

The Hong Kong University of Science and Technology

UG Course Syllabus

Quantitative Social Analysis Practicum

SOSC 3700B

1 Credit

Pre-requisites: SOSC 2400. For QSA students only.

Time: Friday, 9:30AM – 10:20AM

Venue: Room 1410, Academic Building (Lift 25-26)

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Office Hours: Friday, 11:00AM – 12:00AM

Course Description

This course is designed to provide an opportunity for students to gain hands-on experience in doing social science research with the skills they acquired in their Quantitative Social Analysis (QSA) methods courses. Students will choose a topic of their interest, locate relevant data set, identify appropriate methods, carry out analysis, and report their findings. After completing this course, they will get better prepared for their QSA Capstone Project.

Students may work in groups. Each group will consist of 2-3 people. For a group project to be approved by the instructor, it must be more ambitious than an individual project, with expectations set according to the size of the group. The roles of group members need to be specified in the proposal, and the contributions to the final project need to be documented in the final report.

The work done for the project should be above and beyond any work done for the QSA topical elective courses. Any work that is going to be submitted or has been submitted for credit in another course should *NOT* be submitted for the credit of this course.

The class will meet on an occasional basis. A detailed schedule can be found at the end of this syllabus. At these meetings, students will be required to present progress on their projects and participate in discussions of other students' projects.

Intended Learning Outcomes (ILOs)

By the end of this course, students should be able to:

ILO1: Apply appropriate quantitative research methods to investigate a self-chosen research topic.

ILO2: Locate relevant data sources to examine the research question.

ILO3: Present research findings and progress through structured oral presentations and written reports.

Project

You need to identify TWO candidate research topics for the prospective Capstone Project and conduct either of the following two types of projects:

1. Literature review

- Conduct literature review for each of the candidate topics.
- The literature to be covered need to use **quantitative data analysis**.
- The main objective is to convince readers the importance your research topics. Thus, only focus on the literature that is directly related to your topics, or more precisely, to the keywords of your topics.
- To review the existing studies, you need to summarize their main hypotheses, what data are used to test these hypotheses, what quantitative methods are employed to address the empirical challenges, and what the main findings are. Moreover, you had better discuss how these studies speak to each other.
- You need to specify how your proposed research differs from previous studies and what contributions you can make to the literature.
- It's not acceptable to contain merely a series of paraphrases or summaries while lacking the analysis that helps to show why it is relevant to your topic.

2. Data exploration

- For each candidate research topic, explore a variety of datasets potentially suitable for addressing it.
- You may find it much easier to work with a well-documented dataset that is publicly available and ready to be downloaded. However, you are also welcome to construct your own dataset.
- You need to evaluate the suitability of the data to your topic in terms of sample size, time frame, availability and adequacy of variables, and so on. Preliminary data analysis is also needed. Try to apply basic analytical techniques that you learned in your methods courses to each of your datasets.
- It must include a description of the steps taken as part of the analysis, including the statistical package used, the code or scripts used to transform the data, and the description of how you prepared your dataset and produced the tables and figures, among other things.
- Your tables and figures should be visually appealing and appropriately titled and labeled, with appropriately chosen axis ranges, symbols, and color schemes.

Assessment and Grading

This course will be assessed using criterion-referencing and grades will not be assigned using a curve. Detailed rubrics for each assignment are provided below, outlining the criteria used for evaluation.

1. **Attendance and Participation (10%):** Attendance at all scheduled meetings (see "Schedule" for specific dates) is required. You are also expected to actively participate in the discussion and provide comments and feedback to other students.
2. **Work Plan (10%):** The work plan should briefly describe your topic, explain why the topic is important, and specify the data and methods you are going to use. If you are doing a group project, please indicate the names of all your group members and division of work.

- 3. Progress Reports (x2, 25% each):** To better organize your ideas and build up your research experience, please keep a diary of your work on the project. In it, you can record all the related activities, such as the exploration of literature and data, downloading and processing of data, and analyzing data. Some failed attempts, such as the data that you later decided not to use and the analysis that finally didn't work out, should also be included. In sum, the diary should indicate all the efforts you have made on the project, including those that cannot be reflected in the final report.

Each individual/group is required to submit TWO brief reports based on the diary (see "Schedule" for the deadlines). The reports serve to update the instructor on the progress of your project.

- 4. Final Output (30%):** The final output should summarize the topic and findings of your project. It is not expected to be a full-fledged research paper. The key is to demonstrate that you have mastered both the preparation and analysis of data and the interpretation and presentation of your findings.

For group project, you must specify the contributions each member has made.

Summary Table:

Assessment Task	Contribution to Overall Course grade (%)	Due date
Attendance and Participation	10%	Week 1 to 13
Work Plan	10%	Feb 20, 2025
1 st Progress Report	25%	Mar 27, 2025
2 nd Progress Report	25%	Apr 30, 2025
Final Output	30%	May 8, 2025

Mapping of Course ILOs to Assessment Tasks:

Assessed Task	Mapped ILOs	Explanation
Attendance and Participation	ILO1, ILO2, ILO3	This task assesses the student's engagement with the course material and participation in class discussions. By attending the scheduled meetings and actively participating, students demonstrate their ability to apply research methods (ILO1), locate relevant data (ILO2), and communicate their findings (ILO3).
Work Plan	ILO1, ILO2, ILO3	This task requires students to plan their research project, including defining their research topic, explaining its importance, and specifying the data and methods they will use (ILO1 & ILO2). The work plan also allows students to demonstrate their ability to communicate their research plan (ILO3).
Progress Reports	ILO1, ILO2, ILO3	These tasks allow students to document their research process, which demonstrates their ability to apply research methods (ILO1), locate relevant data (ILO2), and communicate their progress (ILO3).
Final Output	ILO1, ILO2, ILO3	This task requires students to summarize the topic and findings of their project. It allows them to demonstrate their mastery of applying appropriate research methods (ILO1), locating and using relevant data (ILO2), and communicating their research findings (ILO3).

Final Grade Descriptors:

Grades	Short Description	Elaboration on subject grading description
P	Pass	Students meet the minimum standards for all assignment components and demonstrate sufficient understanding of the research process, including the application of appropriate methods, use of relevant data, and effective communication of their findings.
F	Fail	Students fail to meet the minimum standards for one or more assignment components, indicating a lack of engagement with the research process, inability to apply the necessary skills, or unsatisfactory communication of their work.

Student Rubrics

The following rubrics will be used to assess the tasks that you submit or achieve.

Class Participation and Attendance Rubric (10 points):

Criteria	Excellent	Good	Average	Below average	Unsatisfactory
Attendance	Attends all classes	Attends all or misses 1 class with a valid excuse (e.g. illness, emergency)	Misses 1 class with a valid excuse (e.g. illness, emergency)	Misses 2 classes, regardless of excuse	Misses more than 2 classes, regardless of excuse
Engagement in Class	Actively participates in discussions, asks thoughtful questions, and provides insightful comments	Participates regularly in discussions and asks questions to clarify understanding	Participates occasionally, but contributions are basic or demonstrate only partial understanding	Rarely participates, even when called upon, and does not seem engaged	Does not participate in class discussions and shows no engagement

Work Plan Rubric:

Criteria	Excellent	Good	Average	Below average	Unsatisfactory
Topic Description	Clearly and concisely describes the topic with exceptional depth and clarity.	Clearly describes the topic with good detail.	Describes the topic adequately but lacks depth.	Vaguely describes the topic with little clarity.	Fails to describe the topic clearly.
Importance of Topic	Thoroughly explains the importance and relevance of the topic with strong insight.	Explains the importance of the topic with solid reasoning.	Provides a basic explanation of the topic's importance.	Offers limited reasoning for the topic's importance.	Does not explain why the topic is important.
Data and Methods	Specifies data and methods in detail, demonstrating strong understanding.	Specifies data and methods with clear understanding.	Mentions data and methods but with limited detail.	Provides minimal information about data and methods.	Fails to specify data and methods adequately.

Progress Report Rubric:

Criteria	Excellent	Good	Average	Below average	Unsatisfactory
Organization and Clarity	Report is exceptionally well-organized, and ideas are clearly presented.	Report is well-organized with clear presentation of ideas.	Report is organized but lacks some clarity.	Report is poorly organized and lacks clarity.	Report is disorganized and unclear.
Comprehensiveness	Includes detailed records of all activities, including literature, data exploration, and analysis.	Includes records of most activities with good detail.	Includes basic records of activities but lacks depth.	Provides minimal records of activities with limited detail.	Fails to include essential records of activities.
Reflection on Challenges	Thoroughly documents failed attempts and reflects on their significance.	Documents failed attempts with some reflection.	Mentions failed attempts but with limited reflection.	Barely mentions failed attempts and lacks reflection.	Does not document failed attempts.
Evolution of Ideas	Clearly shows the evolution of ideas and adjustments made during the project.	Shows some evolution of ideas and adjustments.	Shows limited evolution of ideas and adjustments.	Shows minimal evolution of ideas and adjustments.	Does not show any evolution of ideas or adjustments.

Final Output Rubric:

Criteria	Excellent	Good	Average	Below average	Unsatisfactory
Identification of research topics	Clearly identifies two highly relevant and well-justified research topics, demonstrating a deep understanding of the field	Identifies two relevant research topics, but the justification could be stronger	Identifies two topics, but one or both lack clear relevance or justification	Identifies only one relevant topic, or the topics chosen are not well-justified	Fails to identify two viable research topics
Literature review (if applicable)	Provides a comprehensive and critical review of the existing literature, effectively synthesizing key findings, methodologies, and gaps	Provides a thorough review of the literature, but the synthesis and analysis could be stronger	Includes a literature review, but it lacks depth or fails to effectively connect the studies to the proposed topics	Literature review is cursory or fails to adequately cover the key studies related to the topics	Lacks a meaningful literature review
Data exploration (if applicable)	Thoroughly explores and evaluates multiple high-quality datasets, demonstrating a strong understanding of their suitability and limitations	Explores and evaluates several datasets, but the analysis or justification of their suitability could be stronger	Explores a limited number of datasets, and the analysis or justification of their suitability is lacking	Explores only one dataset, or the evaluation of dataset suitability is poor	Fails to explore and evaluate appropriate datasets
Analytical techniques	Applies advanced analytical techniques with a high level of sophistication, producing visually appealing and insightful tables/figures	Applies appropriate analytical techniques, producing clear tables/figures	Applies basic analytical techniques, but the tables/figures could be improved	Applies limited or inappropriate analytical techniques, resulting in subpar tables/figures	Fails to apply meaningful analytical techniques or produce relevant tables/figures
Communication and writing	Presents the project findings in a clear, concise, and well-organized manner, with excellent use of language and adherence to academic conventions	Presents the project findings in a clear and organized manner, with good use of language and adherence to academic conventions	Presents the project findings in a somewhat disorganized or unclear manner, with occasional lapses in language or academic conventions	Presents the project findings in a disorganized or unclear manner, with multiple issues in language and academic conventions	Fails to present the project findings in a coherent or professional manner

Course AI Policy

The use of generative AI tools is permitted to assist students with understanding course materials and project development, but they must verify AI-generated information with reliable sources and ensure all submitted work is original and properly cited to adhere to academic integrity.

Communication and Feedback

Assessment marks for individual assessed tasks will be communicated via Canvas within two weeks of submission. Feedback on assignments will include comments on strengths and areas for improvement. Students who have further questions about the feedback including marks should consult the instructor within five working days after the feedback is received.

Late submission Policy

Late submission will *NOT* be accepted unless a valid reason is given and prior special permission is obtained.

Academic Integrity

Students are expected to adhere to the university's academic integrity policy. Students are expected to uphold HKUST's Academic Honor Code and to maintain the highest standards of academic integrity. The University has zero tolerance of academic misconduct. Please refer to [Academic Integrity | HKUST – Academic Registry](#) for the University's definition of plagiarism and ways to avoid cheating and plagiarism.

Schedule

Week	Presentation Topic	Class Meeting	Submission
1 (Feb 7)	Course Introduction	Yes	
2			
3 (Feb 21)	Work Plan	Yes	Work Plan & the presentation slides due on Feb 20.
4			
5			
6			
7			
8 (Mar 28)	1st Progress Report	Yes	1st Progress Report & the presentation slides due on Mar 27.
9			
10			
11			
12 (May 2)	2nd Progress Report	Yes	2nd Progress Report & the presentation slides due on Apr 30.
13 (May 9)	Final Output	Yes	Final Output & the presentation slides due on May 8.