

BOROUGH OF MANHATTAN COMMUNITY COLLEGE

City University of New York

Department of Mathematics

Statistics
MAT 209
Semester:
Credits: 4

Class hours: 4

Instructor Information:

Name:

Email:

Phone:

Office:

Course Description

This course covers the study of probability theory and random variables, the binomial distribution, the hypergeometric distribution, the normal distribution, measures of central tendency and dispersion, sampling distributions, chi-square distributions, t-test, estimation theory with confidence intervals, correlation and regression, and hypothesis testing.

Prerequisites/Co-requisites

The student must have passed or been exempt from MAT 206 (precalculus).

Student Learning Outcomes

Upon successful completion of this course, students will be able to:

- identify and analyze appropriate methods for gathering statistical data on a particular population and summarize data in statistical diagrams and graphs;
- calculate measures of location and variation and identify outliers, and use these to draw appropriate conclusions from given statistical data;
- calculate permutations, combinations, mathematical expectation and probability of events;
- graph statistical data and identify data distribution types and be able to accurately interpret and draw correct conclusions from graphs depicting statistical data;
- calculate error and confidence intervals and perform hypothesis testing on several different types of statistical data and then correctly interpret and apply the results of these calculations to draw appropriate conclusions about a population;
- apply regression and correlation analysis and parametric and non-parametric testing to real statistical data;
- identify misuse of statistical tools, and through independent research, choose and correctly implement the appropriate statistical tool for analysis of a variety of problems and questions in business, and the social or physical sciences.

Required Text & Readings

Statistics A First Course: Eighth Edition by John E. Freund & Benjamin Perles, Prentice-Hall, Inc., 2004.

Use of Technology

Students must have an inexpensive (about \$10-30) scientific calculator for use in the course.

Students will be expected to use and to be familiar with output from the spreadsheet program Microsoft Excel.

Students will use a microcomputer statistical (Excel or SPSS) for analyzing selected data sets.

Evaluation & Requirements of Students

Students should read the relevant sections of the text in advance of each lecture to gain a general idea of the material to be covered. The instructor will advise the student of the determination of the final grade. Students are required to attend all scheduled classes.

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Academic Adjustments for Students with Disabilities

Students with disabilities who require reasonable accommodations or academic adjustments for this course must contact the Office of Services for Students with Disabilities. BMCC is committed to providing equal access to all programs and curricula to all students.

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