

COURSE OUTLINE

Department & Faculty: Dept. of Mechanical Engineering & Management Centre for Diploma Studies, SPACE, UTM	Page :
Course Code : Business Statistics (DDWG 2213) Total Lecture Hours : 42 hours	Semester: Academic Session:

Lecturer	:	
Room No.	:	
Telephone No.	:	
E-mail	:	
Synopsis	:	This course is design to expose the student the basic knowledge of statistics in the field of business. Besides that, it provides a rich depth of practical examples and application approach by using statistical techniques. This course will also emphasize topics on introduction and data collection, presenting data in tables and charts, numerical descriptive measures, basic probability, normal distribution, sampling distributions, fundamental of hypothesis testing : one-sample tests; two-samples tests with numerical data, analysis of variance, tests for two or more samples with categorical data, simple regression and correlation and index numbers.

LEARNING OUTCOMES

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

No	Course Learning Outcome	Programme Learning Outcome(s) Addressed	Taxonomy and KI levels	Assessment Methods
1.	Identify the data collection methods and understand how to categorize data.	PLO1	C2	Quiz, Test Final Exam
2.	Analyze and understand the mean, median, mode and variance for a set of data. Apply the common rules of probability and to evaluate the types of processes that are presented by discrete probability distributions.	PLO1	C3	
3.	Discuss the important of properties of the normal distribution, know how to use test statistic, critical value and p-value approach to test the null hypothesis.	PLO3	P3, CTPS1	
4	Compute and understand and the price index Identify and analyse problems as well as propose alternative solutions	PLO1	C3	Assignment
6.	Work collaboratively and communicate effectively in a team and changing roles.	PLO5	A2, CTPS1, TS1, TS2	

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Prepared by: Name: Mohd. Shafie bin Abd. Rashid Signature: Date:	Certified by: (Course Panel Head) Name: Hairuzzafwan bin Bukhari Signature: Date:
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STUDENT LEARNING TIME

Teaching and Learning Activities	Student Learning Time (hours)
A. Face-to-face Learning <ol style="list-style-type: none"> Lecture 35 Tutorial 14 Student Centered Learning 7 	
B. Self Directed Learning <ol style="list-style-type: none"> Non face-to-face : project 34 Revision 16.5 Assessment Preparation 8 	
C. Formal Assessment <ol style="list-style-type: none"> Continuous Assessment : test 3 Final Exam 2.5 	
Total	120

TEACHING METHODOLOGY

Lecture and Discussion, Homework, Co-operative Learning, Independent Study, Assignment.

LECTURE WEEKLY SCHEDULE

Week 1 & 2	1.0 Introduction and Data Collection <ol style="list-style-type: none"> Types of data Fundamentals elements of a statistical analysis Types of sampling methods Collecting data, why data is needed, source of data 	4 hrs
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Week 3 & 4	2.0 Presenting data in tables and charts <ol style="list-style-type: none"> 1. Organizing numerical data 2. Tables and charts for numerical data 3. Graphing bivariate numerical data 4. Tables and charts for categorical data 5. Tabulating and graphing bivariate categorical data 	3 hrs
Weeks 4&5	3.0 Numerical descriptive measures <ol style="list-style-type: none"> 1. Measures of central tendency, variation and shape 2. Exploratory data analysis 3. Obtaining descriptive summary measures from a population 4. The coefficient of variation 	5 hrs
Week 5&6	4.0 Basic probability <ol style="list-style-type: none"> 1. Basic probability 2. Concepts of conditional probability 3. Bayes' theorem 	4 hrs
Week 6	TEST 1	REVISION CHAPTERS 1, 2, 3 & 4
Week 7	5.0 The normal distribution and other continuous distributions <ol style="list-style-type: none"> 1. The normal distribution 2. The normal approximation to the Binomial Distribution 	3 hrs
Week 8	Mid term break	
Weeks 8 & 9	6.0 Sampling distributions <ol style="list-style-type: none"> 1. The unbiased property of the sample mean 2. Standard error of the mean 3. Sampling from normally and non normally distributed populations 4. Sampling distribution of the proportion 	4 hrs
		5 hrs

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Weeks 9 & 10	7.0 Fundamentals of hypothesis testing: one -sample tests <ol style="list-style-type: none"> 1. Hypothesis testing methodology 2. z test of the hypothesis for the mean and proportion 3. t test of hypothesis 	
Weeks 10 & 11	8.0 Two-sample hypothesis tests <ol style="list-style-type: none"> 1. Comparing two independent samples 2. Comparing two related samples 	4 hrs
Week 11	TEST 2	
Week 12 & 13	9.0 Analysis of variance (ANOVA) and Chi-square tests <ol style="list-style-type: none"> 1. One-way analysis 2. Chi-square test for the differences in more than two proportions 	4 hrs
Weeks 13	10.0 Simple regression and correlation <ol style="list-style-type: none"> 1. Describe the types of regression models. 2. Compute the simple linear regression. 	2 hrs
Weeks 14&15	11.0 Index numbers <ol style="list-style-type: none"> 1. Explain the concept of index numbers. 2. Compute the price index. 3. Compute the aggregate price indexes and weighted aggregate price indexes. 	3 hrs
	Revision week – 1 week	
	Final Exam weeks – 2 weeks	

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REFERENCE S

1. Mark L. Barenson, David M. Levine and Timothy C, Krehbiel (2015). Basic Business Statistics:
Concepts and applications, 13th ed. New Jersey, Prentice Hall. (Text book)
2. Richard I. Levine & David S. Rubin (2005). Statistics for management. 7th ed. New Jersey.
Prentice Hall.
3. Prem S. Mann (2004). Introductory statistics. 5th ed. USA, Wiley.

GRADING

No.	Assessment	Number	Each Assessment %	Overall %	Dates
1	Assignment	1	10	10	
2	Quiz	1	5	5	
2	Test 1	1	10	1	
3	Test 2	1	15	15	
4	Final Exam	1	60	60	
	Overall Total			100	