



[Stern School of Business](#)
[New York University](#)
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Course: B01.1305.32 - Statistics & Data Analysis

Semester: Spring 2010 (2/11 – 5/6/10)

Class Hours: Thursday 6-9pm

Class Room: TBA

Instructor: Prof. [Edward Melnick](#)

Email: emelnick@stern.nyu.edu

Office Hours: TBA

Office: KMC 8-56 **Tel:** (212) 998-0444

Teaching Fellow: TBA **Email:** TBA



OBJECTIVES OF THE COURSE

The analytical approach to problem solving is a process that is based on a mathematical model.

The purpose of the course is to train students to formulate analytical problems, to survey statistical techniques, and to introduce technical concepts from the core departments at Stern. The course stresses applications by analyzing data to formulate business decisions. Technical aspects underlying the methods will be presented intuitively with the goal of making students critical readers of quantitative arguments that appear in research reports.

The computer will be used as a tool for problem solving. The preferred computer package for the course is MINITAB Statistics Software (Version 15 plus). No computer background is required for the course and detailed instructions for MINITAB will be provided. The program can also be rented for 6 months for \$29.99 at www.e-academy.com.

The mathematical prerequisite for the course is a working knowledge of elementary algebra and differential calculus. The course will be taught in a lecture and discussion mode. Student participation is strongly urged.

A. REQUIRED TEXT

HOG: Hildebrand, D.K., and Ott, R. L., and Gray, J. B. (second edition, 2005), *Basic Statistical Ideas for Managers*, California: Thomson Brooks/Cole.

B. SUPPLEMENTARY READING

For those students needing some practice in algebra.

Spiegel, Murray R., **Schaum's Outline Series in College Algebra**,

New York: McGraw Hill Book Company (Chapters 1-7, 9-13, 19, 22).

C. RECOMMENDED

Hewlett Packard calculator 17b II + (Business Consultant II)

D. PROBLEM ASSIGNMENTS AND TESTS

Problem assignments will be given each week and will be submitted the following week for review. Assignments must be completed.

The final grade is computed as follows:

Category	Percentage
Assignments and Participation	10%
Mid-term Examination	40%
Final Examination	50%

E. COURSE TOPICS AND READING ASSIGNMENTS

TOPICS

READING ASSIGNMENTS

- | | |
|--|---|
| 1. Data Collection and Analysis | HOG: Chapters 1 and 2 |
| 2. Concepts of Probability | HOG: Chapter 3: Sections 1 and 2 |
| 3. Special Probability Models | HOG: Chapter 4: Sections 1 – 3;
Chapter 5: Sections 1, 2, 4. |
| 4. Multivariate Normal
Distribution: Portfolio Theory | Document 16 in Course Documents Folder;
Chapter 11: Sections 4 and 5. |
| 5. Statistical Inference | HOG: Chapter 6: Section 3; Chapter 7:
Sections 1, 2, 4-7; Chapter 8: Sections 1 and 7. |
| 6. Linear Regression and
Correlation Analysis | HOG: Chapter 11 |
| Simple Linear Regression | Document 23 in Course Document Folder |

HOG: Chapter 11

Multiple Linear Regression

HOG: Chapter 12: Sections 1-3, 5

7. Final Examination

F. APPROXIMATE CLASS SCHEDULE

<u>TOPICS</u>	<u>NO. OF SESSIONS</u>	<u>DATES</u>
Introduction and Data Analysis	1	
Concepts of Probability	1.5	
Special Probability Models	1.5	
Portfolio Theory	1	
Question and Discussion Session	1	
MID-TERM EXAMINATION		
Statistical Inference		
Confidence Interval	1	
Test of Hypotheses	.5	
Regression		
Simple Linear Regression	1.5	
Multiple Linear Regression	1	
Examples with Diagnostics	1	
FINAL EXAMINATION	1	

Note for Students with Disabilities

If you have a qualified disability and will require academic accommodation during this course, please contact the Moses Center for Students with Disabilities (CSD, 998-4980) and provide the professor with a letter from them verifying your registration and outlining the accommodations they recommend. If you will need to take an exam at the CSD, you must submit a completed Exam Accommodations Form to them at least one week prior to the scheduled exam time to be guaranteed accommodation.
