

Syllabus for Ecology 370 W2013

Personnel and office hours

Professor: Dr. Bitty Roy

Lecture: in LA 166 from 11-11:50 M/W/F

Office Hour: 1-2 on Wednesdays and by appointment

Room 461b Onyx Bridge (enter 461 and go through a pocket door to the left)

Tel. 346-4520

E-mail: bit@uoregon.edu *Please use 370 in the subject header*

Graduate Teaching Assistants:

1. Tobias Policha, tpolicha@uoregon.edu, office hour Friday 10-11, or by appointment, Place: 360 Onyx.
2. Jesse McAlpine, mcalpine@uoregon.edu. Jesse will only be helping with field trips and report grading. He will not be holding office hours.

Biology Undergraduate Assistants:

Robbie McNulty, rmcnulty@uoregon.edu; helping only with field trips, no office hours.

Neal deGhetaldi, deghetaldi@uoregon.edu; helping only with field trips, no office hours.

Required Materials

1. Textbook: Cain, M. L., W. D. Bowman, S. D. Hacker. 2011. Ecology, 2nd Edition. Sinauer Associates.
2. Field trip supplies: write-in-the-rain notebook and pencils (need by first Friday of class).
3. SimUText on Life histories. The license for this should have been with the textbook at the bookstore. You are only being charged for the Life History chapter. As an “extra” the company threw in a module on Ecosystems, which I encourage you to explore. Information on how to access this material will be emailed to you.
4. JMP Computer program, for statistical analysis. This program is available FREE to UO students by going to this website: <https://it.uoregon.edu/software/jmp> and then clicking on “Login to view available downloads” at the bottom of the page. Choose the software that fits your operating system. If you have difficulty downloading or getting the software running, contact the IT helpdesk in 151 McKenzie Hall; you can reach them in person, by telephone 541-346-4357, or by email at helpdesk@uoregon.edu.

If you do not have your own computer, JMP is installed on the computers in the Microcomputer lab in the basement of Klamath (KLA B13).

5. Blackboard will contain some additional readings and the data from the fieldtrips will be posted there.

Course Objectives

Ecology is the study of how organisms interact with each other and their environment at the population, community, and ecosystem levels. Through the lectures, exercises, field trips, reports and readings you will:

1. Gain an appreciation for the broad biological significance of ecological knowledge and theory.
2. Gain an understanding of the questions that ecologists' study, the methods used, and the questions that remain unanswered.
3. Develop your ability to apply quantitative skills to collect, analyze and interpret ecological data.

SYLLABUS

Wk	Mo	Day	Day	Lect	Topic	Homework	Pages
1	Jan	Mon	7	1	Introduction	Ch 1 The Web of Life	2-18
	Jan	Wed	9	2	Prep for Friday's fieldtrip	Ch 4 water and temperature	81-105
	Jan	Fri	11	trip	Field trip Cemetery lichens	Ch. 14 Mutualism	305-322
2	Jan	Mon	14	3	Parasitism and Mutualism	Ch. 13 Parasitism	283-302
	Jan	Wed	16	4	Parasitism-Forest Disease	Ch 6 Evol & Ecol	132-153
	Jan	Fri	18	5	Preparation for Dorena	Cemetery report due	
	Jan	Sat	19	trip	Dorena Field trip 10-4	write methods, read about rusts	blackboard readings
3	Jan	Mon	21	holiday	MLK Holiday	Read materials on blackboard	blackboard readings
	Jan	Wed	23	6	Correlation & Regression	work on analysis	
	Jan	Fri	25	7	ANOVA, report writing	finish report	
4	Jan	Mon	28	8	Disc of Dorena	Dorena report due	
	Jan	Wed	30	9	Life Histories	SimUtext	SimUtext Life Hist. Sections 1 & 2
	Feb	Fri	1	10	Life Tables and demography	SimUtext	SimUtext Life Hist. Section 3
5	Feb	Mon	4	11	Tests of C-S-R model	SimUtext	SimUtext Life Hist. Section 4
	Feb	Wed	6	exam	Mid-term exam		
	Feb	Fri	8	12	Community Structure	Ch. 15 Nature of Communities	324-342
6	Feb	Mon	11	13	Community Dynamics	Ch 16 Change in communities	343-363
	Feb	Wed	13	14	Coast trip prep-organisms		blackboard readings
	Feb	Fri	15	15	Coast trip prep-logistics	Ch. 18 species Diversity	388-408
	Feb	Sat	16	trip	Coast Trip	8 to 9	
	Feb	Sun	17	trip	Coast Trip	8 to 3:30	
7	Feb	Mon	18	16	Metapopulations	Ch. 8 Distr and abundance & write 3 methods	177-198, 234-236
	Feb	Wed	20	17	Biogeography	Ch. 17 Biogeography	364-387
	Feb	Fri	22	18	Physiological ecology	Ch 5 energy	106-131
8	Feb	Mon	25	19	Ecosystem Services	Ch. 19 Production Dunes report due;	410-429 Optional: SimUtext

							Ecosystems
	Feb	Wed	27	20	Climate	Ch. 2 climate	22-48
	Mar	Fri	1	21	Climate Change Experiments		532-539
9	Mar	Mon	4	22	Nutrients and soils	Ch. 21 Nutrient supply	452-473
	Mar	Wed	6	23	Discussion of mudflat data	Mudflat Report due	
	Mar	Fri	8	24	Tragedy of the common	Ch. 22 Conservation biology	476-500
10	Mar	Mon	11	25	Fire on the Mountain	Ch. 23 Landscape and Ecosystem	501-524
	Mar	Wed	13	26	Discussion of boat basin	Boat Basin Report due	
	Mar	Fri	15	27	Overview		
	Mar	Fri	22	exam	Final exam		

Course Format

Lectures are Monday, Wednesday and Friday, 11:00-11:50 in room LA 166

You should do the assigned readings before coming to the lectures. It is likely that at least one clicker question for each lecture will concern material from the reading that is due that day. I will try to post on Blackboard a pdf of the powerpoint file of a lecture before each lecture (this is the first time I have taught this course, so there are no lectures prepared and there may be times when I don't get them posted before class). You are welcome to print my pdfs as an aid to note taking. The powerpoint slides will provide an outline of the lecture, spelling of technical words, diagrams, illustrations, etc. They will not contain all the lecture material, or even most of it, so viewing the powerpoint files cannot replace lecture attendance.

Clickers (Personal Response Systems) Similar to the Intro Bio series, clickers will be used in almost every class. Clickers encourage participation and provide immediate feedback for everyone. Each student is expected to purchase a clicker for use in this class. You will need to register your clicker on the course blackboard site. If you've already registered your clicker *this term*, for another class, then you don't need to register it again. Questions during lecture that require clickers will be multiple choice. The number of points per question may vary, but the score will always include points for participating, even if you got it wrong. For example, 5 points for correct answer, 2 points for incorrect answer.

Field Trips

There are three **required** field trips:

Friday Jan 11 (Pioneer Cemetery) during class, 11-11:50. MEET at the edge of the Cemetery that is closest to 13th, on University Avenue at 11am sharp.

Saturday Jan 19th (Dorena Genetic Resource Center, USDA Forest Service). Half of you will be going from 10-1:30 and the other half from 12:30-4pm. You will be randomly assigned to the time slot, but if you have a reasonable conflict, let me know and I will switch you with someone. Field trip Meeting Place: Parking lot behind Onyx Bridge, directly behind the science library entrance. Be prompt. We will leave exactly on time.

Saturday Feb 16th AND Sunday Feb 17th (Coast). We will leave Eugene at 8 in the morning on Saturday and will return to Eugene on Sunday at approximately 3:30. Field trip Meeting Place: Parking lot behind Onyx Bridge, directly behind the science library entrance. Be prompt. We will leave exactly on time. We will be staying at the Marine lab near Charleston. They have beds for you and will be serving us all our meals.

Bring a snack, water to drink, your write-in-the-rain field book, and a cm ruler. A hand lens is optional but very nice to have.

Clothing for field trips: Wear long pants (for warmth & poison oak), bring a rain jacket (you will be miserable without it), warm hat, gloves, sweater or jacket for under the raincoat, umbrella (handy for writing under and they do keep you dry), and rainpants are strongly recommended (if you don't have any, bring extra dry pants with you). For shoes rubber boots are **STRONGLY** recommended. If you don't own rubber boots, tennis shoes with plastic bags over your socks and extra dry socks will work better than other alternatives, especially in the mudflats. Bring dry clothing with you to leave on the bus for changing into later. Bring sunscreen just in case.

Field Reports A major goal of this class is to make you comfortable with data, from collection to analysis to written presentation. The five reports that you will turn in constitute 50% of your grade for the class. Please see the handout on how to write these.

Exams will cover subjects and vocabulary presented in the readings, lecture, fieldtrips and other assignments. You are expected to know what is in the assigned reading, even if we don't cover that material during a lecture or fieldtrip. Questions may be multiple choice, short essay, fill in the blank, or true/false format. The final exam will be cumulative.

Grading:

Clicker Questions	10%
Cemetery Lichen Report	10%
Dorena Tree Disease Report	10%
SimU Life Table exercise	10%
Dunes Report	10%
Mudflat Report	10%
Boat Basin Report	10%
Field trip attendance is MANDATORY and there are NO MAKEUPS . If you miss a trip, your report grades will automatically be one full grade lower (10%) than the grade it would otherwise have earned. Note that if you miss the coast trip, this means reduced grades on 30% of the total.	
Mid-term Exam	15%

Final Exam	15%
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Grade	%
A	90+%
B	80+%
C	70+%
D	60+%
F	0-59

STUDENTS WITH SPECIAL NEEDS

At this University we do our best to support students with special needs. If you have special needs, such as test accommodations, note-taking, and sign language interpretation, please contact Disability Services so that their personnel and I can work together to help you learn comfortably in this class. The Disability Services office is located in 164 Oregon Hall. Telephone 541 346-1155. TTY: 541 346-1083. Fax 541 346-6013. On the web: <http://ds.uoregon.edu>. E-mail: disabsrv@uoregon.edu

If English is your second language and you find understanding my speech difficult, please contact me. I may be able to help you (I too have lived in countries in which I was not native, and have had to function in other languages).

MISCELLANEOUS COURSE POLICIES:

While this is a biology class, and not a class in ethics, policy, or economics, some of the material we will be discussing may touch on these other areas. Differing opinions are welcomed in this class, and no student will be graded (up or down) on his or her opinion on such matters. However, opinions must be expressed politely and no *ad hominem* comments will be permitted. (*Ad hominem* argument: one that addresses another person's personal traits rather than the subject matter.)

If you miss a class, it is your responsibility to contact a classmate to get lecture notes.

There are NO MAKE UP EXAMS, except for genuine **Emergencies and crises**. When crises do occur, especially medical ones, I will work with you to make arrangements and accommodations. I don't ever want anyone lying in a hospital bed worrying about his or her ecology class! Documentation may be requested.

I expect students to maintain high standards of academic integrity during my classes, and they nearly always do. Penalties for cheating range from receiving a zero score on the relevant test, quiz or exercise to receiving an F grade in the class. The student conduct code can be found at:

<http://studentlife.uoregon.edu/LinkClick.aspx?fileticket=puLfAzFDbsg%3D&tabid=69>

Electronic devices (computer, cell phones, graphing calculators, PDA's, electronic game, radio, CD player, etc.) may not be used during a quiz or test. Any electronic device used during a test will be confiscated.

Cell phones should be turned off or the ringers silenced during class. If you need to take a call during class (other than during a quiz or test), leave class, deal with the call in the lobby (not near the classroom door), and return when finished. If you must take a call during a test or quiz, turn in the test or quiz when you are finished with it. Then take the call.