

**City University of Hong Kong
Course Syllabus**

**offered by College/School/Department of Social and Behavioural Sciences
with effect from Semester A 2022/2023**

Part I Course Overview

Course Title: Applied Social Statistical Analysis

Course Code: SS5428

Course Duration: One Semester

Credit Units: 3

Level: P5

Medium of Instruction: English

Medium of Assessment: English

Prerequisites:
(Course Code and Title) Nil

Precursors:
(Course Code and Title) Nil

Equivalent Courses:
(Course Code and Title) Nil

Exclusive Courses:
(Course Code and Title) Nil

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 | 4 | | | |
| 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 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 | 4 | | | |
| Continuous Assessment: 100% | | | | | | | |
| AT1: Data Analysis Report Writing and Critique | ✓ | ✓ | ✓ | | | 60% | |
| AT2: Exercises using SPSS | ✓ | ✓ | ✓ | | | 30% | |
| AT3: Class Participation | ✓ | ✓ | ✓ | | | 10% | |
| Examination: _____ % (duration: _____, if applicable) | | | | | | | |
| * 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.)

Applicable to students admitted in Semester A 2022/23 and thereafter

| Assessment Task | Criterion | Excellent (A+, A, A-) | Good (B+, B) | Marginal (B-, C+, C) | Failure (F) |
|--|--|--------------------------|-----------------|-------------------------|----------------|
| 1. Data Analysis Report Writing and Critique | Validity of analysis, coherence of reporting, and demonstration of knowledge building | High | Good | Moderate | Poor |
| 2. Exercises using SPSS | Validity of analysis, clarity of reporting, and demonstration of insight | High | Good | Moderate | Poor |
| 3. Class Participation | Demonstration of class participation and learning | High | Good | Moderate | Poor |

Applicable to students admitted before Semester A 2022/23

| Assessment Task | Criterion | Excellent (A+, A, A-) | Good (B+, B, B-) | Fair (C+, C, C-) | Marginal (D) | Failure (F) |
|--|--|--------------------------|---------------------|---------------------|-----------------|----------------|
| 1. Data Analysis Report Writing and Critique | Validity of analysis, coherence of reporting, and demonstration of knowledge building | High | Good | Moderate | Basic | Poor |
| 2. Exercises using SPSS | Validity of analysis, clarity of reporting, and demonstration of insight | High | Good | Moderate | Basic | Poor |
| 3. Class Participation | 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.
- Berkmanm Elliot T., and Steven P. Reise. 2012. *A Conceptual Guide to Statistics Using SPSS*. Thousand Oaks, CA: SAGE.
- Collier, Jacqueline. 2010. *Using SPSS Syntax: A Beginner's Guide*. Los Angeles, CA: Sage.
- Denis, Daniel J. 2019. *SPSS Data Analysis for Univariate, Bivariate, and Multivariate Statistics*. Hoboken, NJ: Wiley.
- Dugard, Pat. 2010. *Approaching Multivariate Analysis: A Practical Introduction*. New York: Routledge.
- Ho, Robert. 2014. *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. 2014. *IBM SPSS for Intermediate Statistics: Use and Interpretation*. New York: Routledge.
- Meyers, Lawrence S., Glenn C. Gamst, and A. J. Guarino. 2013. *Performing Data analysis Using IBM SPSS*. Hoboken, NJ: Wiley.
- 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.
- Reddy, M. Venkataswamy. 2015. *Statistical Methods in Psychiatry Research and SPSS*. Oakville, Ontario: Apple Academic.
- 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.)

- Abbott, Martin. 2017. *Using Statistics in the Social and Health Sciences with SPSS and Excel*. Hoboken, NJ: Wiley.
- Acock, Alan C. 2005. "Working with Missing Values." *Journal of Marriage & Family* 67(4):1012-1028.
- Aljandali, Abdulkader, 2016. *Quantitative Analysis and IBM® SPSS® Statistics: A Guide for Business and Finance*. Switzerland: Springer.
- 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.
- Kulas, John T., Renata Garcia Prieto Palacios Roji, and Adam M. Smith. 2021. *IBM SPSS Essentials*. Hoboken, NJ: Wiley.
- 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.
- Roni, Saiyidi Mat and Hadrian Geri Djajadikerta. 2021. *Data Analysis with SPSS for Survey-Based Research*. Singapore: Springer.
- Sawilowsky, Shlomo S. 2007. *Real Data Analysis*. Charlotte, NC: Information Age.
- te Grotenhuis, Manfred, and Chris Visscher. 2014. *How to Use SPSS Syntax: An Overview of Common Commands*. Thousand Oaks, CA: SAGE.
- 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.