

Course Overview

Statistics is one of the studies that is applicable in all fields. It is used to solve a problem using quantitative analysis.

The use of statistics has been increasingly growing due to the development of various branches of study, one of which is applied science called Statistics for Business and Economics. Statistics plays a significant role in planning and decision-making aspects in business and economics. Data that is concerned with the economy of a company or a nation is processed by using theories and concepts of statistics as a medium to problem solving.

This book provides readers with a fundamental theory and its calculations. Therefore, the readers are able to process and analyze the data accordingly.

This subject weighs three (3) credit units and consists of nine (9) modules.

Module 1: Focuses on Regression Theory. Students are expected to understand how to draw a regression line based on the original data distribution. This module consists of two Learning Activities.

Learning Activity 1: Drawing A Regression Line (make a linear regression line)

Learning Activity 2: Concepts in Regression Analysis and the Use of SPSS

Module 2: Focuses on Regression Analysis. Students are expected to apply the concept of simple regression. This module consists of three Learning Activities.

Learning Activity 1: Simple Linear Regression

Learning Activity 2: Coefficient of Determination

Learning Activity 3: Correlation Coefficient and its usage in SPSS

Module 3: Focuses on Multiple Regression. Students are expected to apply the principle of least squares to obtain the estimated coefficient of multiple regression.

Learning Activity 1: Multiple Linear Regression

Learning Activity 2: Type of Regression Analysis and the Use of SPSS

Module 4: Focuses Inference in OLS Regression. Students are expected to test regression parameters.

Learning Activity 1: Regression Parameter Testing and Confidence Intervals

Learning Activity 2: Coefficient of Multiple Determination and the Use of SPSS

Module 5: Focuses on Assumptions in OLS Regression. Students are expected to detect indications of violations of assumptions related to errors.

Learning Activity 1: Assumptions Underlying OLS Regression

Learning Activity 2: Classical Assumption Test and the Use of SPSS

Module 6: Focuses on Time Series Analysis and Linear Trend Models. Students are expected to apply the concepts of Time Series Analysis and Linear Trend Models.

Learning Activity 1: Time Series Analysis

Learning Activity 2: Non-linear Trend Models

Learning Activity 3: Decomposition Methods

Module 7: Focuses on Chi Square. Students are expected to draw conclusions on the results of calculations with the Chi Square concept.

Learning Activity 1: Concept of Chi Square

Learning Activity 2: Goodness-of-Fit Test

Module 8: Focuses on Bayes' theorem. Students are expected to make decisions using Bayes' theorem.

Learning Activity 1: Probability for Multiple Events

Learning Activity 2: Bayes' Theorem

Module 9: Focuses on Decision theory. Students are expected to apply the concepts of decision theory to make decisions in various conditions.

Learning Activity 1: Decision Making under Conditions of Uncertainty

Learning Activity 2: Decision Making under Conditions of Risk

Competency Map

Statistics for Business and Economics/IEESPA4224/3 Credit Units

