a basis for problem solving in natural resource management, be able to apply scientific processes and knowledge to professional decision-making, and have a foundation to become an effective contributor to science-based resource knowledge.

Goal 5: Students will be able to think quantitatively and apply quantitative tools to answer natural resource management and research questions.

Goal 6: Students will be aware of a suite of field, laboratory, and computer-based techniques for studying and managing natural resource systems and will be able to use and apply those techniques appropriate to the student's specific career interests.

Goal 7: Students will be able to effectively communicate with a diversity of audiences.

Part 3: Course Outline/Schedule

- **Pre-Departure**
- **Week 01:** Discussion of ecological principles with 4 mini-lectures
Readings about Southern African Ecosystems and relevant current research
Discussion of biogeography and biodiversity of the area
- **Week 02:** Discussion of field techniques and wildlife handling
Readings about physiology and nutrition of organisms relevant to current projects
Discussion of the history and culture of the countries to be visited

- **Internship in Southern Africa**

Depending on each student's choice, this period can last from 2-12 weeks and include 1-4 different projects.

All students will begin each week with a safety talk and receive detailed training in properly completing field work in a safe and efficient manner.

Students generally have internship related activities 5 days a week from 6:30 am to 4:00 pm.

Activities each day will vary based on location and project and could include

Preparation of food and feeding

Checking camera traps

Recording data of organism location and activity

Taking digital photos of organisms for identification and tracking

Maintaining enclosures, roads, camps, and scientific equipment

Taking samples of water, scat, skin, body tissue

Placing radio collars or tags on organisms

Checking vitals of organisms

Monitoring sick animals and administering medicine

Assessing health of corals, mangroves, or other primary producers

Prepare and analyze scientific samples

Engage with the local community

Students will be expected to keep a journal during their internship and check in at least once a week with Dr. Peters to monitor their learning and overall experience.

- **Post Internship**
- **Week 01:** *Finalize topic of paper and presentation.*
Discuss how their internship impacted their future program of study and career objectives
- **Week 02:** *Completion of paper and delivery of presentation*
Discuss how their internship relates to other course work at MSU
Oral final examination to assess learning goals and objectives

Part 4: Grading Policy

Grades will be assigned based on the following

Pre-departure: 20%

Completes readings and assignments from mini-lectures to show appropriate background knowledge before departure.

Shows engagement and participation with Dr. Peters and fellow interns during discussions and classroom sessions.

Internship: 60%

Completes activities expected of interns each day.

Shows engagement and dedication to learning field techniques and scientific data collection.

Maintains a positive mindset and communicates well with the team and staff

Participates with community outreach activities.

Maintains weekly contact with Dr. Peters and completes journaling activity.

Post Internship 20%

Completes final paper and final project.

Engages in discussions about internship impact.

Grade Point	Percentage	Performance
4.0	92 to 100%	Excellent Work
3.5	86 to 91%	Above average
3.0	80 to 85%	Good Work
2.5	75 to 79%	Mostly Good Work
2.0	70 to 74%	Average work
1.5	65-69%	Below average work
1.0	60 to 64%	Poor work
0	0 to 59%	Failing work

Part 5: Course Policies

Diversity Equity and Inclusiveness

Diversity, Equity and Inclusion are important, interdependent components of everyday life in the College of Agriculture and Natural Resources (CANR) and are critical to our pursuit of academic excellence. Our aim is to foster a culture where every member of CANR feels valued, supported and inspired to achieve individual and common goals with an uncommon will. This includes providing opportunity and access for all people across differences of race, age, color, ethnicity, gender, sexual orientation, gender identity, gender expression, religion, national origin, migratory status, disability / abilities, political affiliation, veteran status and socioeconomic background. (See the full CANR statement: <https://www.canr.msu.edu/news/canr-statement-on-diversity-equity-and-inclusion>)

Commit to Integrity: Academic Honesty

Article 2.3.3 of the [Academic Freedom Report](#) states that "The student shares with the faculty the responsibility for maintaining the integrity of scholarship, grades, and professional standards." In addition, the (insert name of unit offering course) adheres to the policies on academic honesty as specified in General Student Regulations 1.0, Protection of Scholarship and Grades; the all-University Policy on Integrity of Scholarship and Grades; and Ordinance 17.00, Examinations. (See [Spartan Life: Student Handbook and Resource Guide](#) and/or the MSU Web site: www.msu.edu.)

Therefore, unless authorized by your instructor, you are expected to complete all course assignments, including homework, lab work, quizzes, tests and exams, without assistance from any source. You are expected to develop original work for this course; therefore, you may not submit course work you completed for another course to satisfy the requirements for this course. Also, you are not authorized to use the www.allmsu.com Web site to complete any course work in this course. Students who violate MSU academic integrity rules may receive a penalty grade, including a failing grade on the assignment or in the course. Contact your instructor if you are unsure about the appropriateness of your course work. (See also the [Academic Integrity](#) webpage.)

Inform Your Instructor of Any Accommodations Needed

From the Resource Center for Persons with Disabilities (RCPD): Michigan State University is committed to providing equal opportunity for participation in all programs, services and activities. Requests for accommodations by persons with disabilities may be made by contacting the Resource Center for Persons with Disabilities at 517-884-RCPD or on the web at rcpd.msu.edu. Once your eligibility for an accommodation has been determined, you will be issued a Verified Individual Services Accommodation ("VISA") form. Please present this form to me at the start of the term and/or two weeks prior to the accommodation date (test, project, etc.). Requests received after this date may not be honored.

Participation and Engagement

During all classes, the instructor expects students to be fully engaged and prepared to discuss reading assignments. Students are encouraged to ask questions of the instructor, guest speakers, and their peers.

Active participation includes, but is not limited to, the following behaviors:

1. Asking and answering questions of the instructors, peers, or guest speakers
2. Bringing forth new ideas, information, or perspectives to academic conversations
3. Discussing your readings and reflections with instructors and peers
4. Meeting with the instructors to discuss your interests, assignments, or project
5. Questioning information presented and discussed
6. Participating in small group discussions and activities
7. Assuming responsibility for personal behavior and learning

While working on group projects, students should be mindful of other students in their group; therefore, it is important for all participants to exercise:

- Respect for themselves, each other
- Openness and a positive attitude toward new ideas and other's ideas
- Flexibility and tolerance of ambiguity
- Good communications amongst themselves.

Complete Assignments

Assignments for this course will be submitted electronically through *D2L* unless otherwise instructed. Assignments must be submitted by the given deadline or special permission must be requested from instructor before the due date. Extensions will not be given beyond the next assignment except under extreme circumstances.

All discussion assignments must be completed by the assignment due date and time. Late or missing discussion assignments will affect the student's grade.

PART 6: GENERAL COLLEGE AND UNIVERSITY POLICIES

All other general college and university policies applicable to this course are available at <https://www.canr.msu.edu/academics/courses/policies> . Please review these policies.

Topics covered in these general policies include:

- Students with disabilities, Resource Center for Persons with Disabilities (RCPD) and accommodations
- Student rights under the family educational rights and privacy act (FERPA)
 - Student release authorization form
- Religious holiday policies
- Grief absence policies
- Students in distress policies
- MSU student athlete policies
- Course add-drop policies
- Honors options
- Course Management system policies
- Final exam policy and attendance
- Grade dispute policies
- Academic honesty and integrity, plagiarism, and disciplinary procedures
- Disruptive behavior
- Harassment and discrimination policies
- RVSM University reporting protocols
- Limits to confidentiality
- Social media policy
- Web accessibility policies
- MSU Code of Teaching Responsibility
- SIRS
- Commercialization of lecture notes
- University Learning Goals