The Hong Kong University of Science and Technology

UG Course Syllabus

SOSC1990 Research Methods in Psychological Science (Spring 2025)

3 Credits; No pre-requisites

Instructor

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*When contacting us by email, please ***prefix the subject line*** of your message with the course code [SOSC1990]. Use your university email account only. Do NOT leave your messages in the Canvas inbox.

Lecture Time: **Tue, Thu 16:30 – 17:50**
Venue: **LG3008**

Course Description

This course introduces students to the basic research principles in psychological science. It evaluates various research designs and statistical analyses, and discusses relevant ethical issues encountered in studying human behaviors.

Intended Learning Outcomes (ILOs)

By the end of this course, students should be able to:
1. recognize the basic research principles in psychological science;
2. evaluate various research designs and statistical analyses commonly used in research on psychological science;
3. demonstrate the ability to apply the professional ethics in conducting research and practice of psychological science;
4. demonstrate skills of scientific reasoning, effective research methods, and problem-solving;
5. demonstrate the ability to critically read, summarize, interpret, and evaluate information regarding behavioral phenomena and social issues; AND
6. demonstrate the ability to present, discuss, and explain knowledge about psychological science with clarity in both oral and written forms.

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.

Summary

Assessment Task	Contribution to Overall Course grade (%)	Due date
Class and Workshop Participation	15%	8/5/2025
Assignment 1	15%	24/2/2025
Assignment 2	15%	2/5/2025

Group Project
   o   Research Proposal
   o   PPT Slides
   o   Presentation
	
	10%
	10%
	10%
		
		18/3/2025
		11/4/2025
		15, 17, 22, 24/4/2025

Quiz	25%	8/5/2025

Class and Workshop Participation
- You are strongly encouraged to participate actively in activities and group discussions in classes and the workshops. The activities or discussions will be issues that will be related to the course contents.
- Your contributions in the class discussions or activities will be recorded in class and count towards your participation score.

Assignment 1 and Assignment 2
- You will have to complete 2 individual assignments. Guidelines will be released on Canvas in due course. The topics for assignments will be Assignment 1 (Research Ethics) and Assignment 2 (Scale and Measurement).

Group Research Study
- In a random group of 5-6, you will conduct a small research study. The research topic will be randomly drawn by the teaching team.
- Your group will either conduct an experimental study or a survey for a psychological study and collect data on HKUST students.
- The group list will be released on Canvas after the add/drop period. To minimize the problem of free riders, each student will anonymously evaluate the contribution of other group members towards the completion of the project through the iPeer system. The free rider's grade may be adjusted based on the peer evaluation.
- All group members should attend and discuss with the teaching team your presentation in the 2 consultation sessions (Feb 25 and Mar20/25).
- Attendance of all the presentation sessions is required. 1% (out of 30%) will be deducted for absence from each session.
- For the research study, you have to submit:
  - A research proposal reviewing previous psychological studies and the literature review based on the assigned research topic. Based on the literature review, your group needs to formulate a research hypothesis and to propose a research design to test your hypothesis.
  - A set of PPT slides including the sections of "Method, Results, and Discussion"
  - Presentation will be evaluated on the content, presentation skills, and performance in the Q&A sessions. Detailed guidelines will be provided in due course.

Quiz
- One quiz will be administered to test your understanding of course materials. They will include multiple-choice questions only. Coverage includes lecture from Week 1 (Introduction) to Week 6 (Experiment Design) and the three workshops.

- Recommended readings are listed in the lecture slides, but they will NOT be included in the quiz. These readings are useful for a deeper understanding of the course contents.

Mapping of Course ILOs to Assessment Tasks

Assessed Task	Mapped ILOs	Explanation
Class and Workshop Participation	ILO1, ILO2, ILO3, ILO4, ILO5, ILO6	Class participation assesses students' ability to explain the principles and apply practices of psychological research (ILO1, ILO2), including applying ethics (ILO3), critical thinking (ILO4, IOL5) and skills to report research findings in psychology (ILO6).
Assignment 1 and 2	ILO1, ILO2, ILO3, ILO4, ILO5, ILO6	These assignments assess students' ability to explain the principles and apply practices of psychological research (ILO1, ILO2), including applying ethics (ILO3), critical thinking (ILO4, IOL5), and effective communication skills to investigate behavioral phenomena, interpret findings, and present psychological knowledge (ILO6).
Group Project	ILO1, ILO2, ILO3, ILO4, ILO5, ILO6	This task assesses students' ability to explain the principles and apply practices of psychological research (ILO1, ILO2), including applying ethics (ILO3), critical thinking (ILO4, IOL5), and effective communication skills to investigate behavioral phenomena, interpret findings, and present psychological knowledge (ILO6).
Quiz	ILO1, ILO2, ILO3, ILO4, ILO5, ILO6	A quiz is designed to assess students' ability to explain the principles and apply practices of psychological research (ILO1, ILO2), including applying ethics (ILO3), critical thinking (ILO4, IOL5), and effective communication skills to investigate behavioral phenomena, interpret findings, and present psychological knowledge (ILO6).

Final Grade Descriptors

Grades	Short Description	Elaboration on subject grading description

A	Excellent Performance	Demonstrates a comprehensive grasp of subject matter, expertise in problem-solving, and significant creativity in thinking. Exhibits a high capacity for scholarship and collaboration, going beyond core requirements to achieve learning goals.
B	Good Performance	Shows good knowledge and understanding of the main subject matter, competence in problem-solving, and the ability to analyze and evaluate issues. Displays high motivation to learn and the ability to work effectively with others.
C	Satisfactory Performance	Possesses adequate knowledge of core subject matter, competence in dealing with familiar problems, and some capacity for analysis and critical thinking. Shows persistence and effort to achieve broadly defined learning goals.
D	Marginal Pass	Has threshold knowledge of core subject matter, potential to achieve key professional skills, and the ability to make basic judgments. Benefits from the course and has the potential to develop in the discipline.
F	Fail	Demonstrates insufficient understanding of the subject matter and lacks the necessary problem-solving skills. Shows limited ability to think critically or analytically and exhibits minimal effort towards achieving learning goals. Does not meet the threshold requirements for professional practice or development in the discipline.

Course AI Policy

Use of GenAI in project and individual paper is permitted. Students have to sign a declaration and include the prompts requested.

Communication and Feedback

Assessment marks for individual assessed tasks will be communicated via Canvas within four 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 or TAs within 5 working days after the feedback is received.

Assignment Submission Policy

o **Grace-period**: A 5-hour grace period after the deadline applies to all submissions. Submissions received less than 5 hours after the deadline will NOT be penalized. Submissions later than the deadline for 5 hours up to 24 hours will receive a 50% deduction off the assigned score; submissions later than the deadline for 24 hours up to 48 hours will receive another 50% deduction off the assigned score. This will be strictly enforced; NO exception will be made. To ensure that your efforts are reflected in the course grade, please make sure to submit on time.

o **File format**: Only the submitted file will be graded, even if you claim to have submitted a wrong file, a wrong assignment, an incomplete assignment, or a corrupted file. It is your responsibility to make sure that your submitted file is correct and free of problems. Please check carefully of your

submitted files on Canvas.

o ***Word limit:*** Mark deduction applies to any assignments over the word limit. Details can be found in the assignment guidelines.

Recommended Texts and Materials

Shaughnessy, J. J., Zechmeister, E. B., & Zechmeister, J. S. (2015). *Research methods in psychology* (10th ed.). New York: McGraw-Hill.

Jhangiani, R. S., Chiang, I-Chant. A., Cuttler, C., & Leighton, D. C. (2019). *Research methods in psychology* (4th ed.). Kwantlen Polytechnic University, Surrey, B. C. https://open.umn.edu/opentextbooks/textbooks/75

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.

Other Notes

Interaction in Class

I believe interactions (both verbal and non-verbal) between the teaching team and the students (and among students) are one of the key ingredients to an optimal learning experience. Your active participations in class discussions or activities will not only enhance your learning, but also motivate the teaching team to do better! Stay behind the class and share with me your thoughts about the course contents.

Lecture Slides

Lecture slides will be posted to Canvas before each class, but the contents will be slightly different from the displayed slides. I hope to encourage you to take your notes. Note-taking facilitates your reflection and assimilation of the lecture contents.

Communication

Expect that your emails will be responded to during weekdays 10 am to 6 pm HKT. Do NOT inbox your message on Canvas.

Teaching Schedule

Week	Date	Topic
1	Feb 4	Introduction
	Feb 6	Research Questions and Hypotheses Formulation
2	Feb 11	Research Ethics
	Feb 13	
3	Feb 18	Psychological Measurement
	Feb 20	Types of Research Methods
4	*Feb 25*	*Group Project Consultation I*
	Feb 27	Workshop I: Conducting Literature Search
5	Mar 4	Survey and Sampling
	Mar 6	
6	Mar 11	Experimental Design
	Mar 13	
7	Mar 18	Group Project Discussion and Data Collection
	Mar 20	*Group Project Consultation II*
8	*Mar 25*	
	Mar 27	Group Project Discussion and Data Collection
9	*Apr 1*	*Mid-Term Break*
	Apr 3	
9	Apr 8	Workshop II: Descriptive and Inferential Statistics
	Apr 10	
10	*Apr 15*	*Group Project Presentation*
	Apr 17	
11	*Apr 22*	
	Apr 24	
12	Apr 29	Workshop III: Communicating Research Findings in Journal Articles
	May 1	*Labor Day*
13	May 6	Quiz Review
	May 8	**Quiz**

Important Dates

Date	Submission
Feb 24	Assignment 1
Mar 18	Group Project Proposal
Apr 11	Group Project PPT
May 2	Assignment 2
May 12	Peer Evaluation