Course Title: Research Methods in Psychological Science

Course Code: SOSC1990

Credits: 3

Prerequisites: None

Term: Fall 2025

Location: LG3009

Time: Monday & Wednesday 12:00 pm – 1:20 pm

Instructor

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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. Explain the basic research principles in psychological science
2. Evaluate various research designs and statistical analyses commonly used in research on psychological science
3. Critique the ethical guidelines for using human and animal participants in research and demonstrate the ability to apply professional ethical guidelines in conducting psychological research
4. Critically read, interpret, analyze, and evaluate information related to psychological research
5. 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.

Mapping of Course ILOs to Assessment Tasks

Assessed Task	Percentage	Mapped ILOs	Explanation
In-Class Participation	10%	ILO1, ILO2, ILO3, ILO4	This task assesses students' ability to explain the principles and apply practices of psychological research (ILO1, ILO2), including applying ethics (ILO3), critical thinking (ILO4).
Individual Assignments	30%	ILO1, ILO2, ILO3, ILO4, ILO5	This task assesses students' ability to explain the principles of psychological research (ILO1, ILO2), including applying ethics (ILO3), critical thinking (ILO4), and effective communication skills to explain knowledge about psychological science (ILO5).
Midterm Quiz	30%	ILO1, ILO2, ILO3, ILO4	This task assesses students' ability to explain psychological research principles, evaluate psychological research practices (ILO1, ILO2), critique research ethical guidelines (ILO3), and critical analyze information on psychological science (ILO4).
Group Project	30%	ILO1, ILO2, ILO3, ILO4, ILO5	This task assesses students' ability to explain the principles and apply practices of psychological research (ILO1, ILO2), including applying ethics (ILO3), critical thinking (ILO4), and effective communication skills to investigate behavioral phenomena, interpret findings, and present psychological knowledge (ILO5).

Final Grade Descriptors:

Grades	Short Description	Elaboration on subject grading description
A	Excellent Performance	Demonstrates a comprehensive grasp of subject matter and expertise in applying scientific research methods to investigate psychological phenomena and behaviours. Employs critical thinking in solving psychology-related problems. Exhibits a high capacity for scholarship, meeting all the core requirements to achieve learning goals.
B	Good Performance	Shows good knowledge and understanding of the main subject matter, ability to conduct and evaluate psychological research, and competence in critical thinking. Displays high motivation to learn.
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 related to psychological research. Benefits from the course and has the potential to develop in the discipline.
F	Fail	Demonstrates insufficient understanding of the subject matter. Shows limited ability to think critically or analytically and exhibits minimal effort toward achieving learning goals. Does not meet the threshold requirements for professional practice or development in the discipline.

Communication and Feedback

Assessment marks for individual assessed tasks will be released within two weeks of the due date. Feedback on individual assignments and the group project will include strengths and areas for improvement. Students who have further questions about the feedback, including marks, should consult the instructor or teaching assistant within five working days after the feedback is received.

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 for academic misconduct. Please refer to Academic Integrity | HKUST – Academic Registry for the University's definition of plagiarism and ways to avoid cheating and plagiarism.

Course AI Policy

GenAI may be used as a tool, but it is NOT a substitute for completing the assessment tasks. If AI tools are used in completing an assignment, the use of AI tools must be declared and explained in assignment submissions. Failure to declare AI use or declaring its use without exercising critical thinking and responsibility will constitute academic misconduct.

Course Communication Platform

All lecture materials and announcements will be posted on CANVAS. Be sure to check CANVAS from time to time for any updated news.

Suggested Textbook

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

Course Schedule

Week	Date	Topic
1	01 Sep	Introduction
	03 Sep	Research Questions and Hypotheses
2	08 Sep	Research Ethics
	10 Sep	
3	15 Sep	Psychological Measurement
	17 Sep	Group Project Consultation I
4	22 Sep	Workshop I: Conducting Literature Search
	24 Sep	Survey and Sampling
5	29 Sep	
	01 Oct	NO CLASS: The National Day
6	06 Oct	Qualitative Research Methods
	08 Oct	
7	13 Oct	**Midterm Quiz**
	15 Oct	Experimental Designs
8	20 Oct	
	22 Oct	
9	27 Oct	Group Project Consultation II
	29 Oct	NO CLASS: The Chung Yeung Festival
10	03 Nov	Group Project Consultation II
	05 Nov	Workshop II: Descriptive Statistics & Inferential Statistics
11	10 Nov	
	12Nov	Group Project Discussion and Data Collection
12	17 Nov	Group Project Presentations
	19 Nov	
13	24 Nov	
	26 Nov	

Important Dates

Date	Topic
21 Sep	Assignment 1
05 Oct	Assignment 2
13 Oct	Midterm quiz
26 Oct	Group project proposal
16 Nov	Group presentation slides
29 Nov	Peer evaluation

Assessment Overview

1. In-Class Participation (10%)

During classes, we will have activities in various forms. The activities are designed to assess your understanding of the lecture materials, collect your opinions on a topic, and share different perspectives.

- You will earn 2 points for completing one activity. The maximum number of points you can earn is 10 (2 points * 5 activities). You can expect at least 8 activities offered throughout the semester.
- Activities will not be announced in advance.
- No late or make-up submissions are allowed for in-class activities.

2. Individual Assignments (30%)

There are two individual assignments: Research Ethics (15%) + Scaling and Measurement (15%). The first assignment is due at **11:59 pm on September 21,** and the second assignment is due at **11:59 pm on October 05**. Guidelines for the assignments will be distributed on Canvas in due course.

- Late submission policy: There is a 5-hour grace period. For submissions after the deadline and within the grace period, 1 point will be deducted (1%). For submissions after the grace period and within 24 hours of the deadline, a 20% penalty will be applied. For submissions 24 hours after the deadline, a 50% penalty will be applied. No submissions will be accepted one week after the deadline. Submissions after that will not be accepted unless you contact the instructor and teaching assistant about requiring an extension or accommodation before the due date. Documented excuses are required. If you cannot inform the instructor or teaching assistant before the deadline due to emergencies or unexpected accidents, please email the instructor or teaching assistant as soon as you can with valid evidence.

3. Midterm Quiz (30%)

A Mid-term quiz will be administered **during class time on October 13** to test your understanding of the course materials. Exams are multiple-choice and True/False questions. The quiz covers all course materials from Week 1 to Week 6.

- Arrive on time for the exams, as no additional time will be given for students arriving late. No make-up exams will be given to students who are absent from the examination unless students can provide validated medical reasons. You should notify the instructor (through email) about your absence by attaching your official medical certificate within 24 hours of the original exam date if you wish to arrange for a make-up exam. All make-up exams will ONLY be in the form of essays and oral questions.

4. Group Project (30%)

You will be assigned to a team of 5-7 people to conduct a research study. The research topic will be randomly assigned to groups. Your group will conduct a psychological study by collecting data on HKUST students. Evaluations will be separated into two sections: *Research Proposal* and *Group Presentation*.

Research Proposal (10%):

- Literature Review: Your group will review previous psychological studies and complete a Literature Review Report based on the assigned research topic.
- Research Question: Based on the literature review, your group needs to formulate a research hypothesis(es) and to propose a research design to test your hypothesis(es).

Group Presentation (20%)

- Presentation Slides: The content will be evaluated based on the quality of content in the four sections: Introduction, Method, Results, and Discussion.
- Presentation: Presentation will be evaluated on the content, coherence, and performance in Q&A sessions. Detailed guidelines will be provided in due course.

Peer Evaluation:

- Contributions of group members will be evaluated towards the completion of the project using *Group Membership Evaluation*. Each person's individual grade in the Group Project will be adjusted based on peer evaluations.