Instructor
Monique Rocca
NESB A114, 491-2112
rocca@cnr.colostate.edu
Office hours: Mondays 1:30-3pm, or by appointment, or just drop in.

Course Schedule
Tuesday, 3-5 pm

Course Objectives
In this course, students will learn popular techniques for analyzing multivariate ecological data, with an emphasis on ordination and classification of multivariate data characteristic of community ecology. Students will gain a conceptual understanding of multivariate analyses and interpretation, and will practice implementing these techniques on a dataset of their choice. By the end of the semester, students will be comfortable working with the Pcord software package and have the skills necessary to perform a multivariate analyses that will stand up to peer review.

With these techniques, students will be able to answer questions such as:
- how are species distributed with respect to environmental gradients or treatments?
- what factors underly patterns of species distributions?
- how do these patterns change through time?
- do groups of species form distinct “communities”?

Course Format
- We will meet weekly for a combined lecture/lab/discussion in NR 201. Most weeks, there will be a short assignment to complete on your own. The second half of the semester is flexible by design, to allow us to pursue topics of interest to the group and allow you to work with your own data. I anticipate a seminar-like format where we review multivariate analyses from the literature and explore cutting-edge techniques.
- For those registering for 2 credits, attendance in class, completion of the assignments, and active class participation are expected. For those registering for 3 credits, you will have the additional requirement of a journal-style manuscript (which may lead to a thesis chapter or a publication), due at the end of the semester. You will have plenty of time to work on the manuscript during the second half of the semester.
- Ideally, you should have a dataset of your own with which to apply the techniques learned in the course, especially if you are taking 3 credits. The standard data structure is a matrix of species occurrences in plots/samples, with associated environmental/treatment data for each sample.
- The format of the course will be informal and flexible. I would like to steer the content towards topics that will help you. Please provide feedback as we go.
- Your grade will be assessed based on equally on: 1) class attendance and participation, 2) weekly assignments, 3) term paper (if applicable).