

Biology 116 – Introductory Ecology -- Fall 2007
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Both lecture and lab will occur in Room 102
Tentative Schedule and Reading Assignments

<u>Week</u>	<u>Topic</u>	<u>Chapter</u>	<u>Lab #</u>
Sep 7	Introduction to course, ecology & science methodology	WS 1	#1
10	Taxonomy, complexity, biodiversity & interdependence Spatial Scale	WS 2 & 3	# 2
17	Biogeochemical cycles, food webs & food chains Photosynthesis/respiration & energy transfers/efficiency	WS 4	# 3
24	Hydrological cycle, variations in physical environment Biomes	WS 5	# 4
Oct 1	TEST #1 (at lab # 5 time) Soil & decomposers	WS 1-5	# 5
8	Introduced species, evolution & coevolution	WS 6, 7, 8, 9 WW 5	# 6
15	Evolution, coevolution, & adaptations (19 October, no class: fall break)	WS 11	# 7
22	TEST #2 (at lab # 8 time) Conservation/preservation	WS 6-9 & 11; WW 5	# 8
29	Succession, habitat change, scale, endangered species, values, & ethics	WS 10; WW 1,2,3 & 4 WS 12, 13 & afterword	# 9
Nov 5	Populations & communities	WW 6	# 10
12	TEST #3 (at lab # 11 time) Island biogeography	WS 10, 12,13 & a; WW 1-4 & 6	# 11
19	Extinction & conservation (23 November, no class: holiday – there will also be no class on the 21 st)	WW 8, 9 & 10	none
26	Conservation strategies (26 November there will be no class, lab meets on Tuesday)	WW 11 & 12	#12
Dec 3	Economic development & preservation		# 13
11	FINAL EXAM: 8 to 9:50 (Tuesday)	Comprehensive	

TEXTS: Wild Solutions (WS) 2004 (2nd Edition) by Andrew Beattie and Paul Ehrlich
Win-Win Ecology (WW) 2003 by Michael Rosenzweig

SUPPLEMENTAL TEXTS: (ON RESERVE IN LIBRARY):

The Economy of Nature by Robert E. Ricklefs, 5th Edition, 2001.
Ecology: Concepts and Applications by Manuel Molles, 4th Edition. 2008.

TESTS: There are three hourly tests scheduled for: Tuesday, 2 October
Tuesday, 23 October
Tuesday, 13 November

All 3 hourly tests will occur during the laboratory time and place. There are no make-up tests. You MUST notify me during the first week of class if you have a university-sponsored conflict with any of these dates. The final exam, which is comprehensive but with emphasis on chapters 8 to 12 of WW: Win-Win Ecology and chapters 12 –13 & afterword of WS: Wild Solutions is scheduled for the morning of 11 December.

DROP-IN HOURS: My office drop-in hours are posted on my office door (Room 143): 10:30 to 11:30 on Monday, Wednesday and Friday and from 2:00 to 4:00 on Monday. If you have questions, feel free to drop by my office during the informal drop-in times. You are also welcome to set an appointment to see me at a time that is mutually convenient. You are also welcome to email me. If you send me an email, please be sure that BIOL 116 is in the subject line. If you have an emergency that affects your class participation, you may call me at home, (761-7773); but please do not call after 10 pm.

GRADES: It is suggested that each of the 3 hourly tests be worth 15 % of your grade for a total of 45%. Because the final exam is comprehensive, it represents 25% of your final grade. Written lab reports will count for 20% of your grade and writing assignments during the semester will total 10%. Final grades will be assigned on a 10-point scale at least as favorable as: 90% is an A-; 80% is a B-; etc. The grade of A demonstrates a superior competency of the material, excellent application of ecological principles, integration of lecture/lab/reading information, and a completion of all assignments. A grade of B is earned by a student who has demonstrated a solid understanding and application of the terms and concepts, with some integration and application. The grade of C typically indicates that a student has completed most or all of the assignments but fails to demonstrate full understanding and application of the materials. The course has no attendance requirement; however, since the emphasis of the tests and final exam is on the material covered during lecture and laboratory, attendance is important. Laboratory reports/analyses and written assignments may be part of each test/exam. Because this is a course in science and scientific methods, in order to receive credit for any laboratory report, you must have been present for that particular laboratory activity. During the semester some lab activities will occur during the lecture time period. Some tests/exams may also include special take-home writing assignments.

SPECIAL ACCOMODATIONS: If you need course adaptations or accommodations because of a disability, if you have emergency medical information to share with me, or if you need special arrangements in case the building must be evacuated, please make an appointment with me immediately. Remember, you are responsible for notifying me of any conditions that may impair your academic performance. If you have questions concerning the services available for students with disability at PLU, please contact Ms. Ruth Tweeten in Ramstad 106 or call x7206.

COURSE OBJECTIVES: Through lectures, readings, and laboratory experiences, it is intended that students will grasp the fundamental concepts that shape ecological relationships. This course emphasizes the understanding of scientific reasoning, the interpretation of data, and the relationships in the natural world. The course is designed specifically for non-science majors and to fulfill the “Environment and Society” requirement for Environmental Studies. PLU’s Integrated Learning Objectives are designed to provide a common understanding of how learning at PLU is targeted. Because they are integrative in nature, no one course deals with all the learning objectives equally. There are five: critical reflection, expression, interaction with others, valuing, and multiple frameworks. Among these, we will identify issues and problems facing people in every culture (including our own) seeking constructive strategies for addressing them; develop a habit of caring for oneself, for others, and for the environment; select sources of information using appropriate research methods; and communicate clearly and effectively.

LABS: The father of modern zoology – Louis Agassiz -- said, “Study nature, not books!” While one still needs to read a text, it is important to study life and the physical environment to understand ecology. Our labs will provide many activities for following the advice of Professor Agassiz. As a science course, the laboratories help one learn how scientists ask questions, formulate hypotheses, and investigate knowledge. You should read the appropriate laboratory exercise before arriving in lab and the relevant assigned readings so that you will be prepared to begin the lab activity. Good science is repeatable, and therefore you should be observant and careful to record the conditions and variables that could affect your results so that others might duplicate your experiment. Most labs will be accompanied by a worksheet/report that you should complete. You may find it helpful to complete some of the questions outside of the lab period. Each test/exam will include material that relates to labs. In some cases, the questions will be the same as those found on the worksheets. In order to submit a lab worksheet/report for a grade, you must have

attended that laboratory session. To complete the questions on the worksheet/report, you may work with your fellow students when the activity is group-oriented, consult your textbooks, or ask the professor, lab assistant, or academic assistance tutors for help – but the analysis and wording of your answers on the lab worksheet/report must be entirely your own individual work. Sharing analyses, graphs, or answers and even looking or reading another student’s answers are examples of academic dishonesty. Writing assignments are to be completed by you alone (or with consultation with the professor). Discussing your writing assignments outside of class time with another student is an example of academic dishonesty. You may view PLU’s Academic Integrity Policy on the web at <http://www.plu.edu/academics/integ.html>

The weather may affect our laboratory schedule, but generally speaking field trips during the laboratory period will occur regardless of weather. Therefore, each Tuesday you should be prepared to venture outside. If you are not dressed appropriately, you will be asked to go home, instead of attending lab. No sandals or open-toed shoes are appropriate in the laboratory or the field. At no time may food or beverages be consumed in Room 102 – our classroom/laboratory.

Proposed Lab topics:

- 4 Sept. Lab # 1 Field trip on campus
- 11 Sept. Lab # 2 Diversity and sampling
- 18 Sept. Lab # 3 Evapotranspiration under different conditions
- 25 Sept. Lab # 4 Leaf adaptations to modify water loss
- 2 Oct. Lab # 5 HOURLY TEST
- 9 Oct. Lab # 6 Leaf Litter Analyses/Genetics & inheritance
- 16 Oct. Lab # 7 Soil Texture and Soil Profile Analyses
- 23 Oct. Lab # 8 HOURLY TEST (Allelopathy experiment during lecture time)
- 30 Oct. Lab # 9 Habitat Restoration (lab begins early; alternate dates or assignments available)
- 6 Nov. Lab # 10 Predator/Prey relationships
- 13 Nov. Lab # 11 HOURLY TEST
- 20 Nov. Thanksgiving Week (lab will not meet)
- 27 Nov. Lab # 12 Conservation biology & computer modeling
- 4 Dec. Lab # 13 Conservation biology & computer modeling

Please note: The lab on the 30th of October will begin at 1:45 and last until 5:25. We will be doing habitat restoration work at Puget Park in Tacoma. Transportation will be provided on that Tuesday. Because many have other classes immediately prior to our laboratory, there are two make-up sessions – both on a Saturday morning (November 3rd and November 10th). Directions to the park will be provided for those interested in either Saturday session. Realizing that some may not be able to participate in this activity, an alternate assignment – a written essay – will be available.

Labs will be corrected and assigned points from 1-5 based on the following grading rubric, which is identical to that of GEOS/ENVT 104. Grading of many writing assignments will also utilize this same rubric.

Grade	Expectations
5	Excellent work: exemplary effort, mastery of the material, shows insight & applications, integration of material into new situations
4	Very good work: correct completion of the exercise, some integration, clear communication, few minor errors
3	Good work: mostly complete or some errors, no integration
2	Fair work: major mistakes or gaps, communication problems
1	Poor work: a minimal effort, lots missing, many wrong answers
0	No work: nothing submitted