

300:683 Course Outline

Fall, 2011

Title: Applied Multivariate Analysis

Instructor: Douglas A. Penfield (932-7496 x8324) - Rm. 324 GSE

Time: Thursday from 4:50-7:30 PM **Place:** ED - Rm. 208

Prerequisites: 291:531, 291:532, 300:515, and 300:519

Book: Applied Multivariate Statistics for the Social Sciences
(5th. edition)
James Stevens
Lawrence Erlbaum Associates, Inc.

Statistics Laboratory: Room 304 in the GSE

Exams: Midterm - November **01** Final - **December 20**

Schedule of Lectures

Sept. 06 Review of Basic Statistical Principles (Chap. 1)

Sept. 13 Matrix Algebra (Chap. 2)

Sept. 20 Multiple Regression (Chap. 3)

Sept. 27 Logistic Regression (Chap. 3)

Oct. 04 Hotelling's T-Square (Chap. 4)

Oct. 11 K-Sample MANOVA (Chap. 5)

Oct. 18 K-Sample MANOVA (Chap. 5)

Oct. 25 Post Hoc and Planned Comparisons (Chap. 5)

Nov. 01 **Midterm**

Nov. 08 Eigenvalues and Eigenvectors

Nov. 15 Discriminant Analysis (Chap. 7)

Nov. 29 MANOVA for Factorial Designs (Chap. 8)

Dec. 06 Exploratory Factor Analysis (Chap. 11)

Dec. 13 Canonical Correlation (Chap. 12)

Dec. 20 **Final**

HOMEWORK ASSIGNMENTS

300:683

Douglas A. Penfield

Fall, 2011 Dates

- Sept. 06** Pages 41-42 (1, 2, 3, 4, 5)
- Sept. 13** Pages 60-62 (1, 2, 3, 4, 5, 6, 7, 8)
- Sept. 20** Pages 132-135 (1, 3, 5)
- Sept. 27** Pages 135-143 (6, 14, 16)
- Oct. 04** Pages 171-173 (4, 6, 7)
- Oct. 11** Pages 211-212 (1, 2)
- Oct. 18** Page 213 (5)
- Oct. 25** Page 213 (4)
- Nov. 08** Eigenvalue & Eigenvector Assignment
- Nov. 15** Pages 269 (1)
- Nov. 29** Pages 285-286 (1, 2(a-d), 3)
- Dec. 06** Read Chap. 11 (Pages 325-344)
 [Exploratory Factor Analysis]
 Pages 381-382 (1, 2)

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Academic Integrity: Please comply with standards of academic integrity in this course. If you need assistance in understanding an assignment or course content, please seek assistance from other appropriate resources or me. Assignments, however, should be your own work. The consequence for violating policies of academic integrity and other elements of the student code of conduct are serious and can have a tremendous negative impact on your academic progress and future career. Exams are also your own work. Please familiarize yourself with the university policy on academic integrity (<http://academicintegrity.rutgers.edu/integrity.shtml#I>).

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For information on the academic integrity policy, please go to:

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Clear evidence of extensive plagiarism will likely result in a grade of F for the assignment AND course.