City University of Hong Kong
Course Syllabus

offered by Department of Media and Communication
with effect from Semester B 2018/19

Part I   Course Overview

Course Title:	Multivariate Analysis in Communication Research
Course Code:	COM8007
Course Duration:	One semester
Credit Units:	3
Level:	R8
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
(A 150-word description about the course)

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) or popular programming languages (e.g., R or Python), 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)
(CILOs state what the student is expected to be able to do at the end of the course according to a given standard of performance.)

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%			

 # Please specify the alignment of CILOs to the Gateway Education Programme Intended Learning outcomes

(PILOs) in Section A of Annex.

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)
(TLAs designed to facilitate students' achievement of the CILOs.)

TLA	Brief Description	CILO No.					Hours/week(if applicable)
		1	2	3	4	5	
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
Final project	Students are require to conduct a final project to use knowledge learned from this course to discover their own knowledge	✓	✓	✓	✓	✓	NA

4. Assessment Tasks/Activities (ATs)

(ATs are designed to assess how well the students achieve the CILOs.)

Assessment Tasks/Activities	CILO No.					Weighting*	Remarks
	1	2	3	4	5		
Continuous Assessment: 100 %							
Homework Assignments	✓	✓	✓	✓		35%	
In-class quizzes	✓	✓	✓	✓		30%	
Final project	✓	✓	✓	✓	✓	35%	
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	Students demonstrated excellent understanding of lecture content.	Students demonstrated good understanding of lecture content.	Students demonstrated moderate understanding of lecture content.	Students demonstrated little understanding of lecture content.	Students failed to demonstrate understanding of lecture content.
Quizzes	Performance on quizzes	Quiz score over 90	Quiz score between 80-90	Quiz score between 70-80	Quiz score between 60-70	Quiz score below 60
Final project	Quality of final project	Students exhibited strong knowledge in data analysis and data interpretation. Final project has a good potential to be published in academic journals.	Students exhibited good knowledge in data analysis and data interpretation. Final project has a good potential to be accepted by international conferences.	Students exhibited moderate knowledge in data analysis and data interpretation. Final project has some potential to be accepted by international conferences after revision.	Students exhibited basic knowledge in data analysis and data interpretation. Final project needs substantial revision to be accepted by international conferences	Students failed to demonstrate knowledge in data analysis and data interpretation.

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

1.   **Keyword Syllabus**
     (An indication of the key topics of the course.)

     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**
     (Compulsory readings can include books, book chapters, or journal/magazine articles. There are also collections of e-books, e-journals available from the CityU Library.)

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.)