

Course code:	SSC217
Course title:	Statistics for Social Sciences
No. of credits/ term:	3
Lecture:	Two hours per week: Wednesdays 1:30pm – 3:20pm (NAB112)
Tutorial:	One hour per week: (A) Fridays 1:30pm – 2:20pm (SO109 / SO202) (B) Fridays 2:30pm – 3:30pm (SO222 / SO202)
Instructor:	Dr. SIU Leung-Sea, Lucia Room SO214; Phone 2616 7208; Email: Lssiu@Ln.edu.hk

Aims

This is a university statistics course offered at intermediate level. This course provides students with knowledge and understanding of statistical techniques used in social research and everyday life. The course will cover descriptive statistics, inferential statistics, bivariate analysis, and multivariate analysis.

NB: SSC217 is offered in the first semester with an emphasis on SPSS. The same course will be offered by the Department of Economics in the second semester in a slightly different version.

Learning outcomes

At the end of the course, you will be able to:

1. Interpret statistical data in the contexts of economic, political and social life;
2. Use statistical techniques to analyze quantitative relationships among variables in the social sciences;
3. Gain competence in using Statistical Package for the Social Sciences (SPSS) to handle statistical problems;
4. Gain competence in carrying out quantitatively-oriented senior projects.

Assessment of learning outcomes

20%	Tutorial participation
20%	Midterm test (8 Oct 1:30pm, NAB319)
20%	Assignment (Deadline: 24 Nov 4:00pm)
40%	Final Exam

Textbook

Joseph F. Healey (2009). *Statistics: A tool for Social Research* (8th edition), Belmont: Wadsworth Cengage

References

George Mallery (2006). *SPSS for Windows Step by Step: A Simple Guide and Reference* (6th edition), Boston: Allyn and Bacon

Jane Fielding and Nigel Gilbert (2000). *Understanding Social Statistics*, London: Sage

McClave, J.G Benson and T Sincich (1998). *Statistics for Business and Economics*, 9th ed., New Jersey: Peason Prentice Hall

Course materials

1. Lecture powerpoints, tutorial handouts and dataset files are downloadable from WebCT.
2. Tutorial handouts are distributed on class.
3. You can find the textbook in the University bookstore. It is fine if you are using the previous version; only minor differences exist between the 7th and 8th editions.

SPSS software

Our classroom computers, student labs, and the Chiang Chen Multimedia Lab of the Main Library are installed with the SPSS software. Towards the later stage of the course, you are going to use SPSS frequently. You can do your tutorial exercises and SPSS assignment in any one of the labs.

Tutorial attendance (20%)

We have 12 tutorials in this course. Eight tutorials will take place in the computer lab SO202 where you can use SPSS; four tutorials will take place in a classroom setting (SO109/222). Please check the course schedule for dates and rooms.

20% of your final grade will be given according to your tutorial attendance and participation. Tutorials T1 – 9 are compulsory: they are core parts of the course, and they carry attendance points. Tutorials OT1 – 3 are optional: you may skip them without penalty. OT1 is advisable for those who have not taken SSC111 before, and OT2 & OT3 are sessions where you can ask questions for the assignment and final exam. The aim of OT sessions is to provide flexibility for students with different background and learning style.

Exercises

It is important that you do the weekly tutorial exercises and keep up with the course. If you are stuck with unresolved problems, you are welcome to fetch me during tutorials or after lectures.

Assignment (20%)

Your assignment will be available on 12 Nov (Wed). You will be asked to perform statistical techniques learned in the course to solve problems, compile SPSS output, and provide text-based descriptions and interpretations.

An optional tutorial session is provided on 14 Nov (Fri) in SO202. This is a lab session where you can work on the assignment, and I will be walking around the lab to answer your questions. (I am out of town between 18 – 23 Nov, and may not be able to reply emails. There is no lecture and tutorial on 19 Nov and 21 Nov.)

You may discuss with classmates and learn from each other, but **DO NOT COPY**. Make sure you understand the materials you submit, and be able to explain the methods employed. Plagiarism is a serious offence that will not be tolerated. Do not worry too much if your methods are different from your friends' – sometimes there are many ways to solve a problem.

The deadline is 24 Nov 2008 (Mon) 4:00pm, SO214. Please present your work (including graphics, tables and texts) on stapled A4 paper – no plastic folder please. If you miss this deadline, a penalty of 4% will be deducted for every working day excluding Saturday and Sunday. All the 20% will be lost after 4:00pm, 1 Dec.

Midterm Test (20%)

Date: 8 Oct (Wed)

Time: 1:30pm

Venue: NAB319

Assessment weighting: 20%

Coverage: Descriptive statistics and inferential statistics

Final Exam (40%)

Date and time: To be announced

Assessment weighting: 40%

Coverage: All course materials

Don't miss your Test and Exam!

Supplementary tests and exams will only be arranged under exceptional circumstances. If you experience an emergency condition, you have to inform the instructor and the Programme Office as soon as possible. Usually late notices 24 hours after the test/exam will not be accepted.

Indicative Contents

1. Review of elementary statistics
 - The meanings and uses of statistics
 - Univariate statistical analysis
 - Central tendency, dispersion and normal distribution
2. Inferences based on a single sample
 - The elements of a test of hypothesis
 - Large sample test of hypothesis about a population mean
 - Small sample test of hypothesis about a population mean
 - Large sample test of hypothesis about a population proportion
3. Inferences based on two samples
 - Comparing two population means
 - Comparing two population proportions
4. Bivariate statistical analysis
 - Association between two nominal variables
 - Association between two ordinal variables
5. Simple linear regression
 - Fitting the model: the Least Squares approach
 - Estimating and interpreting the beta parameter
 - The coefficient of correlation
6. Multiple regression
 - Multiple regression models
 - Beta parameters
 - Coefficients of determination

SSC 217 Course Schedule (Autumn 2008)

Lecture	Date	Reference	Contents	Tutorial	Date	Contents
L1	3 Sep	Ch. 1, 2 & 3	Introduction Revision: Descriptive Statistics	No tutorial		
L2	10 Sep	Ch. 4, 5 & 6	Revision: Central tendency & dispersion Revision: Normal Distribution	T1	12 Sep (SO202)	<u>SPSS session</u> Data types; Data view / variable view Exploring a single variable
L3	17 Sep	Ch. 7 & 8	Revision: 1-Sample Hypothesis Test Z (large samples) and t (small samples) Type 1 & Type 2 errors	T2	19 Sep (SO109/222)	<u>Classroom session</u> Contexts of Hypothesis Testing Type 1 & Type 2 errors
L4	24 Sep	Ch. 9	Hypothesis Testing: 2-Sample Case (Means and proportions)	OT1 (optional session)	26 Sep (SO109/222)	<u>Revision Classroom session</u> Using Z table & t table Z(critical) & Z(obtained)
	1 Oct		--- National Day ---	T3	3 Oct (SO109/222)	<u>Classroom session</u> Z, sigma and P: 2-sample cases
Test	8 Oct NAB319	Ch. 2 ~ 9	20% Test	T4	10 Oct (SO202)	<u>SPSS session</u> Producing SPSS output files Histogram, tree diagram, boxplot, scatter plot
L5	15 Oct	Ch. 1, 12	Using statistics in SocSci research Bivariate Association (introduction) Causation and Correlation	T5	17 Oct (SO109/222)	<u>Classroom session</u> Explaining graphics and numbers in words Bivariate association
L6	22 Oct	Ch. 13	Bivariate Association (nominal) Phi, Cramer's V, Lambda	T6	24 Oct (SO202)	<u>SPSS session</u> Using Crosstab
L7	29 Oct	Ch. 14	Bivariate Association (ordinal) Gamma, Spearman's Rho	T7	31 Oct (SO202)	<u>SPSS session</u> Using Recode
L8	5 Nov	Ch. 15	Bivariate Association (interval-scale): Scattergram & Linear Regression Correlation coefficient (Pearson's <i>r</i>)	T8	7 Nov (SO202)	<u>SPSS session</u> Simple Regressions & Correlation coefficient
L9	12 Nov	Ch. 10 & 11	ANOVA and Chi Square 20% Assignment. Due: 24 Nov 4pm	OT2	14 Nov (SO202)	<u>Lab Q/A session</u>
	19 Nov		--- No Lecture ---		21 Nov	--- No Tutorial ---
L10	26 Nov	Ch.16 + supp.	Multiple regression models	T9	28 Nov (SO202)	<u>SPSS session</u> Multiple regressions & Beta parameters
L11	3 Dec	Ch.17 + supp.	Beta parameters	OT3	5 Dec (SO202)	<u>Lab Q/A session</u>