Biostatistics-II, Multivariate Statistics, 3 cr  
BIOS-8700 (#9014) and PBIO-8700 (#10054)  
Fall Semester 2013

NOTE: This course is co-taught by Brian C. McCarthy and Donald B. Miles

This syllabus is relevant **ONLY** to BCMs portion of the course (weeks 1-7).

Instructor: Brian C. McCarthy (weeks 1-7, only)  
Office: Wilson Hall Admin, Rm-207  
Telephone: 740-593-2979  
Email: mccarthy@ohio.edu  
WWW: http://www.plantbio.ohiou.edu/instruct/multivariate/multivariate.htm  
Office Hours: By appointment (email or call)

Scheduling: Tuesday & Thursday 09:00-10:20, Porter Hall 417

Suggested Texts:


Grading: There will be **two** (2) take-home problem sets/exams (50% of final grade).

Academic: *Attendance*, while not formally taken, is expected for all lectures.

The **Code of Student Conduct** should be strictly adhered to. Academic misconduct (cheating, plagiarism, etc.) will result in a grade of F for the course with subsequent referral to the Office of University Judiciaries. The university policies regarding the student code of conduct and academic integrity are clearly and completely summarized at: http://www.cats.ohiou.edu/judiciaries/index.htm. If you are unclear as to what these policies are, please consult the website.

**Accommodations**, Any student who suspects s/he may need an accommodation based on the impact of a disability should contact the class instructor privately to discuss the student’s specific needs and provide written documentation from the Office of Student Accessibility Services. If the student is not yet registered as a student with a disability, s/he should contact the Office of Student Accessibility Services.

Goals of Course: The goal of this half of the course is to introduce upper-level students in the biological sciences to typical multivariate statistical techniques and technological tools necessary to evaluate the literature and be able to carry out original research in the discipline. The emphasis will be on exploratory methods (i.e., ordination and classification).

We will primarily use the statistical software R (http://www.r-project.org/) because it is free, available for a variety of operating systems, and quite high quality. Given the broad utility of R in biological research applications, students are encouraged to learn this as much as possible. However, we may also examine other common software applications along the way such as MVSP, PAST, PC-ORD, etc. None of these applications will be required of students to acquire or learn. The purpose of using these is illustrative and to heighten awareness about the array of tools and applications available.