THE UNIVERSITY OF THE WEST INDIES, MONA

ECON2010 STATISTICAL COMPUTING

Semester II, 2020-21

Lecturer: Jevon Henry
Email address: jevon.henry@uwimona.edu.jm; jev_56@hotmail.com
Office Hours: Mondays 12 noon – 2 pm; Tuesdays 4 pm – 5 pm

Pre-requisites: ECON2009 OR STAT2001
Anti-requisite: SOCI2009

Description

This is a practical course that has been designed to introduce students to data analysis using SPSS. The course teaches students how to use the computer software to analyze data and solve problems is statistics.

Learning Outcomes

Upon successful completion of this course, students should be able to:

- Apply data analytical methods to a given scenarios using SPSS
- Construct the appropriate test/calculations/diagrams for given situations using SPSS
- Evaluate the results for each test/calculation/diagram using SPSS
- Write reports of statistical results using SPSS

Modes of Delivery

Two lecture hours and one tutorial hour per week. ***Delivery will be online.***

Assessment

Assignment 1: 20%; Assignment 2: 20%; Assignment 3: 60%

Details and dates will be announced.

Syllabus

Review of Descriptive Statistics

- Main types of data
- Basic descriptive methods
- Exploratory data analysis
- Output generation & interpretation in SPSS

Review of Hypothesis Testing

- Hypothesis Testing Techniques
- The appropriateness of each test
- Output generation & interpretation in SPSS

Scatterplots & Correlation

- Creation & interpretation of scatterplots
- Correlation & its relation to scatterplots
- Using the appropriate correlation test for different types of data
- Output generation & interpretation of results in SPSS

Regression and Regression Diagnostics

- Simple Regression
- Multiple Regression
- Dummy, Interaction, and Polynomial variables
- Regression diagnostic
- Weighted Least Squares: correction for heteroskedasticity
- Output generation & interpretation in SPSS

Logistic regression

- Mathematical derivation of logit models
- Output generation & interpretation in SPSS

Factor Analysis

- Purpose of factor analysis
- Theoretical and mathematical foundations of factor analysis
- Output generation & interpretation in SPSS

Resources

Prescribed

Bryman, Alan and Cramer, D ***Quantitative Data Analysis (with SPSS for Windows)***, Routledge. 2005

Recommended

De Vaus, D. **Surveys in Social Research**, Routledge. 2002

De Vaus, D. **Analyzing Social Science Data: 50 Key Problems in Data Analysis**, London: SAGE publications, 2002