City University of Hong Kong
Course Syllabus

offered by Department of Media and Communication
with effect from Semester A 2017/18

Part I   Course Overview

Course Title: Multivariate Analysis in Communication Research

Course Code: COM8007

Course Duration: One semester

Credit Units: 3

Level: R8

Proposed Area:
(for GE courses only)
☐ Arts and Humanities
☐ Study of Societies, Social and Business Organisations
☐ Science and Technology

Medium of Instruction: English

Medium of Assessment: English

Prerequisites:
(Course Code and Title) None

Precursors:
(Course Code and Title) None

Equivalent Courses:
(Course Code and Title) None

Exclusive Courses:
(Course Code and Title) None

Part II   Course Details

1.   Abstract

The course aims to:

provide post-graduate research students with a working knowledge of the assumptions, concepts, and theories underlying the most frequently used multivariate analysis techniques in quantitative social and behavioural sciences. These techniques include, but are not limited to, multiple regression, logistic regression, exploratory and confirmatory factor analysis, path analysis, structural equation modelling (SEM), and multilevel analysis. The selection of specific topics may be tailored to students' research needs each semester. The focus will be on practical issues such as selecting the appropriate analysis, preparing data for analysis in the popular statistical packages (e.g., SPSS and AMOS), interpreting output, and presenting results of a complex nature.

The course addresses both the underlying mathematics and problems of applications. As such, a reasonable level of competence in both statistics and mathematics is needed.

2.   Course Intended Learning Outcomes (CILOs)

No.	CILOs[#]	Weighting* (if applicable)	Discovery-enriched curriculum related learning outcomes (please tick where appropriate)		
			A1	*A2*	*A3*
1.	**Describe** the basic assumptions, concepts, theories, and applications of multivariate statistical procedures most commonly used in social and behavioural research	20%		✓	✓
2.	**Identify** and **select** the appropriate multivariate techniques to address the research question through creative research design	20%	✓	✓	✓
3.	**Apply** appropriate multivariate statistical techniques to their own research problem by using SPSS, AMOS, and other software packages	20%		✓	✓
4.	**Discover** and correctly **interpret** new knowledge from various multivariate techniques and **report** the results according to APA publication guidelines	20%	✓	✓	✓
5.	Critically **analyze** and **evaluate** articles in the literature reporting results from multivariate analyses	20%	✓	✓	✓
* If weighting is assigned to CILOs, they should add up to 100%.		100%			

A1: *Attitude*

Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

A2: *Ability*

Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to self-life problems.

A3: Accomplishments

Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

3. Teaching and Learning Activities (TLAs)

TLA	Brief Description	CILO No. 1	2	3	4	5	Hours/week(if applicable)
Lecture	Students are required to attend lecture regularly and on time every week.	✓	✓				NA
Lab Tutorial–	Weekly tutorials are conducted to give students a chance to internalize course material through demonstrations and hands-on exercises	✓	✓	✓	✓		NA
Homework assignments	Students are required to use SPSS to perform an assigned multivariate technique on a chosen dataset, and translating the output into coherent narratives, tables, and figures in APA format.	✓	✓		✓		NA
Evaluation and critique of homework assignments	For each homework assignment, students are asked to evaluate and critically review the work of a randomly chosen classmate.	✓	✓	✓	✓	✓	NA

4. Assessment Tasks/Activities (ATs)

Assessment Tasks/Activities	CILO No.					Weighting*	Remarks
	1	2	3	4	5		
Continuous Assessment: <u>100</u> %							
Lecture Participation	✓	✓	✓	✓	✓	10%	
Tutorial & exercises	✓	✓	✓	✓	✓	25%	
Homework Assignments	✓	✓	✓	✓		40%	
Assignment Critique				✓	✓	25%	
Examination: __NA							
* The weightings should add up to 100%.						100%	

5. Assessment Rubrics

(Grading of student achievements is based on student performance in assessment tasks/activities with the following rubrics.)

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C, C-)	Marginal (D)	Failure (F)
Assignments	Quality of assignment	High	Significant	Moderate	Basic	Not even reaching marginal levels
Final project	Quality of final project	High	Significant	Moderate	Basic	Not even reaching marginal levels

Part III   Other Information (more details can be provided separately in the teaching plan)

1.   **Keyword Syllabus**

Multivariate analysis, ANCOVA, MANOVA, MANCOVA, factor analysis, multiple regression, discriminant analysis, logistic regression, path analysis, structural equations modelling

2.   **Reading List**

2.1   **Compulsory Readings**

1.	Tabachnick, B. J. & Fidell, L. S. (2001). Using Multivariate Statistics. (4th ed.). New York: Harper Collins.
2.	Cohen, J., Cohen, P., West, S., & Aiken, L. (2002). Applied Multiple Regression/Correlation for Behavioral Sciences. (3rd ed.). New York: Lawrence Erlbaum Associates.
3.	Berry, W.D. (1993). Understanding Regression Assumptions. Sage.
4.	Raudenbush, S. W. & Anthony S.B (2002). Hierarchical Linear Models: Applications and Data Analysis Methods. Sage.
5.	Kline, R. B. (2005). Principles and Practice of Structural Equation Modeling. Guiford.
6.	Enders, W. (2004). Applied Econometric Time Series. Wiley.

2.2   **Additional Readings**
(Additional references for students to learn to expand their knowledge about the subject.)