



EDO UNIVERSITY, IYAMHO

EDO STATE, NIGERIA

DEPARTMENT OF ECONOMICS



ECO 213: DECSRIPTIVE STATAISTICS

- INSTRUCTOR:** David Umoru, Email: david.umoru@edouniversity.edu.ng
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- LECTURES:** Tuesday, 3Pm – 5pm, Lecture Classroom 5 (LC5),
Mobile Line: (+234)8033888414
- OFFICE HOURS:** Thursdays, 10am to 2pm, Office: 1st Floor, MH Administrative Block

GENERAL OVERVIEW OF LECTURE:

- i. Descriptive statistics describes statistical measures and techniques of analyzing data.
- ii. The course concentrates on data tabularization, graphical (plotting) and visual presentation of data.
- iii. The course also dwell so much on counting techniques, measures of central tendency, dispersion and probability theory
- iv. The course introduces students to techniques and tools to deal with economic data and economic applications. Given that probability and statistics are central to modern applied economics; it thus implies that a clear understanding of such ideas is imperative in the subsequent study of economics.
- v. In sum, it is the foundation of a series of courses in the teaching of quantitative economics such as inferential Statistics and mathematical economics. In particular, it will launch the students to basic statistical concepts and characteristics of economic data

PREREQUISITES: Students should be acquainted with introduction to statistics (ECO 113 & 123) with emphasis on data summaries, probability, mathematical expectation, variance, covariance, and central limit theorem.

LEARNING OUTCOMES: The students at the end of this course should be able to:

- i. Have a solid foundation in data description, data tabularization, graphical presentation, and counting techniques
- ii. Understand:
 - a. the basic techniques of visualizing data
 - b. the types of descriptive measures; - know how to construct various charts and graphs
 - c. know how to calculate descriptive measures and interpret the results;
- iii. Analyze a set of data, to reach a conclusion based on these analyses, and to make and defend a recommended course of action.

ASSIGNMENTS: Classroom test and take home assignments will also be given to facilitate learning of the course. This will make up the continuous assessment of 30% of the final grade of every student.

GRADING: We will assign 10% of this class grade to homeworks, 10% for the programming projects, 10% for the mid-term test and 70% for the final exam. The Final exam is comprehensive. The grading for this course is a combination of continuous assessment and final examinations. A final examination will be written at the end of the course and this will cover 70%

REFERENCE TEXTS

The recommended textbooks for this class are as stated:

Title: *Descriptive Statistics and Probability*

Authors: Schaum's.

Publisher: Schaum's Outline Series, 2nd Edition

Year: 2007

Title: *Introduction to the Practice of Statistics*

Author(s): Moore, D. S. and McCabe, G. P.

Publisher: Freeman Publishers, 2nd Edition

Year: 2008

Title: *Elementary Statistics and Inference*

Author(s): De Veaux, Velleman, Bock

Publisher: Freeman Publishers, 5th Edition

Year: 2015

COURSEWARE: ECO 213 – Descriptive Statistics

Section I: Basic Measures

- 1.0 Introduction
- 1.1 Descriptive Statistics: Definition
- 1.2 Elements of Descriptive Statistics
- 1.3 Data Collection Methods
- 1.4 Statistical Scale of Measurement

Section II: Moments and Moments Generating Functions

- 2.0 What are Moments?
- 2.1 Moment About the Mean
- 2.2 Moments about origin
- 2.3 Relationship between Moments

Section III: Skewness

- 3.0 Meaning of Skewness
- 3.1 Type of Skewness

3.2. Measurements of Skewness

Section IV: Kurtosis & Modality

4.0. Meaning of Kurtosis & Modality

4.1. Type of Kurtosis & Modality

4.2. Measurements of Kurtosis & Modality

Section V: Partitions/Fractiles

5.0. Meaning of Partitions/Fractiles

5.1. Measures of Partition/Fractiles

Section VI: Permutation and Combinations

6.0 Mathematical Expectations

Section VII: Sampling Theory

7.0 What is Sampling?

7.1 Importance of Sampling

7.2 Sampling Techniques

7.3 Sampling Distribution

7.4 Revisions/Conclusion