SOSC 1100 Elementary Statistics for Social Research
Spring, 2019
Tuesday & Thursday, 10:30-11:50am
Room 4502 (Lift 25-26), Academic Building

Instructor: Dr. WANG, Hongbo (hbwang@ust.hk)
Office: Academic Building, Room 2372 (Ext. 7804)
Office Hours: Friday, 2:00-2:50pm or by appointment

TA: Mr. SHA Wenbiao (wenbiao.sha@connect.ust.hk)
Office: Academic Building, Room 3001 (Lift 4)
Office Hours: Thursday, 2:00-4:00pm

Course Description and Objectives:
Focusing on practical aspects of social data analysis, this course introduces basic
techniques for presenting, analyzing, and interpreting quantitative data in social science.
It is deliberately designed as complementary to a theoretically-oriented statistics courses
at the introductory level.
Devoted computing sessions, held weekly in tandem with the lectures, are a central
component of the course. The computing sessions cover computing and related issues
indispensable for analyzing social data in practice. In particular, students will receive
hands-on training in data management skills, such as locating data source, transforming
variables, and linking datasets. Some of the skills are rarely taught in a regular statistics
course. Besides in-class practices, students will also have the chance to apply the skills to
real-world data by conducting a group project with a topic of their own choice.
Upon completion of the course, students should have acquired useful skills for social data
analysis as well as a better understanding of quantitative social scientific research.

Organization:
The lectures will be given on Tuesdays while Thursdays are usually reserved for
computing sessions (See “Course Schedule” below for detailed topics).

Course materials will be distributed through Canvas. Note that all course material should
be used exclusively for the purpose of this course.

Students will form groups of 5 individuals to collaborate on the group project.

Computing:
This course will mainly use R for computing.
Prerequisite:
Basic knowledge about statistics.

References:


Assessment:
Your grade will be determined as follows:
(1) Attendance and class participation: 10%
Attendance is required for both regular lecture and computing session. We will take attendance via iPRS. You will get one point deducted for each missed lecture or computing session.

(2) In-class quizzes: 40%
There will be four in-class quizzes.

(3) Group project: 50% (Oral presentation, 10%; written report, 40%)
Under the instructor’s supervision, each group will choose a topic of their own, locate appropriate data sources, carry out data analysis, present the findings, and, finally, submit a written report. Detailed guidelines will be provided in a separate document.
Course Schedule *(Subject to adjustment)*

<table>
<thead>
<tr>
<th>Calendar Week</th>
<th>Topic</th>
<th>Readings</th>
<th>Deadlines</th>
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<tr>
<td>Week 1: Tuesday Thursday</td>
<td>Introduction</td>
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| Week 2: Tuesday Thursday | *Holiday (2/5)  
*Holiday (2/7) | | |
| Week 3: Tuesday Thursday | Sources of Social Data: I  
Sources of Social Data: II | | |
| Week 4: Tuesday Thursday | [R] Computing session  
Data Generating Process | Project Group Finalized (2/19) |
| Week 5: Tuesday Thursday | [R] Computing session  
Dataset and Variables | | |
| Week 6: Tuesday Thursday | [R] Computing session  
Data Management | Proposal Due (2/28) |
| Week 7: Tuesday Thursday | [R] Computing session  
Describing Uni-variate Distribution | | |
| Week 8: Tuesday Thursday | [R] Computing session  
Two-way Tables for Categorical Variables | Quiz 1 |
| Week 9: Tuesday Thursday | [R] Computing session  
Comparing Distributions between Groups | Quiz 2 |
| Week 10: Tuesday Thursday | [R] Computing session  
Scatterplot, Correlation, and Regression | | |
| Week 11: Tuesday Thursday | [R] Computing session  
Hierarchical Data Structure | | |
| Week 12: Tuesday Thursday | [R] Computing session  
*Midterm Break (4/18) | Quiz 3 |
| Week 13: Tuesday Thursday | *Midterm Break (4/23)  
Statistical Inference and Causality | | |
| Week 14: Tuesday Thursday | [R] Computing session  
*Project Presentation | Quiz 4 |
| Week 15: Tuesday Thursday | *Project Presentation  
*Project Presentation | | |
| Week 17: | | Final Report Due (5/24) | |