Subject Code	MM604
Subject Title	Statistical Analysis for Management Research
Credit Value	3
Level	6
Normal Duration	1-semester
Pre-requisite/ Co-requisite/ Exclusion	None
Objectives	This subject contributes to the achievement of the DBA/DMgt outcome by sharpening students' ability to conduct original applied research and ethical awareness in business administration (Outcome 3).
	This course is designed for DBA/DMgt participants who want to learn or to refresh their understanding of basic to more advanced statistical applications that are commonly used in management research (both academic and industrial). This course will be much more practical and "hands on" than theoretical. In that sense, it is much more about data analysis than statistics, per se. Emphasis will be on such matters as inputting data, transforming and manipulating data, formulating strategies for data analysis, strategies for analyzing a database, performing statistical techniques using common software packages, interpreting results and formulating the next steps.
	The techniques covered will range from the relatively simple techniques associated with descriptive statistics using SPSS to such advances techniques such as Factor Analysis, Correspondence Analysis, and Structural Equation Modeling. This subject will be especially useful for those who plan to conduct research that involves quantitative analysis in their dissertation as well as for those how wish to analyze data and apply data-driven insights to business and industry using data science
Intended Learning Outcomes	Upon completion of the subject, students will be able to: a. understand when to use various statistical applications that are commonly used in management and in academic papers; b. formulate a strategy for analyzing a particular data set; c. use the SPSS and AMOS software programs to analyze different types of data to answer a broad range of research questions; d. use data science to extract meaning from your data; e. better understand relationship of theory-building and theory testing; f. read journal articles and understand the statistical methods used; g. apply domain expertise to solve real-word problems using data science.
Subject Synopsis/ Indicative Syllabus	• Review of the basic statistical concepts • Cleaning, labeling, transforming and describing data • Crosstabs & hypothesis testing • Distributional assumptions and tests of two means • One way and two-way ANOVA • Correlation and bivariate regression • Multiple regression • Hierarchical Multiple Regression • Logistic regression • Exploratory factor analysis • Structural equation modeling using AMOS

Teaching/Learning Methodology	The class is run as a combined lecture and lab. A "typical" class will be comprised of a powerpoint-structured lecture/discussion with participants applying the concepts using either SPSS or AMOS on actual data sets. Topics and issues related to research design are folded into the lectures and assignments. Participants will have to complete a number of assignments relating to data organization, analysis and interpretation. Individual reflection is designed to assess students' understanding about how data science can be used to extract meaning from your data.

Assessment Methods in Alignment with Intended Learning Outcomes	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						
			a.	b.	c.	d.	e.	f.	g.
	Continuous Assessment*	**60%**							
	1. Assignment 1 (individual reflection on method application in Data Science)	30%	✓	✓	✓	✓	✓		✓
	2. Assignment 2	30%				✓		✓	✓
	Examination	**40%**	✓	✓	✓	✓	✓		✓
	Total	100 %							

Weighting of assessment methods/tasks in continuous assessment may be different, subject to each subject lecturer.

To pass this subject, students are required to obtain Grade D or above in the overall subject grade.

Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes: the various methods are designed to ensure that all students taking this subject –

- Discuss the issues brought up in the lectures/seminars;
- Appreciate the different approaches that may be used to formulate a strategy for analyzing a particular data set;
- Participate in discussing and analyzing data by applying various statistical applications.

Student Study Effort Expected	Class contact:	
	▪ Lectures / laboratories	30 Hrs.
	Other student study effort:	
	▪ Preparation for lectures / laboratories	30 Hrs.
	▪ Preparation for assignment / group project and presentation / examination	60 Hrs.
	Total student study effort	120 Hrs.

Reading List and References	*Textbooks* Hair, J. F. Anderson, R. E. Tatham, R.L. and Black, W. C, *Multivariate Data Analysis,*

| | Prentice-Hall International, Inc. (Latest Edition)

Norusis, M. J. *SPSS Guide to Data Analysis*. Upper Saddle River, N.J.: Prentice-Hall (Latest Edition).

References
Byrne, B.M., *Structural Equation Modeling in AMOS*, latest edition.
Field, A., Discovering statistics using SPSS, Sage Publications, latest edition.
Levin and Rubin, D. S. *Statistical for Management*, Prentice Hall, latest edition. |

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