UNIVERSITI TEKNOLOGI MARA

COURSE INFORMATION

Confidential

Course Code	:	STA404
Course Name (English)	:	STATISTICS FOR BUSINESS AND SOCIAL SCIENCES APPROVED
Course Name (Malay)	:	STATISTIK PERNIAGAAN DAN SAINS SOSIAL
Course Level	:	6 - Bachelors Degree
SLT	:	120 Hours
		Equivalent to 3 Credits
		Face to Face: 58 Hours
		Non Face to Face: 0 Hours
		Student Preparation Time: 62 Hours
Pre-Requisite Courses	:	No course recommendations
Co-requisite Courses	:	No co-requisite Courses listed
Equivalent Courses	:	STATISTICS FOR BUSINESS AND SOCIAL SCIENCES (STA404)
Teaching Period Duration	:	14 Weeks
Resource Person	:	AZ'LINA BINTI ABDUL HADI
National Education Code	:	(4)Science, Mathematics and Computing
Delivery Period Duration	:	1 Semester

Course Learning Outcomes

At the end of the course, students should be able to:

1. Apply appropriate concepts and methods to solve given problems related to statistics for business and social sciences. (C3)
2. Demonstrate communication skills in a group project on topics related to statistics for business and social sciences. (A3)
3. Demonstrate lifelong learning skills in carrying out assignments related to statistics for business and social sciences. (A3)

Course Description

This course introduces the students to the basic and intermediate methods of data analysis. It emphasis on the use of descriptive and inferential statistics including numerical descriptive, estimation, hypothesis testing, analysis of variance, chi-square test of independence and regression. Students will be exposed to analysis using statistical software, and interpretation of output.

Syllabus Content

1. Introduction to Statistics

- What is Statistics
- Descriptive and Inferential Statistics
- Variable, Types of Variable, Types of Data, and Level of Measurement
- Data Collection Methods
- Sampling Techniques (simple random sampling, stratified, systematic, cluster, convenience, quota, judgmental, and snowball)

2. Descriptive Statistics

- Organizing data (bar chart, pie chart, stem and leaf, box whisker plot, frequency distribution table and histogram)
- Numerical Descriptive Measures (ungrouped data)
- Measures of Central Tendency
- Measures of Variation (range, standard deviation, variance, coefficient of variation)
- Measure of Skewness
- Measures of Position

3. Estimation

- Sampling Distribution of the Mean
- Interval Estimation for a Mean
- Interval Estimation for the Difference Between Two Means (Independent Samples)
- Interval Estimation for the Dependent Samples

4. Hypothesis Testing

- Concept of Hypothesis Testing
- Test of Mean Difference:
- Testing for a Mean
- Testing the Difference Between Two Means (Independent Samples)
- Testing the Difference Between Two Means (Dependent Sample)
- Testing for the Difference Among More Than Two Means (One-Way Analysis of Variance)
- Test for Independence

5. Bivariate Analysis

- Correlation (Scatter Diagram and Linear Correlation Coefficient)
- Simple Linear Regression
- Estimating Linear Regression using Least Square Method
- Coefficient of Determination

Teaching Methodologies

- Discussion
- Lectures
- Tutorial

Proposed % Marks Approved by KPP

Question Difficulty Levels	Range
C1 - C2	25 - 40
C3 - C4	40 - 60
C5 - C6	15 - 30

Assessment

Continuous Assessment:	60.00% Assignment - 10% out of 100 on Week 10. Passing Mark(s): 50 n/a CLO: 3 Group Project - 10% out of 100 on Week 13. Passing Mark(s): 50 n/a CLO: 2 Quiz - 10% out of 100 on Week 4. Passing Mark(s): 50 n/a CLO: 1 Test - 30% out of 100 on Week 8. Passing Mark(s): 50 n/a CLO: 1
Final Assessment:	40.00% Final Examination - 40% out of 60 on End of Semester. Passing Mark(s): 30 Final Exam CLO: 1 **Duration :** 120 minutes

Transferable Skills

Problem solving skills developed through tests, quizzes and discussion.

Special Regulation

This Module has no special regulation

Reassessment Requirement

Repeat the Course

Reassessment Description

The assessment of this Course is inextricably linked to the delivery. The student must reattend the Course in its entirety in order to be reassessed.

Recommended Text

1. Allan G.Bluman, *Elementary Statistics: A Step by Step Approach*, 10th ed., McGraw-Hill Education, 2018, ISBN: 9781259922015

References

1. Kieth A. Carlson & Jennifer R. Winquist, *An Introduction to Statistics: An Active Learning Approach*, 2nd ed., SAGE Publications Inc., 2017, ISBN: 978148337873
2. Evan M. Berman & XiaoHu Wang, *Exercising Essential Statistics*, 4th ed., SAGE Publications Inc., 2017, ISBN: 978-150634895
3. Neil Weiss, *Introductory Statistics*, 10th ed., Pearson Education Inc., 2017, ISBN: 9780321989178
4. Ronald E.Walpole, Raymond H.Myers, Sharon L.Myers & Keying Ye, *Probability and Statistics for Engineers and Scientist*, 9th ed., Pearson Education Inc., 2017, ISBN: 978933251908
5. T. Rajaretnam, *Statistics for Social Sciences*, 1st ed., SAGE Publications, 2016, ISBN: 978935150655
6. Howard M. Reid, *Introduction to Statistics*, 1st ed., SAGE Publications Inc, 2013, ISBN: 9781452271965
7. Sheridan J. Coakes, *SPSS: Analysis Without Anguish Using SPSS Version 20*, 20th ed., John Wiley & Sons Inc., 2012, ISBN: 978111833776
8. Robert H.Carver & Jane Gradwohl Nash, *Doing Data Analysis with SPSS®: Version 18.0*, 5th ed., Cengage Learning, 2012, ISBN: 978084004916
9. John Murdoch & John Anthony Barnes, *Statistical Tables for Students of Science, Engineering, Psychology, Business, Management, Finance*, 4th ed., Macmillan Education, 1998, ISBN: 9780333558591

Other References

This module does not have other references

Course Extra Information

This Module has no extra information