Instructor: Susan Bush, 502B Aline Skaggs Biology, Tel. 587-3405, susan.bush@utah.edu
Office hours: arrange for specific times via email

TA: TBD
Office hours: TBD

Lab hours: Friday, 12:55-3:55 pm, Crocker Science Center, Rooms 104 & 106
Required Saturday field trips (August 24, September 7, September 21, October 19)
For field trips, meet in Bookstore parking lot east of Aline Skaggs Biology Building

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1. Course learning objectives
As an interdisciplinary upper division biology course, the learning objectives of this laboratory course are:
1. To introduce students to the ecology of plant communities in and along the Wasatch Front.
2. To introduce students to both field and laboratory techniques relevant to ecology and plant distribution, so as to better understand how to approach and to evaluate research topics.
3. To engage students in a team-focused learning environment, with projects focusing on quantitative, modeling, and analytical techniques.
4. To develop writing skills through laboratory reports and through engagement in the methods and approaches for developing, presenting, and evaluating proposals.

2. Achieving learning objectives
These course learning objectives will be achieved through field-based projects. Assignments will require that students participate in four Saturday field trips and that they are familiar with Microsoft Office Products (MS Word, Excel, and PowerPoint) or equivalent computer programs for data analysis, word processing, and graphics preparation.

3. Text books and reading materials
- No text book
• PDF copies of background literature for each lab module are found at the UU CANVAS site.

4. CANVAS
• The CANVAS site contains all of the downloadable files related to this course.
• All assignments must be turned in by uploading through the CANVAS site (no exceptions).

There are plenty of computers available on campus and within the department to assist you. Spell checking and grammar checking programs, spreadsheet programs, drawing programs, statistical programs, and data-analysis programs are also available.

5. Grading for course
A student’s final grade will be based on a cumulative point total of 485 points:
90-100% = A;  80-89% = B;  70-79% = C;  60-69% = D;  <60% = E

Details for all lab modules are provided in the CANVAS pages.

6. Modules 1-5: Project-based field and laboratory projects
Group and individual efforts associated with data collection and data interpretation in these modules. Collaboration is an important skill in the workforce today, but individual skills are evaluated in module writeups.
• **25 points for participation in required field trips (n=4)**
• **50 points for individual lab write ups (n=5)**
• **25 points for quiz (n=1)**
• Modules require data collection and data interpretation. Students will work together to collect the data in the field. Once back in the lab, the data will be coalesced, shared, and discussed; then the composite data sets will be made available to students for their individual write-ups.
• Data analyses for each of the modules will be a group activity within the time allocated to the lab following the field trip.
• A student’s write-up for each of the modules should reflect use of the composite data sets associated with each module.

Guidelines for writeups associated with these modules. Writeups for each of these modules are expected to contain the following elements:
• A maximum of 4 pages in length (excluding a bibliography), presented in the Ecology journal style format
• A structure that includes abstract, introduction, methods, results, and discussion
• At least one and no more than three figures or tables; figures/tables must be numbered individually and include a legend
• A minimum of three and no more than five references from books and refereed literature
• The grading rubric will be based on:
  o Introduction to the topic (5 points)
  o Description of the methods used (5 points)
  o Results - figures or tables (10 points)
  o Results - statistical evaluations (5 points)
  o Results - description of the significance of the results (5 points)
  o Depth and relevance of the discussion (10 points)
  o References (5 points)
  o Clarity and logical consistency of the writing (5 points)
7. Module 6: Developing, assembling, presenting, and assessing a project proposal
Guidelines for developing, assembling, presenting, and assessing a project proposal (Module 6). There can be a minimum of one and a maximum of three individuals per proposal. The proposal is submitted as a group and each student in the group will receive the same score.

Proposal
• **This is a group effort. You will self-organize into groups.**
  • Proposal title submitted by the deadline (5 points)
  • A maximum of 6 pages in length (excluding a bibliography), presented in the Ecology journal style format
  • A structure that includes separate sections for:
    o Abstract (5 points)
    o Introduction and importance of the topic (10 points)
    o Background data that justify the proposed research (10 points)
    o Methods to be used in the proposed research (10 points)
    o Proposed research (20 points)
    o Anticipated significance of the proposed research (5 points)
    o One-year budget and budget justification (10 points)
    o Bibliography (5 points)
    o Curriculum vitae(s) (5 points)
  • At least two and no more than four figures or tables; figures/tables must be numbered individually and include a legend
  • A minimum of ten and no more than fifteen references from books and refereed literature

Presentation
• A 5-minute proposal of the proposed research followed by a 5-minute defense of the proposal (15 points)
• The presentation must be a PowerPoint presentation, uploaded prior to the oral presentation

Evaluation
• Each student will evaluate two different proposal presentations, evaluating the presentations on importance of the proposed research, feasibility of the proposed research, appropriateness of the budget and justification, and overall likelihood of success (2 assessments @ 5 points each)

All writeups (i.e., lab reports, proposal text, proposal powerpoint, biogeography text) must be uploaded through CANVAS. No exceptions.

8. Not officially ‘Writing Intensive’, but with a focus on improving your writing skills
• We expect papers to reflect your best effort. If there are excessive grammatical and/or spelling errors in your paper, we will discuss this with you individually, we will offer help in improving the quality of the presentation, and we will expect that you will correct and improve the paper before a grade for that submission is received.
• Although this is not a “writing intensive” class, we do expect that papers will be written with reasonable quality in terms of content, data analysis, and presentation. After all, once employed after finishing school, you certainly would not think of turning in shoddy work to your employer.

9. ADA information
The University of Utah seeks to provide equal access to its programs, services, and activities for people with disabilities. If you will need accommodations in this class, reasonable prior notice needs to be given
to the Center for Disability Services, 162 Olpin Union Building, 801-581-5020. CDS will work with you and the instructor to make arrangements for accommodations. All written information in this course can be made available in an alternative format with prior notification to the Center for Disability Services.

10. Course drop policy
The withdrawal policy is the same as the University policy described in the Class Schedule. Students may drop without penalty or permission up through August 30 (see schedule). Up through October 18, students may withdraw without permission, but will receive a “W” grade. Course withdrawal after this date is possible with permission of the instructor, but requires a significant medical or personal situation in order for the withdrawal to be approved.

11. Addressing sexual misconduct
Title IX makes it clear that violence and harassment based on sex and gender (which includes sexual orientation and gender identity/expression) is a civil rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, color, religion, age, status as a person with a disability, veteran’s status or genetic information. If you or someone you know has been harassed or assaulted, you are encouraged to report it to the Title IX Coordinator in the Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or the Office of the Dean of Students, 270 Union Building, 801-581-7066. For support and confidential consultation, contact the Center for Student Wellness, 426 SSB, 801-581-7776. To report to the police, contact the Department of Public Safety, 801-585-2677(COPS).

12. Plagiarism
Plagiarism will not be tolerated. Please read the document for details about this form of cheating within the CANVAS folder associated with this class.

13. University safety statement
The University of Utah values the safety of all campus community members. To report suspicious activity, call campus police at 801-585-COPS (801-585-2677). You will receive important emergency alerts and safety messages regarding campus safety via text message. For more information regarding safety and to view available training resources, including helpful videos, visit safeu.utah.edu.

14. Diversity / Inclusivity statement
It is my intent that students from all diverse backgrounds and perspectives be well served by this course, that students’ learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength and benefit. It is my intent to present materials and activities that are respectful of diversity: gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture. Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups. In addition, if any of our class meetings conflict with your religious events, please let me know so that we can make arrangements for you. (Source: University of Iowa College of Education)

Names / Pronouns
Class rosters are provided to the instructor with the student’s legal name as well as “Preferred first name” (if previously entered by you in the Student Profile section of your CIS account, which managed can be managed at any time). While CIS refers to this as merely a preference, I will honor you by referring to you with the name and pronoun that feels best for you in class or on assignments. Please advise me of any name or pronoun changes so I can help create a learning environment in which you, your name, and your pronoun are respected. If you need any assistance or support, please reach out to the LGBT Resource Center. https://lgbt.utah.edu/campus/faculty_resources.php
15. Veterans Center
If you are a student veteran, the U of Utah has a Veterans Support Center located in Room 161 in the Olpin Union Building. Hours: M-F 8-5pm. Please visit their website for more information about what support they offer, a list of ongoing events and links to outside resources: http://veteranscenter.utah.edu/. Please also let me know if you need any additional support in this class for any reason.

16. English language learners
If you are an English language learner, please be aware of several resources on campus that will support you with your language and writing development. These resources include: the Writing Center (http://writingcenter.utah.edu/); the Writing Program (http://writing-program.utah.edu/); the English Language Institute (http://continue.utah.edu/eli/). Please let me know if there is any additional support you would like to discuss for this class.

17. Wellness statement
Personal concerns such as stress, anxiety, relationship difficulties, depression, cross-cultural differences, etc., can interfere with a student’s ability to succeed and thrive at the University of Utah. For helpful resources contact the Center for Student Wellness at www.wellness.utah.edu or 801-581-7776.

Note: This syllabus is meant to serve as an outline and guide for our course. Please note that I may modify it with reasonable notice to you. I may also modify the course schedule to accommodate the needs of our class. Any changes will be announced in class and posted on Canvas under Announcements.