

HBC203 Statistics and Data Analysis for the Social and Behavioural Sciences

Level: 2

Credit Units: 5 Credit Units

Language: ENGLISH

Presentation Pattern: EVERY JULY

Synopsis:

HBC203 Statistics and Data Analysis for the Social and Behavioural Sciences introduces students to the basic principles of quantitative data analysis and helps them develop the skills required for working with statistical data. As they will encounter quantitative data in everyday life, it is essential for them to acquire a competent understanding of how statistics can be used to summarise and interpret the information in the world around them. This course focuses on the application of various statistical tools and methods in the behavioural sciences. The topics will include principles of measurement, measures of central tendency and variability, correlations, simple regression, hypothesis testing, t-tests, analysis of variance, and chi-square tests. Students will have the opportunity to learn to use statistical software (e.g., R, SPSS) and acquire practical experience so that they are able to visualise and analyse data independently to address relevant social and behavioural science questions.

Topics:

- Introduction to Statistics
- Variables and Measurement
- Frequency Distributions & Central Tendency
- Variability; Z-scores
- Probability; Distribution of sample means
- Hypothesis Testing
- Introduction to t-test
- Independent samples t-test; Dependent samples t-test
- ANOVA
- Correlation
- Regression
- Chi-square Test

Learning Outcome:

- Show an understanding of the pertinence of statistical inquiry for the social and behavioural sciences.
- Examine the core concepts and principles of quantitative data analysis and statistical tests and techniques for the social and behavioural sciences.
- Identify the different types of variables that are present in any given set of quantitative data.
- Discuss the advantages and disadvantages of using quantitative data analysis to understand an existing social phenomenon.
- Analyse data using different statistical techniques and appropriate statistical software.
- Interpret the statistical output of any given quantitative research analysis.
- Use statistical software or formulae to carry out basic to intermediate statistical analysis and visualisation.

Assessment Strategies (Daytime Class):

Components	Description	Weightage Allocation (%)
Overall Continuous Assessment	PRE-CLASS QUIZ 1	5
	PRE-CLASS QUIZ 2	5
	TUTOR-MARKED ASSIGNMENT 1	25
	TUTOR-MARKED ASSIGNMENT 2	25
	GROUP BASED ASSIGNMENT 1	40
Total		100