

## Biology 306: Ecological Methods

Instructor: Gerene Taylor  
Email: [gerene.taylor@uwsp.edu](mailto:gerene.taylor@uwsp.edu)  
Office: TNR 461  
Office Hours: 5:30pm Mondays and Tuesdays (*email me to let me know you are coming to office hours at least 24 hours in advance to ensure I am there*)  
I am happy to answer questions via email, but please give me at least 24 hours to respond (i.e. if you email me on the due date of an assignment, I cannot guarantee that I'll get back to you).  
Text: *Field & Lab Methods for General Ecology* (Brower et al.) 4<sup>th</sup> edition (rental)

**Course Objectives:** To study and apply a variety of methods used to conduct and interpret ecological studies of populations, communities, and ecosystems, and to explore fundamental concepts in ecology via both theoretical approaches (e.g., simulation-based modeling) and hands-on activities.

**Communication and course documents:** In addition to our interactions in class I will use email as a means for sharing information. While taking this course I expect that you check your email on a regular basis. If you need to reach me outside of class or regular office hours, email is your best bet.

**Course activities and assignments:** This course includes a variety of activities/topics designed to help you become familiar with some of the concepts and methods used in the scientific field of ecology. Almost every week has either an assignment to be either handwritten or submitted into the D2L dropbox, or a D2L quiz to complete. Some assignments are done individually and others are done in pairs due to the limited number of computers available. In addition to the assignments themselves, there is a final exam to help me assess your knowledge of information covered.

**Attendance:** This course includes quite a bit of collaboration and we only meet once/week. Therefore, on-time attendance is mandatory. You are unable to make up the points you miss for each unexcused absence. Excused absences are restricted to documented, verifiable extraordinary situations (e.g., university sanctioned events, extreme illness or other emergent medical situations, deaths in the family, etc.). Timely communication with me about such absences is key. Late arrivals will result in two points being deducted from your days assignment score for each 5-minute block of time. I reserve the right to consider significantly late arrivals (i.e., > 15 minutes late) as absences. Note that if you miss a class it is your responsibility to obtain missed information/data from one of your classmates.

**Late Policy:** Assignments lose 20% of their point-value for each day they are late.

**Cell/Smart Phones, Laptops, ipads, ipods, etc.:** Please note that using cell phones, smart phones, laptops, ipads, ipods, etc. is not allowed during our meetings unless explicitly told otherwise; they are distracting to your peers and to me. If I observe that you are using these items during class I will (1) deduct five points from your days assignment score and (2) ask you to leave. Please do not force me to do that; it's not fun for either of us.

**Course Schedule:** A schedule of activities/topics follows. Many of these have associated assignments, which are generally due in lab the week following the activity with a few exceptions – see the last column for exact due dates. Note that I reserve the right to change this schedule and/or these activities/topics, with due notice, as we progress through the semester.

Week of:	Topics	Assignment	Due date
Jan. 23	NO LAB: First week of school		
Jan. 30	Course introduction. Statistical Review Part 1: Sampling and checking statistical test assumptions.	Statistical Review Part 1 assignment (35pts)	11:59pm on Feb.7 via D2L dropbox
Feb. 6	Statistical Review Part 2: Intro to R and Statistical Analyses	R tutorial (18pts) Statistical Review Part 2 assignment (42pts)	11:59pm on Feb.14 via D2L dropbox
Feb. 13	Experimental Design	Experimental design worksheet (50pts)	By the end of class
Feb. 20	Evolution	Guppy worksheet (50pts)	In class by Feb 27 for Mon section/Feb 28 for Tues section
Feb. 27	<i>Brassica</i> project – design and setup	Two-way ANOVA assignment (40pts)	11:59pm on Mar. 6 via D2L dropbox
Mar. 5	Genetic terms review. Introduction to Populus software.	Populus lab assignment (30pts)	11:59pm on Mar. 13 via D2L dropbox
Mar. 12	Population Growth	Population Growth Lab (40pts)	11:59pm on Mar. 19 via D2L dropbox
Mar. 19	SPRING BREAK. No lab.		
Mar. 26	<i>Brassica</i> project – harvest and gather data	Brassica Rapa report (70pts)	11:59pm on Apr. 2 via D2L dropbox
Apr. 2	Closed Population Estimation	Closed Population D2L quiz (22pts)	11:59pm on Oct.26
Apr. 9	Open Population Estimation	Open Population activity worksheet (10pts) and D2L quiz (13pts)	Activity worksheet: Due in class D2L quiz: 11:59pm on Apr. 17
Apr. 16	Introduction to GIS	Learning GIS assignment (55pts)	11:59pm on Apr. 24 via D2L dropbox
Apr. 23	R Analysis	AIC results table (35pts)	By the end of class, uploaded onto D2L
Apr. 30	GIS model creation	GIS model creation (70pts)	11:59pm on May 1 via D2L dropbox
May 7	Biol 306 Final Exam	Final Exam is worth 110pts	The final is done during the last lab

**Grading:** You will earn points in this course via a combination of assignments. Your final grade in this course will be based on the percentage of all possible points (690 total) that you earn throughout the semester. To determine your final grade the following metric will be used:

≥	90-	87-	84-	80-	77-	74-	70-	67-	60-	≤
94%	93%	89%	86%	83%	79%	76%	73%	69%	66%	59%
A	A-	B+	B	B-	C+	C	C-	D+	D	F

**Students with Disabilities:** I will be happy to help you if you need special accommodations to succeed in this course. Please see Student Disability Services to complete the paperwork required to document your needs and then contact me so that appropriate arrangements can be made. More information can be found here: <http://www.uwsp.edu/disability/Pages/default.aspx>

**Academic Integrity:** It is your responsibility to be aware of your rights and responsibilities as a UWSP student. D2L scans all submissions for plagiarism, which will not be tolerated in this class. Any plagiarized work will receive a score of 0. Please take the time to read and understand the information found here (and let me know of any questions):

<http://www.uwsp.edu/stuaffairs/Documents/RightsRespons/SRR-2010/rightsChap14.pdf>