

The Hong Kong Polytechnic University

Subject Code	AMA1501
Subject Title	Introduction to Statistics for Business
Credit Value	3
Level	1
Pre-requisite / Co-requisite/ Exclusion	Nil
Objectives	<p>This subject aims to:</p> <ul style="list-style-type: none"> (i) provide students with a variety of basic techniques in understanding and interpreting data; (ii) allow students to develop skills in analyzing scenarios and problems in commerce and industry by applying statistical methods. The emphasis will be on applications of elementary statistical methods to commerce and industry.
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ul style="list-style-type: none"> A. Use a variety of basic techniques in understanding and interpreting data; B. Apply elementary statistical methods in analyzing business scenarios and problems; C. Think critically and creatively about the uses and limitations of statistical methods in business; D. Use statistical package and interpret the output, appreciate the applications of information technology for statistical analysis in business.
Subject Synopsis/ Indicative Syllabus	<p>Descriptive Statistics Presentation of business data in tabular, diagrammatic and graphic forms; misleading presentations. Summary measures of location and spread.</p> <p>Probability Concepts of probability. Probability rules. Bayes' Theorem. Random variables and expected values; uses and limitations in decision making. Common probability distributions: Binomial, Poisson and Normal.</p> <p>Estimation Simple random samples. Sampling distributions: mean, proportion and differences. Confidence intervals: mean, proportion and differences.</p> <p>Hypothesis Testing Hypothesis testing: mean, proportion and differences.</p>

	<p>Chi-square Test Test of goodness of fit. Test of independence.</p> <p>Relationships between Variables Exploratory data analysis. Linear relationships: ordinary least squares. Correlation coefficients.</p> <p>Multiple Regression Multiple regression equation. Inferences about parameters. Modelling techniques</p>
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