



SYLLABUS

Course Code	Course Num.	Course Name	Credit Hours	Lec.	Lab.	Tut.	Private study	Pre-requisites	Course Level	Teaching Language
STA	110	Principles of Statistics	2	2	0	0	5		1 ¹	English

A. Course Description

This course describes the most important ideas, theoretical results, and examples of descriptive statistics, simple linear regression and Index number. The course includes the essential fundamentals of these topics. The emphasis is on calculations, and some applications are mentioned. The use of statistical packages is essential during the course.

B. Course Outcomes

At the end of this course the student will be able to:

- Organize, analyze, interpret and summarize the data in a useful and informative manner.
- Calculate the central tendency and dispersion measures and interpret the meaning also discuss their applications.
- Measure the growth rate, inflation or price index and real value.
- Calculate and interpret the regression and correlation concept.
- Calculate and interpret the general trend in time series.

C. References:

Required Textbook

- *Statistics for Business and Economics*, David R. Anderson, Dennis J. Sweeney, Thomas A. Williams, 11th edition, South- Western- USA.

Other references

- *Essentials of Statistics for Business and Economics*, by David R. Anderson, Dennis J. Sweeney, Thomas A. Williams, Jeffrey D. Camm, James J. Cochran, Cengage Learning; 7th edition (2014).
- *Statistics for Business and Economics*, (12th Edition) by James T. McClave, P. George Benson, Terry T Sincich. Publisher: Pearson; (2012).

¹ B.Sc. in Economics.



D. Topics Outline

1. **Data and Statistics:** Applications in Business and Economics: Accounting, Finance, Marketing, Production, Economics, Data: Elements, Variables, Observations, Scales of Measurement, Categorical (Or Qualitative) and Quantitative Data, Cross-Sectional and Time Series Data, Data Sources: Existing Sources, Statistical Studies.
2. **Descriptive Statistics:** Tabular and Graphical Presentations: Summarizing Categorical Data: Frequency Distribution, Relative and Percent Frequency Distributions, Bar Charts and Pie Charts, Summarizing Quantitative Data: Frequency Distribution, Relative and Percent Frequency Distributions, Histogram, Cumulative Distribution, Ogive, Exploratory Data Analysis: Stem-and- Leaf Display: Cross Tabulation, Scatter Diagrams and Trend Line.
3. **Descriptive Statistics:** Numerical Measures: Measures of Location (Central Tendency): Mean, Harmonic Mean, Geometric Mean, Median, Mode, Percentiles, Quartiles, Measures of Variability (Dispersion): Range, Inter-Quartile Range, Variance, Standard Deviation, Coefficient of Variation, Measures of Distribution Shape, Relative Location and Detecting Outliers: Distribution Shape, Z-Scores, Detecting Outliers, Exploratory Data Analysis: Five Number Summary, Box Plot, Grouped Data: Mean, Variance, Standard Deviation.
4. **Simple Linear Regression:** Simple Linear Regression Model: Regression Model and Regression Equation, Estimated Regression Equation, Least Squares Method, Coefficient of Determination: Coefficient of Correlation, Prediction.
5. **Index Numbers:** Price Relatives, Aggregate Price Indexes, Laspeyres, Paasche and Fisher Indexes.
6. **Time Series Analysis and Forecasting:** Time Series Patterns: Horizontal Pattern, Trend Pattern, Seasonal Pattern, Cyclical Pattern, Selecting a Forecasting Method, Forecast Accuracy, Moving Average

E. Office Hours

Office hours give students the opportunity to ask in-depth questions and to explore points of confusion or interest that cannot be fully addressed in class.

F. Exams & Grading System

The semi-official dates of the exams for this course are:

- **Midterm 1:** 7th or 8th week.
- **Quizzes & Homework:** During the semester.
- **Final Exam:** 16th week.



Your course grade will be based on your semester work as follows:

Midterm 1: 20 %	Final Exam: 60 %
Quizzes, Homework, Attendance & Participation: 20 %	

The grading distribution:

A+	A	B+	B	C+	C	D+	D	F
[95, 100]	[90, 95)	[85, 90)	[80, 85)	[75, 80)	[70, 75)	[65, 70)	[60, 65)	[0, 60)

G. Student Attendance/Absence

Only three situations will be considered as possible excused absences:

- Occurrence of a birth or death in the immediate family will be excused. (“Immediate family” is defined by the University as spouse, grandparents, parents, brother, or sister).
- Severe illness in which a student is under the care of a doctor and physically unable to attend class will be excused. Students are not excused for a doctor's appointment. Do not make appointments that conflict with rehearsals. Notes from the University Health Center will be accepted.

[Executive Rules for Study Regulations and Exams](#)

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