

CT134(1st years)            MATHEMATICS of FINANCE, STATISTICS

INSTRUCTOR: JOSEPH ALFONSO            OFFICE: F262            EXT: 2966

TEXTS: INTRODUCTORY STATISTICS 2nd ed.  
Neil A. Weiss    Matthew J. Hassett

MATHEMATICS of FINANCE  
Carl W. McCoomb

GRADING:

ASSIGNMENTS	10%
MIDTERMS (2)	40%
FINAL*	50%

\* FINAL MAY BE WRITTEN FOR 70% IF ALL THE MIDTERMS HAVE BEEN WRITTEN AND THE AVERAGE IS AT LEAST 40%. LOWEST MIDTERM MARK WILL BE DISCARDED.

There will be weekly assignments and

NO LATE ASSIGNMENTS WILL BE ACCEPTED

COURSE DESCRIPTION: A review of elementary algebra, (per cents, ratios, exponents and logs), simple and compound interest, simple discount, ordinary simple annuities, simple annuities, amortization and sinking funds, depreciation and related topics, contingent payments. Elementary probability concepts. Measures of central tendency and dispersion. Binomial and normal distributions. Hypothesis testing and elementary sampling.

COURSE OBJECTIVES: This course will provide an introduction to the Math of finance and statistics. The math of finance is used extensively in accounting. Statistics is used in business for quality control, market research, forecasting and product planning to name a few applications. The statistical package Minitab will be used to introduce students to applications software.

Chapters to be covered

MATHEMATICS of FINANCE

CHAPTER	1	Simple Interest and Discount
	2	Compound Interest
	3	Equations of Value or Equations of Equivalence
	4	Simple Annuities
	5	General Annuities (Complex Annuities)
	6	Applications of Annuities
	8	Depreciation and Depletion

STATISTICS

Chapter	1	The Nature of Statistics
	2	Organizing Data
	3	Descriptive Measures
	4	Probability
	5	Discrete Random Variables
	6	The Normal Distribution
	7	The Sampling Distribution of the Mean
	8	Estimating Means and Proportions
	9	Hypothesis Tests for Means and Proportions

Schedule

The first five weeks will be devoted to the Mathematics of Finance. We will be covering two chapters per week (approximately). At the end of the five weeks we will have our first midterm. The rest of the semester will be spent on Statistics, we will be covering one chapter per week (approximately). The second midterm will be held during the tenth week of classes. The midterms will deal with material covered in the previous five weeks. The final exam will be cumulative, covering all topics studied during the semester.

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NO LATE ASSIGNMENTS WILL BE ACCEPTED

COURSE DESCRIPTION (CT218): Elementary probability concepts. Measures of central tendency and dispersion. Binomial and normal distributions. Hypothesis testing and elementary sampling. Statistical applications packages such as Minitab will be used.

COURSE OBJECTIVES: This course will provide students with a basic understanding of statistics and its applications. Statistics is used extensively in business for quality control, market research, forecasting and product planning to name a few applications. The statistical package Minitab will be used to introduce students to applications software.

## CHAPTERS TO BE COVERED

Chapter	1	The Nature of Statistics
	2	Organizing Data
	3	Descriptive Measures
	4	Probability
	5	Discrete Random Variables
	6	The Normal Distribution
	7	The Sampling Distribution of the Mean
	8	Estimating Means and Proportions
	9	Hypothesis Tests for Means and Proportions
	10	Inferences Concerning Two Populations
	11	Chi-Square Procedures
	12	Regression and Correlation

## Schedule

We will be covering one chapter per week (approximately) except during the week of midterms and the final week of classes which will be used for review.