

**STAT 8250 — Applied Multivariate Methods  
Course Syllabus**

**Instructor:** Dan Hall

**Office Hours:** Monday and Wednesday, 1:30–2:30, and by appointment

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**Teaching Assistant:** Mike Henderson

**Office Hours:** To be announced

**Office:** Room 261, Statistics Building

**Phone:** 542-0912

**Lecture Hours:** Monday, Wednesday, Friday, 11:15–12:05, Stats 306

**Lab Hours:** Occasional Fridays, 11:15–12:05, Stats 307

**Prerequisite:** STAT 6220

**Required Text:**

Johnson, R.A. and Wichern, D. (1992). *Applied Multivariate Statistical Analysis, Fourth Edition*.

**Reserved Text:**

Johnson, D.E. (1998). *Applied Multivariate Methods for Data Analysts*.

**Evaluation:**

Grades will be based on homework (25%), weekly labs (5%), one midterm (20%), a project (20%), and a final (30%).

**Course Topics:**

- Vector and Matrix Algebra
- Basic Multivariate Statistical Concepts
- The Multivariate Normal Distribution
- Multivariate One and Two Sample Inference
- Multivariate Analysis of Variance
- Principal Components Analysis
- Discrimination and Classification
- Clustering

Other possibilities:

- Multivariate Linear Regression
- Factor Analysis
- Canonical Correlation Analysis
- Multidimensional Scaling

## Computer Information:

- All students must have an e-mail address and know how to use it. I may communicate with you via e-mail fairly often, so it is important that you check your e-mail regularly.
- We will use the statistical package SAS as an aid to data analysis in this course. Weekly(?) labs will focus on using SAS to perform computations of the sort required for homeworks and the project.
- I will maintain a web site for this course at <http://www.stat.uga.edu/dhall/STAT8250.html>. I will post this syllabus, lecture notes, homework solutions and other important materials here. Most of the things that I post on the web site will also be distributed in class, so for those things, the web site will be useful simply to obtain hand-outs that you missed. There will be some things, though (e.g., homework solutions), that will only be available on the web site.