College of Business and Economics
Department of Accounting and Finance

Course Information	
Course Number	AcFn1043
Course Title	Statistics for Finance
Degree Program	BA Degree in Accounting and Finance
Module	Computing and Quantitative Method for Business
ETCTS Credits	6
Contact Hours (per week)	4
Course Objectives & Competences to be Acquired	The objective of this course is to discuss the theoretical aspects of statistics and then focus on its practical applications in business decision making, which modern managers and decision makers are expected to be armed with on the face of considerable uncertainty. Besides, it is also to create know-how to students on various application areas and benefit of statistical in business. This course aims: • To familiarize students about the use & application of various statistical tools in the field of financial decision making • To enable students make valid inference from data • To enable students to construct and test different types of hypothesis • To enable students to find correlation between variables • How to apply the statistical tests in the preparation of Research report. • To enable students appreciate the application of statistics in every areas of activities in business and industry such as production, financial analysis, distribution, market research, manpower planning.
Course Description	The use of statistical knowledge in the field of business aid dated many years back. In recent years, an understanding of statistical methods, techniques, and the skills to make use of them had widely been recognized more than before. It is essential for anyone making business decisions on the basis of data to possess a clear understanding of statistics. Among other, the vast and fast changing technological, financial and economic setting has necessitated an organized use and extensive application of statistical tools to business decision making. Statistics has proved useful in many ways. Such as in establishing relationship, making predications, and providing solution to the many problems of business operations and managerial decision Statistics is widely applied in production and quality control, marketing research, manpower planning, finance, etc.
Course Contents	
1. Statistics Refresher 1.1. Introduction 1.1.1. Definition	

1.1.2. Areas (types) of statistics: Descriptive, Inferential
1.1.3. Importance (uses) of statistics

1.2. Descriptive Statistics (Independent Review)
1.2.1. Statistical data (meaning, types, sources, processing and methods of obtaining data)
1.2.2. Organization of descriptive data (tabular presentation; frequency distribution, graphical presentation; histogram, bar graphs, pie charts, the frequency polygon, the give.)
1.2.3. Summarizing data
1.2.4. Measures of location or central tendency: the arithmetic mean, the median, the mode.
1.2.5. Measures of dispersion or variation: the range, percentiles, the variance and standard deviation, the coefficient of variation, skew ness.

2. Probability And Probability Distribution

2.1. Basic definitions of probability
2.2. Fundamental concepts: experiment and event, event and their relationships, conditional and joint probability
2.3. Definitions of probability distribution
2.4. Basic concepts: Discrete and continuous random variables, expected value and variance of discrete random variable
2.5. Continuous Probability distribution: Normal distribution

3. Sampling & Sampling Distributions

3.1. Sampling Theory
3.1.1. Basic Definitions
3.1.2. The need for samples
3.1.3. Designing and conducting a sampling study
3.1.4. Bias and errors in sampling, non-sampling errors
3.1.5. Types of samples- random and non-random samples

3.2. Sampling Distributions
3.2.1. Definitions
3.2.2. Sampling distributions of the mean and proportion
3.2.3. Sampling distribution of the difference between two means and two proportions

4. Statistical Estimations

4.1. Basic concepts
4.2. Point estimators of the mean and proportion
4.3. Interval estimators of the mean and proportion
4.4. Interval estimation of the difference between two independent means (concept and formula)
4.5. Student's t-distribution
4.6. Determining the sample size

5. Hypothesis Testing

5.1. Basic concepts
5.2. Steps in Hypothesis testing
5.3. Type I and type II errors (concepts)
5.4. One tailed \IS two tailed hypothesis tests
5.5. Hypothesis testing of:
5.6. Population mean, proportion
5.7. The difference between two means and two proportions

6. Chi-Square Distributions

6.1. Areas of application
6.2. Tests for independence between two variables
6.3. Tests for the equality of several proportions

6.4. Goodness- of fit tests (Binomial, normal, Poisson)

7. Analysis Of Variance

7.1. Areas of application
7.2. Comparison of the mean of more than two populations
7.3. Variance test

8. Regression And Correlation

8.1. Linear correlation
8.1.1. The coefficient of correlation
8.1.2. Rank correlation coefficient
8.2. Simple linear regression
8.3. curve fitting, the method of least square, r^2

Text Book:

- Anderson. Statistics for Business and Economics

Reference Books

- Lion Douglas A. and Robert D. mason. Basic statistics for Business and Economics.