

## **SOSC2140: Research Methods in the Social Sciences**

Spring 2020

Division of Social Science

The Hong Kong University of Science and Technology

Monday & Wednesday 10:30 to 11:50

Room 1103, Acad Concourse

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### **COURSE DESCRIPTION**

This course offers a broad overview of principles of social science research design and methods. It is intended to provide an understanding of the major approaches in social science to research design, the collection and analysis of quantitative and qualitative data, and the specification and testing of theories. The course covers the logic of scientific inquiry and various research techniques such as experimentation, scientific sampling, survey research, field methods, and quantitative analysis that are commonly used by researchers in economics, education, political science, psychology, and sociology. The course is intended to help students translate their general interests into a well-defined research question, specify a hypothesis, design a study to test it, and interpret the results to assess whether they support the hypothesis.

### **GOALS**

By the time the course is complete, you should have a basic understanding of:

1. The relationship between theory, hypothesis, data collection, and analysis in the conduct of social science research;
2. Strengths and limitations of quantitative and qualitative approaches to social science research;
3. The most common methodologies for social science research, most notably ethnography, questionnaire-based surveys, and analysis of secondary and administrative data;

4. The criteria for claiming that an observed relationship is causal;
5. The basic features of experimental design;
6. The professional and ethical issues that commonly arise in social science research;
7. Methods to critically consume social science research

## **COURSE FORMAT**

This course will be taught in a blended/flipped format. There will be assigned viewing each week. Students are expected to have completed viewing before class. Before class, students will be invited to respond to prompts or suggest topics for detailed discussion at the Canvas site. Each week I will select some of the responses and topics to discuss in class.

The basic format of each class meeting will be as follows:

1. Introductory remarks. I will introduce the topics for that class and make some remarks. I may comment on recent developments.
2. Class discussion based on responses to prompts at the Canvas site. I will invite students to introduce their responses to the prompts, and then will invite classmates to comment. I will also make remarks.
3. Group presentations. Groups will present their ideas for pieces of the research proposal and we will discuss and provide feedback.

## **TEXTBOOKS AND MATERIALS**

### **Online Lectures**

Some lectures are online (please see Canvas for information about registering to view the lectures):

[https://learn.hkmooc.hk/courses/course-v1:HKUST+SOSCAPP+2018\\_Q2\\_R1/course/](https://learn.hkmooc.hk/courses/course-v1:HKUST+SOSCAPP+2018_Q2_R1/course/)

The videos are also available at:

<https://www.coursera.org/learn/social-science-study-chinese-society>

<https://www.coursera.org/learn/social-science-research-chinese-society>

### **Recommended Textbooks (Optional)**

Babbie, Earl. *The Practice of Social Research, International Edition 13<sup>th</sup> edition*.  
Cengage Learning.

*Note: The assigned readings in the schedule are based on the 13<sup>th</sup> edition. The 14<sup>th</sup> edition should be fine, but make sure that you are reading the correct chapter, in case the numbering differs.*

## ASSESSMENT

The assessments of the course will be composed of five parts.

- 25% - Research proposal – written
- 25% - Group presentations
- 20% - Reading Report – written
- 15% - Class participation
- 15% - Pop quizzes

### **Research proposal – written (25%)**

This is **teamwork**. We will split the class into **9 groups**. Students can choose their group members. The size of the groups will depend on total enrollment. The groups should have a roughly equal number of students.

Please go to the following website to complete your group information:

<https://docs.google.com/spreadsheets/d/1PKRFsYalNA3lyS7Z7tIEAhXx6ARZIFHJyVJwuDo57K4/edit#gid=0>.

For your final project, you will produce a research proposal that reflects what you have learned in class about social science research design. The proposal should be for research that could be carried out assuming available adequate funding. Your research proposal should include the following parts:

1. Abstract. (150-200 words) Bring together the key points from all sections, written for non-experts.
2. Aims. (250 words) What is the overall goal? What is the question or problem you seek to address, and how will you go about conducting the study?
3. Research Significance. (250 words) Why is the research important? Make the case that the research is worth doing.
4. Background. (750 words) This should be a review of the relevant literature and a discussion of previous relevant studies. The background should make clear why your proposed research differs from previous studies and identify the gaps in the previous research that you seek to fill.
5. Hypothesis. (250 words) What specific question do you seek to address? What theory do you seek to test? What expectations do you have about patterns or relationships you will observe?
6. Data. (500 words) Provide details on the data collection process. If you plan to make use of public datasets, make sure to explain why these data are the best suited for your proposed research.

7. Methods. (250 words) How do you plan to analyze the data? Make sure to discuss what types of relationships or other results would be consistent with confirming or refuting your hypotheses or expectations. Do not worry about the specifics about the quantitative methods since I don't expect you to have learned that yet.
8. References. There are no strict requirements for reference formatting. References can be in any style or format as long as the style is consistent. You can get more information at <https://libguides.ust.hk/basic-citation/how-to-cite>
9. Acknowledgment. You indicate how each group member contributes to the proposal.

### **Group presentations (25%)**

Groups will make one group presentation of work in progress on the research proposal and one group presentation of the final proposal. For the presentations, the group should introduce their preliminary ideas and plans related to the specified piece of the proposal, and we will have a discussion and provide feedback.

Groups may decide among themselves how to allocate responsibility for making the presentations. Over the course of the three group presentations, however, each member should have roughly the same amount of time presenting. All group members should participate in preparation for each talk, by helping to gather and organize materials or prepare slides.

When one group is presenting, the other group will act as discussants, i.e. stopping and asking the presenters questions. Students need to submit the presentation slides through their email to the TA **one day before the presentation**. I will take a note of each group's performance to give fair grades.

### GROUP PRESENTATION INSTRUCTIONS

#### ***Group Presentation 1: Aims, significance, and data (15 min for presentation, 5 min for Q&A, 10%)***

In this presentation, each group should introduce the topic that they aim to study, explain why it is important, and provide some ideas about how they will go about studying it. The goal is for the group to convince the audience that they have a topic and that it is interesting and worthwhile.

Research that isn't empirical is not appropriate as a topic for this class. For example, a philosophical assessment of whether something is good or bad that is based solely on

reasoning from ideas about culture, norms, morality, and values, but which doesn't rely on evidence collected from the real world is not social science research by the standards of this class.

Groups need to introduce the data they propose to use. If they propose to use an existing dataset, they will need to describe the features relevant to the study. If they propose to collect data, they will need to explain what sort of data they plan to collect, and how they plan to collect it. Please note that there may be more than one type of data that can help them answer the research questions. Groups may discuss the pros and cons of various types of data in their first presentation.

***Group Presentation 2: Final Proposal (20 min for presentation and 5 min for Q &A, 15%)***

Each team will present its final proposal. It should reflect changes made in response to feedback during the earlier presentation. The presentation of the final proposal should be thought of as a 'pitch' to a funding agency, aimed at securing their financial support.

In the final presentation, groups need to introduce the aims and significance of the proposed study, and data and methods they proposed to use. For methods, groups are not expected to provide a detailed explanation of specific quantitative methods, since they are unlikely to have had previous coursework that would prepare them. Rather, groups will want to focus on the relationships that they plan to examine, how they intend to address issues in 1.6 (*viewing Part 1\_Wk 6*), possibly by making use of approaches discussed in assigned viewing 1.7 and 2.5.

**Reading report – written (20%)**

This is **individual work**. You read an assigned paper and write a three-page reading report (A4 size, 1-inch margins, 12-point, Times New Roman font, double spaced). The reading report should include:

1. Summary. In your own words, summarize the substantive ideas that the author is trying to convey to the reader. What were the aims and significance, the hypotheses, the data and methods, and the conclusions?
2. Personal Thoughts. The reading report should conclude with an assessment and critique of the study. Questions to be considered include whether the study's conclusions were supported by the evidence presented, whether other data or methods might have been appropriate, whether the study's focus was appropriate, or it should have taken a different angle, and what the ideal follow-up study

should be. Discussion may also discuss whether claims about cause and effect made in the study are plausible.

3. References (if any).

### **Class participation (15%)**

Student participation can substantially enrich the learning experience for both the students and the instructor. In this spirit, class participation is encouraged. Effective class participation requires that you do the assigned readings and viewing before coming to class. You are encouraged to ask questions and share with the class any relevant insights you may have from your experience or from previous exposure to these topics.

A maximum of 3 free absences is allowed in this course. No questions asked. For each additional absence, 3 points will be deducted from your final course grade. After 6 absences (3 freebies + 3 absences with penalty), your grade will be dropped to the next letter grade increment for each additional absence, for example, from an A- to a B+. After 3 freebies, for any absence to be excused, documentation will be required.

Your active participation will be consequently factored into your final grade. I will take notes about your participation. If you're reluctant to speak up, please talk to me, and we'll figure out a way for you to participate. Those who never participate in class discussion but have perfect attendance will end up with a score of 10 points.

### **Pop quizzes (15%)**

**Three pop quizzes** (5 points each) will be given occasionally in class. The subject matter of these quizzes will be drawn from: 1) the reading assignment for that day, or 2) the topics covered in previous lectures. The pop quizzes include multiple-choice and short answer questions.

### **ACADEMIC INTEGRITY**

The written work you submit must be your own. Unattributed use of the work of others is plagiarism and is not acceptable. If you do feel the need to include text from another source, set it off in quotes and include a proper citation. If you have any questions about how to attribute sources, how to use quotations, etc., ASK!

## TOPICS AND READINGS/VIEWINGS

Week	Date	Topic	Readings/Viewings
1	19 Feb	Course Overview	
2	24 Feb	What is Social Science? <ul style="list-style-type: none"> <li>• What is scientific about social science?</li> <li>• Differences between social science and other disciplines</li> </ul>	<i>Viewing</i> Part 1_Wk 1_What is social science <i>Reading</i> Babbie, Ch. 1, Pp. 3-26 (optional)
	26 Feb	The Big Questions in social science research	<i>Viewing</i> Part 1_Wk 2_The big questions <i>Viewing</i> Part 1_Wk 3_ Social Science Research on China
3	02 Mar	Inquiry, Theory, and Paradigms <ul style="list-style-type: none"> <li>• Theory and paradigms</li> <li>• Well-known paradigms in the social sciences</li> </ul>	<i>Reading</i> Babbie, Ch. 3
	04 Mar	Designing a Study <ul style="list-style-type: none"> <li>• Key steps in the design of a study</li> <li>• The elements of a research proposal</li> </ul>	<i>Viewing</i> Part 2_Wk 1_Designing a study
4	09 Mar	Study Designs I <ul style="list-style-type: none"> <li>• Theory and research hypothesis</li> <li>• Experiments &amp; observational studies</li> <li>• Cross-sectional &amp; longitudinal studies</li> </ul>	<i>Viewing</i> Part 1_Wk 5_Study designs _Video 5.1-5.3
	11 Mar	Study Designs II <ul style="list-style-type: none"> <li>• Quantitative &amp; qualitative studies</li> <li>• Levels of analysis</li> </ul>	<i>Viewing</i> Part 1_Wk 5_Study designs _Video 5.4-5.8 <i>Reading</i> Babbie, Ch. 4 Pp. 97-105
5	16 Mar	Challenges <ul style="list-style-type: none"> <li>• Representativeness</li> <li>• Selection bias</li> <li>• Omitted variables</li> <li>• Reverse causality</li> <li>• The ecological fallacy</li> <li>• Validity of measures</li> </ul>	<i>Viewing</i> Part 1_Wk 6_Challenges

	18 Mar	Cause and Effect I <ul style="list-style-type: none"> <li>• Types of association</li> <li>• Association and causality</li> </ul>	<i>Reading</i> Alan Agresti Ch.10, Pp. 287-299.
6	23 Mar	Cause and Effect II <ul style="list-style-type: none"> <li>• Experimental designs</li> <li>• Cause and effect in observational data</li> <li>• Control and treatment</li> <li>• Natural/quasi- experiments</li> </ul>	<i>Viewing</i> Part 1_Wk 7_Causes and effect
	25 Mar	Evidence and Data <ul style="list-style-type: none"> <li>• Survey data</li> <li>• Statistics and aggregated data</li> <li>• Qualitative data</li> <li>• New sources</li> </ul>	<i>Viewing</i> Part 2_Wk 2_Evidence <i>Viewing</i> Part 2_Wk 4_Public data for China
7	30 Mar	Sampling Design <ul style="list-style-type: none"> <li>• Population and sample</li> <li>• Approaches to sampling</li> <li>• Sample size</li> </ul>	<i>Viewing</i> Part 2_Wk 3_Sampling_viedo 3.1-3.6 <i>Reading</i> Babbie Ch. 5 (optional) <b>Group presentation: group 1</b>
	01 Apr	From Concept to Measurement I <ul style="list-style-type: none"> <li>• Concept and conceptualization</li> <li>• Three types of things we measured</li> <li>• Indicator and dimension</li> </ul>	<i>Reading</i> Babbie Ch. 6 Pp. 163-177 <b>Group presentation: group 2</b>
8	06 Apr	From concept to measurement II <ul style="list-style-type: none"> <li>• Level of measurement</li> <li>• Criteria of measurement quality</li> </ul> Index and scales	<i>Reading</i> Babbie Ch. 6 Pp. 177-194 <b>Group presentation: group 3</b>
	08 Apr	Surveys I <ul style="list-style-type: none"> <li>• Questionnaire design</li> </ul>	<i>Reading</i> Babbie Ch 8 Pp. 229-242 <b>Group presentation: group 4</b>
9	13 Apr	<b>No Class (Easter Monday)</b>	
	15 Apr	Surveys II <ul style="list-style-type: none"> <li>• Conduct questionnaire survey</li> <li>• Strength and weakness of survey research</li> </ul>	<i>Reading</i> Babbie Pp 242-267 <b>Group presentation: group 5</b>

10	20 Apr	Experiments I <ul style="list-style-type: none"> <li>• The classical experiment</li> <li>• Validity issues in experimental research</li> </ul>	<i>Reading</i> Babbie Ch. 9 Pp. 271-286  <b>Group presentation: group 6</b>
	22 Apr	Experiments II <ul style="list-style-type: none"> <li>• Alternative experimental settings</li> <li>• Strength and weakness of experimental method</li> <li>• Ethics issues in experiments</li> </ul>	<i>Viewing</i> “5 Psychology Experiments You Couldn't Do Today” at <a href="https://www.youtube.com/watch?v=zZ3l1jgmYrY">https://www.youtube.com/watch?v=zZ3l1jgmYrY</a> . <i>Reading</i> Babbie Ch. 9 Pp 287-291  <b>Group presentation: group 7</b>
11	27 Apr	Analyzing Quantitative Data <ul style="list-style-type: none"> <li>• Observations and Variables</li> <li>• Univariate analysis</li> <li>• Correlation and Regression</li> <li>• Statistical significance</li> </ul>	<i>Viewing</i> Part 2_Wk 5_ Quantitative analysis _ Video 5.1-5.8 <i>Reading</i> Babbie Ch. 14 Pp. 414-437  <b>Group presentation: group 8</b>
	29 Apr	Analyzing Qualitative Data <ul style="list-style-type: none"> <li>• Linking theory and analysis</li> <li>• Qualitative data processing</li> <li>• Computer software for qualitative data analysis</li> </ul>	<i>Reading</i> Babbie Ch. 13  <b>Group presentation: group 9</b>
12	04 May	Consuming Social Research Wisely	<i>Reading</i> Babbie Pp. 498-511 <i>Reading</i> “Statistics for Policy Professionals: Things that you need to know.”
	06 May	Research Ethics and Professional Issues	<i>Viewing</i> Part 2_Wk 5_ Research and professional ethics
13	11 May	Final Proposal Presentation	<b>Group presentation: group 1-3</b>
	13 May	Final Proposal Presentation	<b>Group presentation: group 4-6</b>
	18 May	Final Proposal Presentation	<b>Group presentation: group 7-9</b>