

**City University of Hong Kong  
Course Syllabus**

**offered by Department of Public and International Affairs  
with effect from Semester A 2022/23**

---

---

**Part I Course Overview**

<b>Course Title:</b>	<b>Statistical Analysis for Public Policy and Management</b>
<b>Course Code:</b>	<b>PIA6204</b>
<b>Course Duration:</b>	One semester
<b>Credit Units:</b>	3
<b>Level:</b>	P6
<b>Medium of Instruction:</b>	English
<b>Medium of Assessment:</b>	English
<b>Prerequisites:</b> <i>(Course Code and Title)</i>	Nil
<b>Precursors:</b> <i>(Course Code and Title)</i>	Nil
<b>Equivalent Courses:</b> <i>(Course Code and Title)</i>	None
<b>Exclusive Courses:</b> <i>(Course Code and Title)</i>	None

## Part II Course Details

### 1. Abstract

This course introduces Master’s students to basic statistical concepts using real-world examples and hands-on data manipulation. Within this course, students will learn about the practical uses of statistics in social science, public policy, management, and everyday life. The course explores topics such as multiple regression, logistic regression, factor analysis, and structural equation modelling, with a particular focus on understanding the conditions under which various statistical techniques may be properly used. Since virtually all of the computations are done with computers, a portion of class time will be devoted to becoming familiar with statistical packages such as STATA. At the end of this course, students will 1) be able to interpret statistical findings of various kinds, 2) become a qualified “consumer” of statistics presented in scholarly journals, and 3) prepare themselves for future research/capstone projects with a quantitative component.

### 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.	Demonstrate a good understanding of major quantitative techniques often used in action research		x	x	
2.	Become conversant with statistical software		x	x	
3.	Interpret and communicate quantitative results to lay readers			x	x
4.	Think critically about statistical data discussed in reports and newspapers		x	x	x
5.	Apply analytical skills learned in the class to solving real problems in workplace				x
		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)

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

TLA	Brief Description	CILO No.						Hours/week (if applicable)
		1	2	3	4	5		
Structured seminars/computing lab sessions	Structured seminars/computing lab sessions	x	x	x				
Preparation of materials for discussion in seminars/computing lab sessions	Preparation of materials for discussion in seminars/computing lab sessions	x		x	x			
Individual consultation and inquiry together with teachers	Individual consultation and inquiry together with teachers		x	x		x		
Completion of problem sets	Assess students' understanding of materials covered during the course	x		x	x	x		

### 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 %								
Problem Sets	x	x	x	x	x		40%	
Mid-Term Test	x		x		x		25%	
In-Class Final Test	x		x		x		25%	
Class Participation	x	x		x			10%	
Examination: % (duration: , if applicable)							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)	Marginal (B-, C+, C)	Failure (F)
1. Problem Sets	Ability to apply what has been learned over the semester to analyse or address issues in real-world scenarios	Excellent ability to apply what has been learned over the semester to analyse or address issues in real-world scenarios	Good ability to apply what has been learned over the semester to analyse or address issues in real-world scenarios	Basic ability to apply what has been learned over the semester to analyse or address issues in real-world scenarios	Inadequate ability to apply what has been learned over the semester to analyse or address issues in real-world scenarios
2. Midterm Test	Use hand calculations to demonstrate knowledge, understanding, and interpretation of quantitative methods covered in the first half of the course	Excellent demonstration of knowledge, understanding, and interpretation of quantitative methods covered in the first half of the course	Good demonstration of knowledge, understanding, and interpretation of quantitative methods covered in the first half of the course	Basic demonstration of knowledge, understanding, and interpretation of quantitative methods covered in the first half of the course	Inadequate demonstration of knowledge, understanding, and interpretation of quantitative methods covered in the first half of the course
3. Final In-Class Test	Levels of understanding of materials covered during all thirteen weeks of the course	An excellent level of understanding of materials covered during all thirteen weeks of the course	A good level of understanding of materials covered during all thirteen weeks of the course	A basic level of understanding of materials covered during all thirteen weeks of the course	An inadequate level of understanding of materials covered during all thirteen weeks of the course

**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.)*

Descriptive Statistics; Basic Concepts of Multivariate Analysis; Hypotheses Testing; Analysis of Covariance; Factor Analysis; Linear Regression; Structural Equation Modelling; Panel Data

**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.	Schroeder, Larry D., David L. Sjoquist, and Paula E. Stephan. 1986. <i>Understanding Regression Analysis: An Introductory Guide</i> . Beverly Hills: Sage Publications.
2.	Moore, David. 2009. <i>Basic Practice of Statistics</i> . Fifth Edition. New York: W.H. Freeman and Co.
3.	De Veaux, Richard D., Paul F. Velleman, and David E. Bock, 2011. <i>Stats: Data and Models</i> . Boston: Pearson Education.

**2.2 Additional Readings**

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

1.	Babbie, Earl R. 2010. <i>The Practice of Social Research</i> . Belmont, Calif: Wadsworth Cengage.
2.	Wang, Xiaohu, 2010, <i>Performance Analysis for Public and Nonprofit Organizations</i> . Jones and Bartlett Publishers
3.	Berry, W. D. (1993). <i>Understanding Regression Assumptions: Series Quantitative Applications in the Social Sciences</i> . Thousand Oaks.
4.	Cohen, J., Cohen, P., West, S., & Aiken, L. (2002). <i>Applied Multiple Regression/Correlation for Behavioral Sciences</i> . (3rd ed.). New York: Lawrence Erlbaum Associates