

**City University of Hong Kong  
Course Syllabus**

**offered by Department of Applied Social Sciences  
with effect from Semester B 2015/2016**

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**Part I Course Overview**

<b>Course Title:</b>	<u>Applied Social Statistical Analysis</u>
<b>Course Code:</b>	<u>SS5428</u>
<b>Course Duration:</b>	<u>One Semester</u>
<b>Credit Units:</b>	<u>3</u>
<b>Level:</b>	<u>P5</u>
<b>Medium of Instruction:</b>	<u>English</u>
<b>Medium of Assessment:</b>	<u>English</u>
<b>Prerequisites:</b> <i>(Course Code and Title)</i>	<u>Nil</u>
<b>Precursors:</b> <i>(Course Code and Title)</i>	<u>Nil</u>
<b>Equivalent Courses:</b> <i>(Course Code and Title)</i>	<u>Nil</u>
<b>Exclusive Courses:</b> <i>(Course Code and Title)</i>	<u>Nil</u>

## Part II Course Details

### 1. Abstract

This course aims to enable students to understand statistical reasoning behind social research and master basic and advanced knowledge and skills about applying appropriate statistical methods to sociological practices for obtaining verifiable and fruitful findings.

### 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.	Apply practical statistical methods to social research data analysis;	60%	✓	✓	✓
2.	Obtain verifiable and fruitful findings in social research; and	20%	✓	✓	✓
3.	Resolve statistical problems in social research data using the SPSS.	20%	✓	✓	✓
		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	
TLA1: Lecture	In the initial part of the course, lectures serves to establish the essential frame of achieving CILOs by strengthening students' knowledge base. Furthermore, lectures encourage students to master their knowledge by deliberation, reflection, questioning, discussion, and working with the statistical	✓	✓	✓	

TLA	Brief Description	CILO No.			Hours/week (if applicable)
		1	2	3	
	package, Statistical Package for Social Sciences (SPSS).				
TLA2: Workshop	Following the completion of lectures, workshops serve to guide students in their application of statistical methods to sociological research via the use of carefully designed in-class exercises. Students have the chance to learn to develop their mastery of knowledge and competence in practical application through guidance individually. In the workshops, students can work with the SPSS to solve sociological research problems and derive fruitful findings.	✓	✓	✓	
TLA3: Presentation and discussion	By the end of the course, students can present and share among themselves their learning, particularly insights that advance learning. This serves to consolidate what they have learned from the course..	✓	✓	✓	

#### 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		
Continuous Assessment: <u>100</u> %					
AT1: Data Analysis Report Writing and Critique	✓	✓	✓	60%	
AT2: Exercises using SPSS	✓	✓	✓	30%	
AT3: Class Participation	✓	✓	✓	10%	
Examination: _____% (duration: _____, if applicable)				100%	

##### AT1: Research report writing

Each student is to write a data analysis report (2,000 words in the main text) of a given data-set demonstrating mastery of advanced knowledge and skills in applying practical statistical methods to social research. The report will include a critique of the data analysis of existing research. Each student is required to develop and work on his/her report continuously throughout the semester. The student needs to consult the instructor at workshops about the writing. The report will be testimony to the student analytic skills, exploratory ability, and innovative organization and presenting of ideas.

##### AT2: Exercise

Each student is to complete exercises to solve the problems of the application of practical statistical

methods to social research. The student can explore new ways of interpreting findings.

### AT3: Class participation

Each student needs to participate actively in classes, including workshops, presentations, discussions, and sharing sessions, to demonstrate thorough and intensive knowledge about applying practical statistical methods to social research. At the end, each student needs to write a one-page report (about 500 words) about the class participation.

## 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-)	Adequate (C+, C, C-)	Marginal (D)	Failure (F)
1. Data Analysis Report Writing and Critique (60%)	Validity of analysis, coherence of reporting, and demonstration of knowledge building	High	Good	Moderate	Basic	Poor
2. Exercises using SPSS (30%)	Validity of analysis, clarity of reporting, and demonstration of insight	High	Good	Moderate	Basic	Poor
3. Class Participation (10%)	Demonstration of class participation and learning	High	Good	Moderate	Basic	Poor

### 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.)

Data management: transformation, recoding, missing value imputation, weighting; Testing and relating: parametric, nonparametric; Data reduction: factor analysis, clustering, multidimensional scaling; Linear modeling: MANOVA, linear regression, mixed-effect modeling; Nonlinear modeling: Logistic regression, Cox's regression, log-linear modeling

#### 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.)

- Abu-Bader, Soleman H. 2010. *Advanced and Multivariate Statistical Methods for Social Science Research with a Complete SPSS Guide*. Chicago, IL: Lyceum.
- Collier, Jacqueline. 2010. *Using SPSS Syntax: A Beginner's Guide*. Los Angeles, CA: Sage.
- Dugard, Pat. 2010. *Approaching Multivariate Analysis: A Practical Introduction*. New York: Routledge.
- Ho, Robert. 2006. *Handbook of Univariate and Multivariate Data Analysis and Interpretation with SPSS*. Boca Raton, FL: Chapman & Hall.
- Huizingh, Eelko. 2007. *Applied Statistics with SPSS*. London: Thousand Oaks, CA: Sage.
- Kendall, Diana. 2002. *Sociology in Our Times: The Essentials*. Belmont, CA: Wadsworth.
- Landau, Sabine, and Brian S. Everitt. 2004. *A Handbook of Statistical Analyses Using SPSS*. Boca Raton, FL: Chapman & Hall.
- Leech, Nancy L., Karen C. Barrett, and George A. Morgan. 2011. *IBM SPSS for Intermediate Statistics: Use and Interpretation*. New York: Routledge.
- Norusis, Marija J. 2006. *SPSS 15.0: Statistical Procedures Companion*. Upper Saddle River, NJ: Prentice Hall.
- Norusis, Marija J. 2012. *IBM SPSS Statistics 19 Advanced Statistical Procedures Companion*. Upper Saddle River, NJ: Prentice Hall.
- Stevens, James. 2009. *Applied Multivariate Statistics for the Social Sciences*. New York: Routledge.
- te Grotenhuis, Manfred, and Chris Visscher. 2014. *How to Use SPSS Syntax: An Overview of Common Commands*. Los Angeles, CA: SAGE.
- Weinberg, Sharon Lawner, and Sarah Knapp Abramowitz. 2008. *Statistics Using SPSS: An Integrative Approach*. New York: Cambridge University Press.
- 宇传华. 2014. *SPSS 与统计分析*. 北京, 中国: 电子工业出版社.

##### 2.2 Additional Readings

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

- Acock, Alan C. 2005. "Working with Missing Values." *Journal of Marriage & Family* 67(4):1012-1028.
- Amato, Paul R., and Bryndl Hohmann-Marriott. 2007. "A Comparison of High- and Low-distress Marriages that End in Divorce." *Journal of Marriage & Family* 69(3):621-638.
- Ferguson, Christopher J. 2009. "An Effect Size Primer: A Guide for Clinicians and Researchers." *Professional Psychology* 40(5):532-538.
- Field, Andy. 2005. *Discovering Statistics Using SPSS*. London: Sage.
- Flanagan, Constance A., and Bernadette Campbell. 2003. "Social Class and Adolescents' Beliefs about Justice in Different Social Orders." *Journal of Social Issues* 59(4):711-732.
- Fuller, Sylvia. 2008. "Job Mobility and Wage Trajectories for Men and Women in the United States." *American Sociological Review* 73(1):158-183.
- Hawkins, Daniel N., Paul R. Amato, and Valarie King. 2006. "Parent Adolescent Involvement: The Relative Influence of Parent Gender and Residence." *Journal of Marriage & Family* 68(1):125-136.

- Katmak, Tomas, Martin Kreidl, and Laura Fonadova. 2006. "Trends in Educational Assortative Mating in Central Europe: The Czech Republic, Slovakia, Poland, and Hungary, 1988-2000." *European Sociological Review* 22(3):309-322.
- Lawal, Bayo. 2003. *Categorical Data Analysis with SAS® and SPSS Applications*. Mahwah, NJ: Lawrence Erlbaum.
- Leech, Nancy, Karen C. Barrett, and George A. Morgan. 2008. *SPSS for Intermediate Statistics: Use and Interpretation*. New York: Lawrence Erlbaum.
- Li, Jiang Hong, Markus Konig, Marlis Buchmann, and Stefan Sacchi. 2000. "The Influence of Further Education on Occupational Mobility in Switzerland." *European Sociological Review* 16(1):43-65.
- Marsh, Herbert W., Rhonda G. Craven, John W. Hinkley, and Raymond L. Debus. 2003. "Evaluation of the Big-two-factor Theory of Academic Motivation Orientations: An Evaluation of Jingle-Jangle Fallacies." *Multivariate Behavioral Research* 38(2):189-224.
- Murthi, Meera, and Dorothy L. Espelage. 2005. "Childhood Sexual Abuse, Social Support, and Psychological Outcomes: A Loss Framework." *Child Abuse & Neglect* 29(11):1215-1231.
- Norusis, Maruha J. 2005. *SPSS 14.0 Advanced Statistical Procedures Companion*. Upper Saddle River, NJ: Prentice Hall.
- Peugh, James L., and Craig K. Enders. 2005. "Using the SPSS Mixed Procedure to Fit Cross-sectional and Longitudinal Multilevel Models." *Educational & Psychological Measurement* 65(5):811-835.
- Pollack, Detlef, and Gert Pickel. 2007. "Religious Individualization or Secularization? Testing Hypotheses of Religious Change—The Case of Eastern and Western Germany." *British Journal of Sociology* 58(4):603-632.
- Sawilowsky, Shlomo S. 2007. *Real Data Analysis*. Charlotte, NC: Information Age.
- Van Tubergen, Frank, and Herman Van De Werfhorst. 2007. "Postimmigration Investments in Education: A Study of Immigrants in the Netherlands." *Demography* 44(4):883-898.