CITY UNIVERSITY
SCHOOL OF BUSINESS

Classroom Syllabus

MTH 110
INTRODUCTION TO STATISTICS

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Syllabus based on original concepts by: Jodey Lingg, MS

REQUIRED RESOURCES

Moore, David S. *Statistics: Concepts and Controversies*. 5th ed. New York: Freeman, 2000.

Hult, Christine A., and Thomas N. Huckin. *The New Century Handbook.* Brief Ed. Needham, MA: Allyn, 2001.

Access to a personal computer is required. All written assignments must be word-processed.

MTH 110
INTRODUCTION TO STATISTICS

This document provides an overview of the course foundation elements, assignments, schedules and activities.

For information about general City University policies, please see the City University catalog. If you have additional questions about the course, please contact your instructor.

Notification to Students with Disabilities

If you are a student with a disability and you require course adaptations or accommodations, please contact the Affirmative Action Coordinator in the Disability Resource Office as soon as possible. You may also contact your instructor or advisor for assistance.

COURSE DESCRIPTION

An introduction to statistics for anyone who has difficulty with the way statistics is usually presented, or who is simply intimidated by the subject. It presumes no statistical background and uses applications to explain statistical concepts without using mathematical symbols and equations. The applications range from sports, advertising, and politics to medicine and psychology. The course will not teach you how to produce statistics but it will teach you how to understand them.

LEARNING OBJECTIVES

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

1. Define the specific steps in experimental research;

2. Assess the difficulties that arise in the experimental research process;

3. Interpret data from tables and graphs;

4. Explain the different methods for assessing reliability;

5. Distinguish between internal validity and external validity;

6. Define the measures of central tendency;

7. Interpret national economic and social statistics;

8. Differentiate between correlation, causation, association and prediction;

9. Define the components of a regression equation;

10. Compare and contrast confidence intervals and significance tests for proportions and means;

11. Explain the importance of probability theory in statistics and how it applies to your daily life.

RECOMMENDED SUPPLEMENTARY RESOURCES

PRINT RESOURCES

Brightman, Harvey J. *Statistics in Plain English*. Cincinnati, OH: South-Western, 1986.
Gonick, Larry. *The Cartoon Guide to Statistics*. New York: HarperCollins, 1993.
Huff, Darrell. *How to Lie with Statistics*. New York: W. W. Norton, 1982.
Kranzler, Gerald and Janet Moursund. *Statistics for the Terrified*. Englewood Cliffs, NJ: Prentice Hall, 1995.
Porkess, Roger. *The HarperCollins Dictionary of Statistics*. New York: HarperCollins, 1991.
Tanur, Judith M. *Statistics: A Guide to the Unknown*. Belmont, CA: Wadsworth, 1989.

ELECTRONIC RESOURCES

The following Internet resources may be of use to you in this course. Please be aware that Web addresses may change from time to time. Consult your instructor if you have questions about electronic resources.

City University
http://www.cityu.edu

StatUSA
http://www.stat-usa.gov

Census Bureau
http://www.census.gov

Bureau of Labor Statistics
http://stats.bls.gov/blshome.html

Statistical Agencies on the Internet
http://www.science.gmu.edu/csi779/drope/govstats.html

OVERVIEW OF COURSE ACTIVITIES AND GRADING

The grade you receive for the course will be derived using City University's decimal grading system, based on the following:

Assignment

Homework Assignments	40%
Midterm examination	25%
Class Attendance	5%
Final examination	30%
TOTAL	100%

Scheduling of homeworks, midterm and final examinations

5.0%	5.0%	5.0%	5.0%	25.0%	5.0%	5.0%	5.0%	5.0%	5.0%	30.0%
9.1	16.1	23.1	30.1	4.2	6.2	13.2	20.2	27.2		6.3
HW1	HW2	HW3	HW4	MidT Ex	HW5	HW6	HW7	HW8	Attnd	Final Ex

Note: Homework Assignments: 8 homeworks; 5% per homework = 40% total

Please see the current City University catalog or consult your instructor for guidance in determining your decimal grade.

EXPLANATION OF ASSIGNMENTS AND GRADING

HOMEWORK ASSIGNMENTS

Your instructor will determine the required problems and provide due dates for the homework assignments.

Grading Criteria for Homework Assignments

Clear demonstration of ability to employ concepts, methods and techniques	20%
Logical and sequential development of results	30%
Appropriate depth of analysis	20%
Appropriate organization and format	10%
Successful problem completion	20%
TOTAL	100%

EXAMINATIONS

You should be prepared to answer a variety of types of questions pertinent to the concepts covered in or suggested by the course materials and assignments. Your instructor may provide you with additional information regarding the content and style of exams in this course.

Grading Criteria for Problems on Examinations

Clear demonstration of ability to employ concepts, methods and techniques	20%

Logical and sequential development of results		30%
Appropriate depth of analysis		20%
Appropriate organization and format		10%
Successful problem completion		20%
TOTAL		100%

Grading Criteria for Essay Questions on Examinations

Clear grasp of major issues posed by the question		20%
Valid arguments; appropriate supportive detail		20%
Appropriate analysis, evaluation and synthesis		20%
Demonstrated ability to employ terms, concepts and frames of reference from texts, lectures and other course materials		20%
Proper organization and logical flow of responses		20%
TOTAL		100%

RECOMMENDED COURSE SCHEDULE

The following schedule has been provided as a general guide to the course. Your instructor may elect to adjust the outline to meet the unique needs of the class.

SESSION	*TOPICS AND ASSIGNMENTS*	*READINGS* (4rd ed.) (5th ed.)
1	Making Sense of Statistics Where Do Data Come From? What Do Samples Tell Us?	Introduction Chapter 1 1 – 3
2	Sample Surveys in the Real World Experiments	Chapter 2 4 – 6
3	Data Ethics Measuring Do the Numbers Make Sense?	Chapter 3 7 – 9
4	Graphs Displaying Distributions with Graphs Describing Distributions with Numbers Normal Distributions	Chapter 4 10 – 13

5	**MIDTERM EXAMINATION**	

6	Describing Relations:
	   Scatterplots & Correlation
	   Regression, Prediction & Causation
	  Government Statistics
		Chapter
		5 - 6 14 – 16

7	Thinking About Chance Probability Models Simulation	Chapter 7 17 – 19
8	Expected Values Confidence Levels Significance	Chapter 8 20 – 22
9	Statistical Inference Two-way Tables & the Chi-square Test Inference about a Population Mean	Chapter 8 23 – 25
10	**FINAL EXAMINATION**	

NOTE: Your instructor will determine the required problems and provide due dates for the homework assignments.

Class Attendance Policy

Students are expected to be diligent in their studies and to attend class regularly. In any course in which attendance is deemed by the instructor to be integral to the achievement of course objectives, it may be a valid consideration in determining the final grade.

At the beginning of each course, the instructor will inform students of the relevance of class attendance in the determination of the final grade.

Any student who fails to attend two consecutive sessions must do one of the following:
1. If the intention is to continue the class, the student must contact faculty with reason(s) for missing the class; or
2. If the intention is to drop the class, the student must contact an advisor. If the student does not make contact the student will be dropped under City University's drop/refund policy.

CITY UNIVERSITY
SCHOLASTIC HONESTY POLICY

EFFECTIVE: AUGUST 20, 2001

Assignments and examinations submitted by students enrolled at City University are presumed to be their own. The university holds students individually responsible for understanding scholastic honesty standards and for exercising them in every aspect of study and work submitted.

City University defines violations of scholastic honesty broadly as any act that violates the rights of other students or that involves misrepresentation of the actual author or one's work.

Violations of scholastic honesty include but are not limited to:

1. Cheating
2. Plagiarizing
3. Submitting the same or substantially the same work in order to meet the requirements of more than one course without the prior consent of the instructors
4. Collaborating on assignments, projects, research papers, or other course requirements without the prior consent of the instructor
5. Submitting the work of another individual whether such work was purchases, borrowed, or received as a gift

Specifically, students shall not:

1. Give or receive help, assistance or information in any form before, during or after an examination for the purposes of obtaining or granting an unfair advantage.
2. Submit papers that have been prepared in whole or in part by another individual.
3. Use any material that has been previously published without clearly identifying such material by use of quotation marks, footnoted citations, or other methods appropriate to the identification of research sources.

Faculty Responsibility to Report Student Violations to the Scholastic Honesty Committee

A faculty member who suspects that a student may have violated the University Policy is expected to consult with the Scholastic Honesty Committee Chair before filing the official Scholastic Honesty Violation Alleuation form. If it is determined that the student may indeed have violated the Scholastic Honesty Policy, the

faculty member is advised to submit the form and supporting documents to the Committee.

The faculty member filing a Scholastic Honestv Violation Alleuation shall also submit to the Registrar's Office a grade of "T" (a grade held pending disciplinary action). The. faculty member shall allow the student to continue taking the class in question unless the faculty and administration determine that the student's conduct is particularly grievous, repetitive or disruptive.

Sanctions Imposed for Violations of the Policy on Scholastic Honesty

If the Committee finds that a student has violated the University Scholastic Honesty Policy, the student may receive a 0.0 for the course, and the Committee may suspend the student from attendance at or enrollment in any University courses, classes, activities or projects for a period of one quarter.

If the Committee finds that a student has committed a second violation of the Policy, the Committee may determine that the student will receive a 0.0 for thecourse and suspend the student from attendance at or enrollment in any University courses, classes, activities or projects for a period of one year.

If the Committee finds that the student has committed, a third violation of the Policy, the Committee may determine that the student will receive a 0.0 for the course and may be permanently expelled from any University courses, classes, activities or projects.

At the Committee's discretion, lesser sanctions may be imposed based on unique circumstances or the evidence presented.

Student's Right to Appeal

If the student feels the procedure that led to the Scholastic Honesty Committee's decision was improperly applied, he or she may appeal to the President within ten (10) working days of receipt of the Committee's decision letter. The decision of the President in such an appeal is final.