

SOSC 5110 Social Science Research Design and Methods

Fall 2025

Course Information

Instructor: Dr. Jin Wang

Office: Room 2347

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Office hours: Tuesday 4:30–5:30 PM

Class time: Tuesday 12–2:50 PM

Class venue: LSK1026

TA: Miss Jiawen Ke

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Course website: <http://canvas.ust.hk/>

Please do not hesitate to contact me and TA should you have any questions with respect to the course, lectures, or readings. We are available during office hours and for appointments to answer questions.

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 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, archival data, and empirical analysis that are commonly used by researchers in economics, political science, sociology, public policy, psychology, and education.

Intended Learning Outcomes

The course is intended to help postgraduate 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. The course aims to help students conduct meaningful and creative research work by themselves, by learning to recognize research designs in the day-to-day world. In addition, this course is intended to help students assess the quality of empirical work from others. The main final project in this course is a research proposal in which students will propose a design to study a question of interest.

For the topics covered, students will read and discuss a selection of articles taken from the major generalist journals in the discipline. By analyzing and understanding the operationalization of research methods in these articles, students will familiarize with issues of research design and get

a sense of what each method does (and does not do), of the vision of the social world it conveys, and of the type of questions it can be applied to.

- Identify theories, hypotheses, and methods used in social science research.
- Apply different methods to research questions.
- Analyze data to measure concepts, make comparisons, and draw inferences.
- Define causation and the multiple ways of reaching causal inferences.
- Communicate social science research method and design orally and in writing.

Textbooks and References

The material will be drawn from the following reference books and from journal articles.

- Babbie, Earl. *The Practice of Social Research* (14th Edition). Cengage Learning. 2016.
- Angrist, Joshua D. and Jörn-Steffen Pischke. *Mastering 'Metrics: The Path from Cause to Effect*. Princeton University Press. 2014.
- Required reading list (canvas): a selection of journal articles, please check the canvas website for the latest updates.

Assessments

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

- Class discussion and participation – 15%
- Assignments – 20%
- Research proposal interim report – 5%
- Paper Presentation – 15%
- Research proposal presentation – 15%
- Research proposal writes up and final submission – 30%

NOTE: for all the assessments **late submissions will NOT be accepted**.

Class discussion and participation For the topics covered, students will read a selection of articles taken from the major generalist journals in the discipline. By analyzing and understanding the operationalization of research methods in these articles, students will familiarize with issues of research design and get a sense of what each method does (and does not do), of the vision of the social world it conveys, and of the type of questions it can be applied to. For each lecture, sufficient time will be reserved for student discussions of the topic covered. Please read the key readings assigned in advance (to be completed prior to class sessions) and come well-prepared to discuss the insights you have gained from them.

Assignments Students will complete three assignments throughout the semester. The main purpose of these assignments is to enhance the understanding of research design and methods.

Paper presentation From week 5, some lecture time will be reserved for individual presentations. The topics of the presentations will be chosen by the students from recently published papers in leading social science journals, which should highlight novel research methods and design in relevant disciplines. Students need to submit the presentation slides through their email to TA the day before the presentation.

Research proposal The basis of good research is a solid research design. Furthermore, methods are often more fun and easier to learn when they are in the context of advancing one's research. For your final project, you will write a research proposal. The proposal should reflect what you have learned in class about social science research design. The proposal should be for research that could be carried out assuming availability of adequate funding. It should not be trivial. Nor should it be impossible, implausible, or require infinite resources. The object should be generalizable social science knowledge. Case studies, whether of specific places, firms, organizations, or other entities, are only acceptable insofar as the goal is generalizable knowledge. Thus, for example, marketing studies, or highly focused opinion studies are not acceptable.

Interim report You will write the proposal in separate parts. By the mid-term, you will submit an interim report that summarizes your progress. The report serves an important purpose in setting out what you are hoping to achieve and how far you have got in achieving this. Although the interim report is significantly shorter than the final proposal, it should not be vague. Interim report requirements:

Broad and up-to-date understanding of the literature: Although your interim report won't contain your full literature review, it should show depth and breadth. The reader will want to be able to see you understand the field.

Relevance of literature to your project: Your interim report, like other reports and essays, needs to connect the literature clearly to your project. The danger when writing a literature review is that it contains a series of paraphrases or summaries but lacks the analysis that develops the argument to show why this is relevant to your project.

Progress to date and next steps: You need to show the reader what you have achieved and how you plan to complete the project. Be specific so that the reader can assess whether your progress and plan are reasonable.

Proposal presentation The last week of the class, **November 25th** will be reserved for you to present your research proposal in class. Students need to submit the presentation slides through their email to TA the day before the presentation. We will take notes of each student's performance (the extent of preparation, the clarification of the presentation, the Question-and-Answer session), to give fair grades. You may incorporate the comments received during your talk into the final revisions.

Proposal parts

1. Aims. What is the overall goal of this research? 350–500 words.
2. Research Significance. Why is the proposed research important? 350–500 words.
3. Background. 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. 800–1000 words.

4. Hypothesis. 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? This may be a formal specification of hypotheses, or if your study is more exploratory and descriptive, you may present this as a discussion of the trends, patterns, or relationships you hope to examine, and your expectations for what you will find, based on the background summarized in 2. 350–500 words.

5. Data. Provide details on the data collection process, including site, time frame, target population, procedures for sampling/randomization/obtaining access. If you plan to make use of public datasets, or archival or administrative data, this is where you would introduce these data, and discuss their properties. Make sure to explain why they are the best suited for your proposed research. 350–500 words.

6. Methods. How do you plan to analyze the data? This is where you would specify the models you would estimate if you were running a regression or describe the tables and figures you plan to produce if you are focusing on tabulations and other descriptive statistics. Make sure to discuss what types of relationships or other results would be consistent with confirming or refuting your hypotheses or expectations. 350–500 words.

7. Work plan and outputs. Provide details on how you will carry out the work related to the study, including a timeline. Describe the intended outputs from the study. If you plan to present at conferences or submit manuscripts to journals, identify the conferences and journals and explain why they are the appropriate ones. 250–300 words.

Proposal writes up and final submission The final version of the proposal submitted at the end of the semester should reflect revisions made in response to feedback received during your presentation and include the following parts.

1. Research proposal title

2. Abstract. 400 words bring together the key points from the 7 sections, written for non-experts.

3. References.

The submission date of the final proposal: **December 16th, 2025.**

Course AI Policy and Academic Integrity

Restricted Use of Generative AI: AI tools can assist but cannot replace students' work. Students must disclose any use of AI tools in their submissions. Failure to do so may result in plagiarism or academic dishonesty.

All submitted work must be original. Unattributed use of others' work is plagiarism. If you include text from another source, use quotes and provide proper citations. Avoid jeopardizing your integrity by submitting plagiarized material. We will use Turnitin to check the originality of your work. The Office of the Provost offers resources to help prevent plagiarism. Read more here: <https://registry.hkust.edu.hk/resource-library/academic-integrity>.

Schedule

Week	Date	Topic
1	Sept 2 nd	Course Overview and Introductions
2	Sept 9 th	Research Question and Ethics
3	Sept 16 th	
4	Sept 23 rd	Concepts and Measurement
5	Sept 30 th	Sampling and Questionnaire Design
6	Oct 7 th	Public Holiday, No lecture
7	Oct 14 th	Evidence and Data (+) New Discovery: Machine Learning and Data Science
8	Oct 21 st	Literature Review, Theory Development and Hypothesis Generation
9	Oct 28 th	Causal Mechanism
10	Nov 4 th	Quasi-natural Experiments I
11	Nov 11 th	Quasi-natural Experiments II
12	Nov 18 th	Field Experiments
13	Nov 25 th	Research Proposal Presentations

Note: Course contents may change; any changes will be announced in class and on the course website.