| UIC | University of Illinois at Chicago |
| | College of Business Administration |
| | Department of Information & Decision Sciences |

| IDS 577 | Research Methodology I |
| | Applied Multivariate Statistical Analysis |

| Syllabus | Fall Semester, 2012 |

| CRN | 32238 |
| Credit | 4 sem hrs |
| Days | Tuesdays and Thursdays, 28-Aug through 6-Dec 2012, except Thursday, 22-Nov (Thanksgiving Day). |
| Time | 2:00 - 3:15 |
| Place | 321 LH (Lincoln Hall) |
| Instructor Contact info | Stanley L. Sclove, Professor, IDS. 2418 UH |
| | e-mail: slsclove@uic.edu     Web: www.uic.edu/~slsclove |
| | Phone:   Office   312-996-2681;   IDS Dept   312-996-2676 |
| Office Hours | Tuesdays and Thursdays, for the half hour before class and after class, in or near the classroom, or by appointment in 2418 UH |

## Course Content

### Overview

The course concerns theory, techniques, and applications of statistical methods in research, particularly methods of regression and multivariate statistical analysis. Various software will be used, including possibly Excel, Minitab, SPSS, and AMOS.

### Likely topics:

- Least Squares Methods

- Selection of Variables for Regression

- Introduction to Regression Models for Time Series

- Introduction to Analysis of Variance and Analysis of Covariance

- Introduction to Logistic Regression

- Introduction to Path Analysis

- The Multivariate Normal Regression Model

## Prerequisites

At least two semesters of statistics, such as IDS 270-371, ECON 270-346, or STAT 381-481. Note that IDS 577 is a pre-requisite for IDS 578 (Research Methodology II), which will be offered in Spring, 2013. IDS 578 includes material on Structural Equation Modeling (SEM).

## Course materials

### Textbooks

### Required

A. A. Afifi, Susanne May, and Virginia Clark. *Practical Multivariate Analysis, 5th ed.* Chapman & Hall/CRC, Boca Raton, FL, 2011. 536 pp. ISBN 978-1-4398-1680-6, $89.95. Catalog no. K10864. Avail. July, 2011.

### Recommended

Barbara G. Tabachnick and Linda S. Fidell. *Using Multivariate Statistics. 5th ed.* Boston: Pearson (Allyn and Bacon), 2007. ISBN-10: 0205459382. ISBN-13: 9780205459384.

Joseph F. Hair, Jr., William C. Black, Barry J. Babin, Rolph E. Anderson. *Multivariate Data Analysis. 7th ed.* Pearson (Addison/Wesley Prentice Hall), 2010. ISBN-10: 0138132631 ISBN-13: 9780138132637

### Video programs

Telecourse, *Against All Odds: Inside Statistics.* UIC Library catalog no. T-1067. Produced by the Annenberg - CPB Public Educational TV Project. Twenty-six half-hour programs. Available on-line at www.learner.org/resources/series65.html .

### Blackboard

Various material, prepared by the instructor, including Course Info, Course Notes, Assignments, and Data, is available at blackboard.uic.edu.

## Grading

The grade will be based on the following categories:

- Homework (25%)
- Exam #1 (25%)
- Exam #2 (25% )
- Project (25%)

Exam #1 will be near mid-semester, Exam #2 will be near the end of the semester. Please consult the Course Calendar on Blackboard for exact dates. The project will be due by Noon on Tuesday of Finals Week.

### Homework

### Exercises

Five homework assignments will be given. Assignments will be accepted late only in the next class meeting, and with a penalty of twenty percent.

### Exams

In class. Closed book. No laptops; no cell phones. The exams may cover reading material not covered in lecture, and, conversely, lecture material that is not contained in the textbook.

### Project

Teams of three or four people are to find a dataset and analyze it using multivariate techniques covered in the course. More detailed information may be available online.

- Project proposals are due in the first class of the tenth week.

- Project presentations will be made in the last three meetings of the course. Everyone's attendance is required.

- Hard copy of projects is due in the IDS office (2404 UH) by Noon on Tuesday of Finals Week. Additionally, a copy of the write-up and the data must be e-mailed to the instructor by then.

### Attendance

Attendance is important. Though there can be legitimate reasons for absence, it is not excused.

### Honor Code for the College of Business Administration

This course and its associated coursework are being administered under the policies of the University of Illinois at Chicago (UIC) College of Business Administration Honor Code. All students are expected to respect and uphold this code.
   **Honor Code Violations and Enforcement.** Violations of the Honor Code are just causes for discipline under the University of Illinois at Chicago Student Disciplinary Procedure, and all allegations of Honor Code violations shall be handled pursuant to that Procedure. (For a complete description of just causes for discipline, disciplinary procedures, and sanctions, see the pamphlet "Student Disciplinary Procedure of the Senate Committee on Student Discipline," available from the Office of the Dean of Students, SSB, Suite 3030, 1200 W. Harrison St., M/C 318.)

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