

Biology 306, Ecological Methods

Tentative Syllabus, Fall 2012

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Course description: Application of ecological methods in the field, laboratory analysis of data, and study and discussion of applied ecology.

Objectives: Become familiar with procedures for defining and designing ecological studies. Gain experience with methods and techniques for studying physical and chemical characteristics and biotic components of ecosystems. Practice collecting, summarizing, analyzing, and interpreting data. Discuss current ecological issues.

Text: Manual prepared principally by C.M. White, UWSP, and possibly reserve readings. Available for about \$5.00 in CNR 167. Bring the manual to every class.

Topics: (see Lab Manual)

Introduction and Planning a Scientific Study

Stream Analysis: physical, chemical, and biotic properties

Vegetation/habitat sampling and data analysis

Topographic Maps

Statistics in Biological Decisions

Population Ecology: demography, life tables, population growth and cycles, quadrat sampling, density, mark-recapture studies

Songbird Census

Diversity Indices

Conservation Biology

Attendance, Testing, and Grading: Attendance is mandatory (you will drop one whole course grade for each unexcused class meeting that you miss). Probably two exams (about 50-60 points on each exam); test format generally is short answer, brief essay, calculations, data interpretation, and identification and use of sampling equipment. **First Exam** is during **25-26 October** and the **Final Exam** (not comprehensive) is during **11-12 December**. Fill in your manual as we go along as it's your main reference medium; you do not have to hand in manual to me. Interactions with the instructor could influence your grade – verbal participation is encouraged! You will lose 5 UNANNOUNCED points for each episode of disruptive behavior or excessive chatting while the instructor is lecturing (cell phone use in class constitutes disruptive behavior). Please be courteous to your neighbor's learning and my teaching environment.

Student Responsibilities:

It is your responsibility to know your rights and responsibilities; please read the following link (it is the same for all your other classes at UWSP):

<http://uwsp.edu/admin/stuaffairs/rights/rightschap14.pdf>

You'll need a calculator—one that you can operate the natural logarithm and exponent keys; bring YOUR calculator to all tests!! Be prepared to go outside during any lab, though most outdoor labs will occur early in the semester.

My office is CNR 474; 346-4255; office hours are 1000-1130 on Tuesday and 1330-1530 on Thursday. My schedule can change quickly depending on unforeseen departmental and campus activities. Leave a note under my door, a message on my phone machine, or send an email if I'm not in the office at these times – thanks!

