

SOSC 1100 **Quantitative Data Analysis for Social Research I**

Fall, 2021

Monday & Wednesday, 9:00-10:20am

Room 4582 (Lift 27-28)

Instructor: Dr. WANG Hongbo (hbwang@ust.hk)
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Course Description and Objectives:

This entry-level course introduces hands-on techniques for presenting, analyzing, and interpreting quantitative social data, many of which are rarely taught in a regular statistics course. It is designed as complementary to a formal statistics course for first-year undergraduate students in a social scientific discipline.

The course covers basic practices of analyzing data for social scientific research, including data management and descriptive analysis. A signature feature of it is devoted computing sessions, in tandem with lectures, which demonstrate how the practices are actually executed with real-world data using a computing tool (e.g. R).

Organization:

The class meets twice a week on Monday and Wednesday, respectively, each lasting for 80 minutes. The lecture will be given on Monday each week, while Wednesday usually is reserved for an accompanying computing session (See “Schedule” below).

All course materials will be distributed through [Canvas](#). Note that they should be used *exclusively* for the purpose of this course.

Computing:

This course will use [R](#) as the major computing tool.

Prerequisite:

Basic math

References:

Babbie, Earl. 2013. *The Practice of Social Research*. (13th E.). Wadsworth Publishing. [B]

Baumer, Benjamin S., Daniel T. Kaplan, and Nicholas J. Horton. 2017. *Modern Data Science with R*. Chapman and Hall/CRC. [BKH]

[Optional] Moore, David S., George P. McCabe and Bruce A. Craig. 2014. *Introduction to the Practice of Statistics*. (8e.) New York: W. H. Freeman & Co. [MMC]

Navarro, Danielle. [Learning statistics with R: A tutorial for psychology students and other beginners](#) (Version 0.6).

Salganik, Matthew. 2017. *Bit by Bit: Social Research in the Digital Age*. Princeton University Press. [S]

Assessment:

Your grade will be determined as follows:

(1) Attendance: 20%

Attendance is required for all classes. We will take attendance via iPRS in class. One point will be deducted for each missed class *without legitimate justification*.

(2) Quizzes: 40%

There will be two in-class quizzes, each accounting for 20% of the final grade.

(3) Final exam: 40%

The final exam will be based *exclusively* on the lectures from the entire semester.

Schedule (*Subject to adjustment*)

Calendar Week	Topic	Readings	Important Dates
Week 1: Monday Wednesday	NO CLASS		9/1
Week 2: Monday Wednesday	[R] Course Introduction [L] Sources of Social Data		
Week 3: Monday Wednesday	[R] Census in China [L] Survey Designs		
Week 4: Monday Wednesday	[R] CGSS [L]: NO CLASS		9/22
Week 5: Monday Wednesday	[R] HKPSSD [L] “Big Data”		
Week 6: Monday Wednesday	[R] Hello to R and RStudio [L] RDB		
Week 7: Monday Wednesday	[R] Dataframe and Importing Data [L] Variable: Measurement		
Week 8: Monday Wednesday	[R] Quiz 1 [L] Coding Variables		10/18
Week 9: Monday Wednesday	[R] Variables in R [L] Transforming Variables		
Week 10: Monday Wednesday	[R] Variable Manipulation [L] Describing A Distribution: <i>Graphs</i>		
Week 11: Monday Wednesday	[R] R Graphics [L] Describing Relationship: <i>2-way Table</i>		
Week 12: Monday Wednesday	[R] Quiz 2 [L] Describing Relationship: Scatterplot		11/15
Week 13: Monday Wednesday	[R] Scatterplot [L] Course Review		11/24
Week 14: Monday Wednesday	[R] Q & A Session (<i>Tentative</i>)		11/29
<i>TBD</i>			Final Exam

[L] Lecture

[R] R and computing