

BIOL 417/517 Field Ecology: KENYA**3 Credit hours**

Instructor: Dr. Andrea Liebl, Churchill Haines 170A, 677-6180, Andrea.Liebl@usd.edu

Office Hours: By appointment

Course Description: This course emphasizes the development of hypotheses and implementation of research. Practical experience with sampling methodologies will be obtained during a major field trip. In addition, a research project will promote hypothesis conception, further research techniques, data analysis, presentation, and discussion skills.

Prerequisites: NONE

Text/ reading assignments: Readings from various texts and the primary literature will be assigned as appropriate. Required Texts for the trip TBA.

Course Webpage: Enrollment in the D2L site for BIOL 417/517 is required. Materials for the course, class announcements, and additional information will be on this site. All material should be downloaded before the course trip.

Course objectives: By the end of the course, you should be able to:

1. Identify a wide variety of organisms including mammals, birds, reptiles, and invertebrates.
2. Understand the basic physical and ecological forces structuring biotic communities in the study area.
3. Develop skills related to designing and implementing field studies
4. Understand the techniques used to sample natural communities and assess organismal response to environmental variation

COURSE POLICIES AND PROCEDURES**Course Expectations**

Attendance: You are expected to attend all indicated lectures and lab classes. Your inputs into class and lab discussions are important.

Punctuality: Please be on time. Repeated late arrival will adversely impact your course grade.

Class participation. You will be expected to actively participate in class. We will meet daily while in the field to discuss concepts related to the tropics, to conservation, and to field biology. This requires that you be familiar with material covered, complete reading assignments prior to class, and review lecture notes periodically. Active participation in the classroom and field trips are essential. Please ask questions about course material and/or reading assignments.

Field trips: We will be taking several day trips to different parks throughout Kenya. Details will be presented in class.

Reading: Readings may include excerpts from texts, primary journal articles and review articles taken from the current literature.

Exams: There will be no exam in this course, the bulk of your grade will be tied to your project and to course discussions.

Field Safety and Preparedness: Students are expected dress appropriately for the field including appropriate footwear, hats and raingear. A full list of appropriate items to bring will be provided ahead of time. Students must obey safety instructions by staff at all times.

Graduate credit (BIOL 517): Graduate student projects will be held to a higher standard and require a higher level of research design and statistical analysis. Students will also be required to present one discussion topic (of their choosing) in the course.

Calculation of course grade: Your grade depends only on how well you do in the class.

BIOL 417

Research project: Students will work in pairs to design and implement a research project of their choosing. Students will be expected to write a short proposal (~1 page) and draw out their experimental design with expected results. Following approval of the proposal, students will have three days to conduct the experiment. Upon return to the US, students will analyze their data (using ANOVA, t-tests, or similar), generate a poster presentation, and present their results to the rest of the class.

- a. Proposal: 50 points
- b. Experiment participation: 50 points
- c. Analysis and presentation of data: 50 points

Discussions: Students will be expected to participate in daily discussions about the field work and phenomena observed. To fully participate, students will be expected to complete assignments during field work (e.g. density estimates, point counts).

- a. Discussion participation: 50 points
- b. Assignments: 50 points

225-250 points is an A, 200-224 points is a B, 175-199 points is a C, 150-174 points is a D, and below that an F.

BIOL 517

Research project: Similar to BIOL 417, students enrolled in BIOL 517 will design and implement a research project of their choosing; however, students in BIOL 517 will design and conduct the experiment on their own. Further, students in BIOL 517 will be held to a higher standard and experiments should be more manipulative. Students will be expected to write a short proposal (~1 page) and draw out their experimental design with expected results. Finally, students enrolled in BIOL 517 will be asked to peer review other students proposals to give feedback to proposals generated by students in BIOL 417. Following approval of the proposal, students will have three days to conduct the experiment. Upon return to the US, students will analyze their data (students in BIOL 517 will be expected to use more sophisticated statistical analyses such as model analysis), generate a poster presentation, and present their results to the rest of the class.

- a. Proposal: 50 points
- b. Peer reviewing: 50 points

- c. Experiment participation: 50 points
- d. Analysis and presentation of data: 50 points

Discussions: Students will be expected to participate in daily discussions about the field work and phenomena observed. To fully participate, students will be expected to complete assignments during field work (e.g. density estimates, point counts). In addition, students enrolled in BIOL 517 will be expected to lead a discussion of their choosing.

- a. Discussion participation: 50 points
- b. Discussion leading: 50 points
- c. Assignments: 50 points

315-350 points is an A, 280-314 points is a B, 245-279 points is a C, 210-244 points is a D, and below that an F.

Academic Integrity

The College of Arts and Sciences considers plagiarism, cheating, and other forms of academic dishonesty inimical to the objectives of higher education. The College supports the imposition of penalties on students who engage in academic dishonesty, as defined in the “Conduct” section of the University of South Dakota Student Handbook.

No credit can be given for a dishonest assignment. A student found to have engaged in any form of academic dishonesty may, **at the discretion of the instructor**, be:

- a. Given a zero for that assignment.
- b. Allowed to rewrite and resubmit the assignment for credit.
- c. Assigned a reduced grade for the course.
- d. Dropped from the course.
- e. Failed in the course.

Cheating and plagiarism will not be tolerated in this course; learning to think independently is a large part of the educational and scientific process and one which will be upheld in this course.

To be clear, cheating is defined as: “Obtaining, attempting to obtain, or aiding another to obtain credit for work by dishonest or deceptive means.” Cheating includes:

- Copying another student’s exam
- Giving permission for another student to copy your exam
- Discussion at any time of answers or questions during an exam
- Taking or receiving copies of an exam
- Using or displaying unauthorized material (e.g. previously written notes (i.e. cheat sheets), calculators, concealed information)
- Using phones or electronic devices during an exam
- Allowing someone else to complete whole or part of an assignment for you (including exams)
- Submission of the same assignment for more than one course (including previous attempts of this course)

Plagiarism is defined as “the act of using the ideas or work of another person/s as if they were

your own without giving proper credit". Proper credit can be given through the use of quotes (for short statements, generally less than a few lines long and ONLY when you believe the original source is the only/best way to relay the information) or paraphrasing (WITH APPROPRIATE CITATIONS, either as in text notes, commentary, or footnotes). Plagiarism does not apply to common knowledge (e.g. the sky is blue), however does include:

- Submission of work, in whole or IN PART completed by another. An example would be submitting a previous lab report (or parts of) as your own.
- Failure to give credit for ideas, statements, or conclusions of another. An example would be coming to the same conclusion of a paper you read (after reading it) without citing that paper.
- Copying and pasting long swaths of information from another paper (EVEN IF YOU CITE IT!). In this case, the information NEEDS TO BE PARAPHRASED AND A CITATION USED (exception: if you are necessarily using a long quote from a source that cannot be paraphrased, then you use quotation marks AND cite it).

I reserve the right to prevent and monitor academic dishonesty by requiring assignments to be handed in via D2L (or similar) and using proctors or other means to monitor exams. Students caught engaging in academic dishonesty will be penalized.

Freedom in Learning

Under Board of Regents and University policy, student academic performance may be evaluated solely on an academic basis, not on opinions or conduct in matters unrelated to academic standards. Students should be free to take reasoned exception to the data or views offered in any course of study and to reserve judgment about matters of opinion, but they are responsible for learning the content of any course of study for which they are enrolled. Students who believe that an academic evaluation reflects prejudiced or capricious consideration of student opinions or conduct unrelated to academic standards should contact the dean of the college or school that offers the class to initiate a review of the evaluation.

Disability Accommodation

Any student who feels s/he may need academic accommodations or access accommodations based on the impact of a documented disability should contact and register with Disability Services during the first week of class or as soon as possible after the diagnosis of a disability. Disability Services is the official office to assist students through the process of disability verification and coordination of appropriate and reasonable accommodations. Students currently registered with Disability Services must obtain a new accommodation memo each semester.

Please note: if your home institution is not the University of South Dakota but one of the other South Dakota Board of Regents institutions (e.g., SDSU, SDSMT, BHSU, NSU, DSU), you should work with the disability services coordinator at your home institution.

Disability Services
Service Center North, R119B
(605) 677-6389
Web Site: www.usd.edu/ds
E-mail: disabilityservices@usd.edu

Diversity and Inclusive Excellence

The University of South Dakota strives to foster a globally inclusive learning environment where opportunities are provided for diversity to be recognized and respected. To learn more about USD's diversity and inclusiveness initiatives, please visit the website for the Office of Diversity.

TENTATIVE Course Schedule (flexibility is IMPERATIVE when travelling internationally)

Date	Activities
May 14	Arrive in Nairobi (evening) Overnight in Nairobi
May 15	AM: Giraffe or Elephant Conservation Center PM: Talk at Museum Overnight in Nairobi
May 16	AM: Drive to Aberdares PM: Forest walk; biodiversity survey; discussion Overnight in Aberdares area
May 17	Game drive, Aberdares NP; point counts Overnight in Aberdares area
May 18	AM: Drive to Ol'Pejeta Conservancy PM: Game drive with Night Game Drive; point counts Overnight in Ol'Pejeta
May 19	AM: Game Drive PM: white rhinos, chimps; discussion Overnight in Ol'Pejeta
May 20	AM: Drive to Samburu PM: Game drive; point counts; discussion Overnight in Samburu
May 21	AM: Game drive PM: Drive to Mt. Kenya Overnight in Mt Kenya area
May 22	Hike Mt Kenya (MET station or moorlands depending on fitness) Overnight in Mt Kenya area
May 23	AM: rest! PM: drive to Nakuru; discussion Overnight Nakuru area
May 24	AM: Menegai crater; project ideas PM: Game drive Nakuru National Park Overnight Nakuru area
May 25	AM: Game Drive Nakuru National Park PM: project ideas; discussion Overnight Nakuru area
May 26	Projects Overnight Nakuru area
May 27	Projects Overnight Nakuru area
May 28	AM: Finish projects PM: drive to Nairobi, Fly back to Omaha

Changes to the above schedule will be announced in class

Lecture hours- 15

Field trip hours- 30 (/2= 15)

Project development (PD) hours- 15

Presentations hours- 2

Total contact hours: 47