Population and Community Ecology (BIOL-35000-01)
Fall 2019 Syllabus

Dr. Jennifer L. Ison
[redacted]

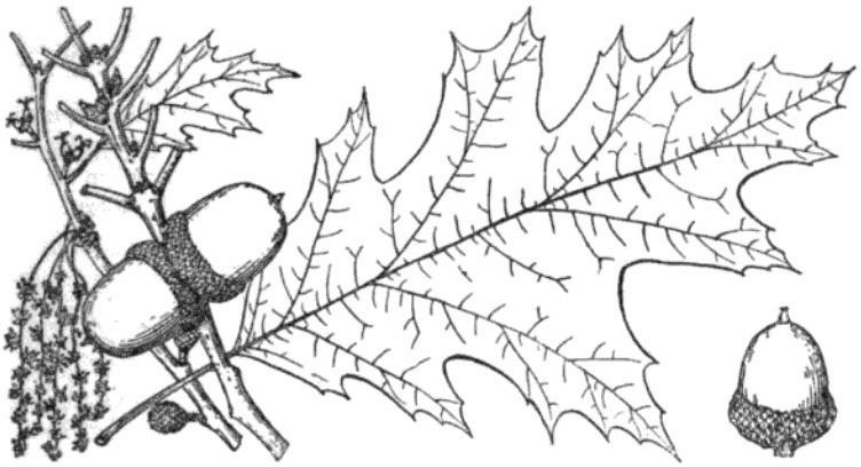
Time and location
Lecture: Tues. & Thur. 9:30-10:50 am, RWW 045
Lab: Mon. 1:00-3:50 pm, RWW 270 and field sites

Course TA: [redacted]

About this course:
Ecology is the scientific study of interactions between organisms and their environment. This course examines ecological principles as they apply to populations, communities, and ecosystems. These principles inform us about patterns and processes of the natural world and can provide us with insights into many of the environmental issues facing us today and in the future. Topics covered include population growth, competition, predation, community structure, nutrient cycling, and species diversity. Laboratory exercises emphasize experimental design and techniques used to investigate ecological questions.

Course objectives:
- Explain and apply foundational population and community ecology concepts.
- Assess ecological primary literature and synthesize information from articles with other ecological concepts.
- Design, execute, and communicate findings of ecological field experiments.
- Integrate ecological concepts with other biological fields and apply this knowledge to present and future ecological questions.

Course texts
Required textbook: Krohne. 2018. *Ecology*, 2nd edition
Additional readings will be posted on Moodle



***Tentative* class and lab schedule:** This schedule will likely change. The lab schedule is weather dependent and may change. For up-to-date information please refer to Moodle. All non-textbook readings will be posted on Moodle. Please remember, you are responsible for checking Moodle and staying up-to-date on readings and assignments if the schedule changes.

Date	General topic	Readings[t] and assignments
Th. Aug. 21	Introduction to course and Terrestrial biomes	
M. Aug. 26	Biomes: Brown's lake	Andreas 1985 & Lutz et al. 2007; Reading response
T. Aug. 27	Evolutionary ecology & adaptations*	
Th. Aug. 29	Adaptations to the physical environment	
M. Sept 2	Field observation: Campus	In-lab ABT presentation
T. Sept. 3	Spatial distribution & demography*	
Th. Sept. 5	Demography & pop growth	Poisson spatial distribution worksheet
M. Sept 9	Field sampling: Johnson Woods	TBD; Reading response
T. Sept. 10	Pop growth & paper discussion	Phillips 2009; Reading response
Th. Sept. 12	Life history strategies and trade-offs*	
M. Sept 16	Species interactions: Fern Valley	AoBP 2017; Reading response
T. Sept. 17	Trade-offs & exam review	
Th. Sept. 19	EXAM I	
M. Sept 23	Species interactions: Fern Valley	
T. Sept. 24	Small population biology*	
Th. Sept. 26	Small pop bio & paper discussion	Wootton & Pfister 2013; Reading response
M. Sept 30	Ecological research proposal: Campus	
T. Oct. 1	Competition*	
Th. Oct. 3	Competition & Lotka-Volterra workshop	FV research proposal
Oct 7-11	*FALL BREAK*	
M. Oct. 14	Ecological research project: Fern Valley	New-to-you ecologist presentations
T. Oct. 17	Mutualism*	
Th. Oct. 19	Mutualism & paper discussion	TBD; Reading response
M. Oct. 21	Ecological research project: Fern Valley	New-to-you ecologist presentations
T. Oct. 24	Exam review	
Th. Oct. 26	EXAM II	
M. Oct 28	Ecological research project: Fern Valley	New-to-you ecologist presentations
T. Oct. 29	Predation*	
Th. Oct. 31	Predation & paper discussion	Douglas *et al.* 2008
M. Nov. 4	Service lab: MSNP	FV paper first submission
T. Nov. 5	Community structure*	
Th. Nov. 7	In-class peer review workshop	FV peer-reviews

* open note reading quiz

[t] textbook reading assignments are posted on Moodle

Date	General topic	Readings[t] and assignments
M. Nov. 11	Predation and foraging: Campus	
T. Nov. 12	Succession*	
Th. Nov. 14	Succession & biodiversity	
M. Nov. 18	Predation and foraging: Campus	FV final paper
T. Nov. 19	Biodiversity & paper discussion	Tilman *et al.* 2012; Reading response
Th. Nov. 21	Exam Review	
M. Nov. 25	Predation and foraging: Campus	
T. Nov. 28	EXAM III	
Th. Nov. 30	*THANKSGIVING BREAK*	
M. Dec. 2	Scientific communication: Campus	Foraging project presentation
T. Dec. 5	Biogeochemical cycles and energy flow*	
Th. Dec. 7	Biogeochemical cycles and energy flow	

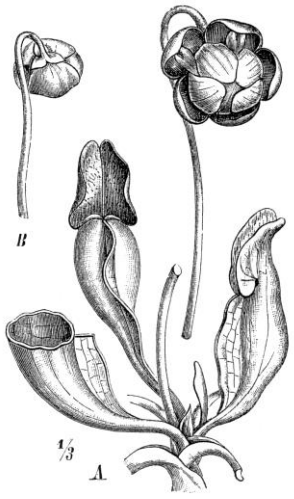
* open note reading quiz

[t] textbook reading assignments are posted on Moodle

FINAL EXAM: Wed. Dec. 11th 9 am

Grade components. The italicized items are class assignments and exams where *you* get to decide how much you would like them to count towards your final grade (see first-day questionnaire).

Item	Percentage of final grade (different for each student)
In class exams:	
Exams x3 (10-15% each)	*30-45%*
Synthesis final exam	*15-25%*
Quizzes, reading responses, and other assignments	10%
Fern Valley group project	5%
Fern Valley individual lab report	*10-20%*
Campus research presentation & project	7%
Engagement and professionalism	3%



Grading scale:

A = 100-93% A- = 93-90%
B+ = 89-87% B = 87-83% B- = 83-80%
C+ = 79-77% C = 77-73% C- = 73-70%
D = 69- 60%
F < 60%

General course information

Please check your COW email and the course Moodle page daily for new announcements or reminders. You are responsible for staying up to date with all information that I announce through Moodle and over email.

Missed and late exams, quizzes, and assignments: Make-up exams will only be given with a letter from a doctor or the Dean of Students. You must contact me BEFORE the scheduled exam or as soon as possible afterwards if it is a medical emergency; be prepared to make-up the exam as soon as possible. Missing an exam without an excused and documented absence will result in you receiving zero points for the exam. In-class reading quizzes will be on most Tuesdays. Make-up quizzes will not be possible, but I will drop your lowest quiz grade. All assignments turned in late will lose **10%** of the total points **each day** unless there are extenuating circumstances, which can be verified.

General course information continued

Re-grade policy: If you believe that an error has been made in grading your course work please contact me within a week from the date the assignment was returned to you.

Class etiquette: Cell phones must remain on silent and unused during lecture and lab. Laptop use in lecture is by permission of instructor only. No tobacco in class. Drinks in spill-proof containers are okay. As a general rule, no food in class (exceptions can be made, especially during long outdoor labs).

Dressing and preparing for outdoor labs: You need to come to lab ready to be out in the field. This means you must be wearing either hiking boots or tennis shoes. Wear old clothes that you will not mind when they get dirty (because they will get dirty!). Many field sites will have insects including mosquitoes, bees, and ticks. The field sites often have poison ivy, therefore, you must wear long pants. You are responsible for checking the weather before lab and dressing appropriately. We will have lab outside even in the rain or snow. For lab please bring a bag or backpack with 1) your lab notebook and a pencil 2) sunscreen 3) water bottle and 4) other weather gear (e.g. umbrella, coat, hat). If you would like to wear bug repellent please do not spray the repellent until we get to the field site. There will be a lot of us per vehicle and it will make for a more pleasant trip if you wait. All your lab and field work needs to be recorded in your lab notebook. This notebook will be outside, probably in rain, and needs to be high quality notebook with a hard cover. It is your responsibility to keep track of your notebook.

***** Please inform me if you have any medical conditions that could arise during a lab (e.g. bee/nut allergies).*****

Class and lab attendance: There is no attendance policy for the lecture portion of this course as this is an upper level course and you are expected to attend all lectures. If you are chronically absent, I reserve the right to deduct points. If you have to miss class due to a college-sanctioned event or an extenuating circumstance, please inform me a week ahead of time. You are responsible for all of the material missed, and assignments must be submitted before the deadline to avoid late penalties. Although I would rather you show up late than not at all, tardiness is highly disruptive to the class. If you are chronically tardy, I reserve the right to deduct points. Many of the labs are group research projects and it is important to attend all labs. Therefore, there is a strict attendance policy for lab; you will fail the course if you have 2 unexcused absences for lab. You must also be on time for lab. Many labs will take place off-campus, and we will not wait for a tardy student. If you miss the bus/car, then you have missed lab, and it will count as an unexcused absence.

The Learning Center – APEX: The Learning Center, which is in APEX (Gault library) offers a variety of academic support services, programs and 1:1 meetings available to all students. Popular areas of support include time management techniques, class preparation tips and test taking strategies. In addition, the Learning Center coordinates peer-tutoring for several academic departments. Students are encouraged to schedule an appointment at the APEX front desk or visit the Learning Center Website for additional options.

An additional support that the Learning Center offers is English Language Learning. Students can receive instruction or support with English grammar, sentence structure, writing, reading comprehension, reading speed, vocabulary, listening comprehension, speaking fluency, pronunciation, and American culture through 1:1 meetings with the Learning Center staff, ELL Peer Tutoring, ELL Writing Studio courses, and other programming offered throughout the year. Students seeking ELL support are encouraged to visit the APEX front desk.

The Learning Center also coordinates accommodations for students with diagnosed disabilities. At the beginning of the semester, students should contact the Learning Center [redacted] to make arrangements for securing appropriate accommodations. Although the Learning Center will notify professors of students with documented disabilities and the approved accommodations, students are encouraged to speak with professors during the first week of each semester. If a student does not request accommodations or does not provide documentation to the Learning Center, faculty are under no obligation to provide accommodations.

General course information continued

Title IX reporting policy: The College of Wooster is committed to fostering a campus community based on respect and nonviolence. In accordance with Title IX, Wooster is legally obligated to investigate incidents of sexual harassment and sexual assault that occur on our campus. Faculty who become aware of any incident of sexual violence (including harassment, rape, sexual assault, relationship violence, or stalking) are required by law to notify Wooster's Title IX Coordinator. For more information about your rights and reporting options at Wooster, including confidential and anonymous reporting options, please visit http://www.wooster.edu/offices/titleix/.

Academic Integrity: Each student in this course is expected to abide by the Code of Academic Integrity as printed in the Scots Key. I have a zero tolerance policy for academic dishonesty, including plagiarism and cheating. Because laboratory exercises often involve group work and group study sessions can be useful, you are encouraged to study with other students to discuss information and concepts covered in class. ***However, any work submitted by a student in this course for academic credit must be the student's own work***. Penalty for violation of this Code may result in no credit for the assignment, failure of the course, and/or disciplinary action by the College. Here are some specific *examples* (not an exhaustive list!) of academic dishonesty:

- Copying another student's assignment – either a current or past student.
- Collaborating with another student on a homework assignment without express permission from me.
- Paraphrasing/copying any text from any resource without providing a reference.
- Extensive paraphrasing/copying of text from any resource (even if you provide a reference).
- Turning in the same assignment to multiple courses, in the same or different semesters, without prior consent from both professors