Department	International College of Liberal Arts		
Semester	Spring 2025	Year Offered (Odd/Even/Every Year)	Every Year
Course Number	PSYC/DATA190		
Course Title	Research Design		
Prerequisites	None		
Course Instructor	LAW Wai Him Crystal	Year Available (Grade Level)	1
Subject Area	Psychology	Number of Credits	3
Class Style	Lecture	Language of instruction	English

(NOTE 1) Depending on the class size and the capacity of the facility, we may not be able to accommodate all students who wish to register for the course

Course Description	This course introduces foundational concepts in research design and psychological measurement. Students will learn to formulate research questions, evaluate hypotheses, conduct rigorous empirical studies, and communicate their findings effectively. Through interactive lectures and hands-on activities, students will explore reliability, validity, statistical analyses, and effective presentation techniques. Additionally, students will be introduced to the structure of a scientific research report (IMRaD: Introduction, Methods, Results, and Discussion) to enhance their comprehension skills for reading scientific papers and understanding research design.
Class plan based on course evaluation from previous academic year	The syllabus is subject to annual review and revision to incorporate insights and feedback from the previous year's course evaluations
Course related to the instructor's practical experience (Summary of experience)	Not applicable
Learning Goals	The goal of this course is to offer students a profound understanding of the diverse methodologies utilized in psychological research, while emphasizing the development of practical skills needed to design, execute, analyze, and report such research. More specifically, the objectives include: 1.Develop skills to critically evaluate and formulate research questions, considering ethical implications. 2.Gain proficiency in data collection techniques, focusing on surveys, while recognizing cultural and contextual influences on research. 3.Analyze and interpret data using descriptive and inferential statistics statistics for problem-solving. 4.Understand and apply fundamental principles of research design and methodology, focusing on reading and interpreting scientific papers and abstracts. 5.Lay a foundation for advanced research design studies by fostering understanding of research design and findings interpretation. 6.Work collaboratively on research projects while respecting diverse perspectives.

iCLA Diploma Policy	DP2／DP3／DP4

iCLA Diploma Policy

(DP1) To Value Knowledge - Having high oral and written communication skills to be able to both comprehend and transfer knowledge

(DP2) To Be Able to Adapt to a Changing World - Having critical, creative, problem-solving, intercultural skills, global and independent mindset to adopt to a changing world

(DP3) To Believe in Collaboration - Having a disposition to work effectively and inclusively in teams

(DP4) To Act from a Sense of Personal and Social Responsibility - Having good ethical and moral values to make positive impacts in the world

Active Learning Methods	Problem-Based Learning／Flipped Classroom／Discussion, Debate				
More details/supplemental information on Active Learning Methods	Not applicable				
Use of ICT	Google form				
Contents of class preparation and review	･Students must complete the recommended readings provided by instructors. ･Exams, quizzes, and in-class written assignments will draw from lecture slides and class material. ･Attendance is crucial, and taking notes and engaging in class activities are key parts of preparation for exams and quizzes. ･Review all class content post-lecture to prepare effectively.	Hours expected to be spent preparing for class (hours per week)	3 hours	Hours expected to be spent on class review (hours per week)	3 hours
Feedback Methods	(1) Feedforward and feedback for assignments. (2) Correct answers of the exams will be discussed in class. (3) Any additional comment or advice will be given as requested. Students should arrange individual meetings with the instructor.				

Grading Criteria		
Grading Methods	Grading Weights	Grading Content
mid-term exam	30%	Multiple-choice and short-answer questions
final exam	40%	Multiple-choice and short-answer questions
in-class assessment	30%	

Required Textbook(s)	1.Lecture notes 2.Research Methods in Psychology, 4th American Edition, Cutter, Jhangiani & Leighton, 2019. https://open.umn.edu/opentextbooks/textbooks/75
Other Reading Materials/URL	Not applicable

Plagiarism Policy	This course does not have written assignments, but students will be assessed through two exams, both of which will be in analog (pen and paper) format. The exams will consist of multiple-choice and/or short-answer questions. Students are expected to abide by academic integrity and honesty, and any cheating during exams or other assessments will be considered a serious offense and will result in a zero for the assessment. Cheating includes, but is not limited to, sharing answers with other students, using unauthorized materials, and taking actions that disrupt the integrity of the exams.
Other Additional Notes (Outline crucial policies and info not mentioned above)	Not applicable

(NOTE 2) Class schedule is subject to change

Class Schedule	
Class Number	Content
Class 1	Week 1: Induction and Overview of Research Design (1) Course overview, student induction
Class 2	(2) Principles of research design
Class 3	Week 2: Psychology as a Science (1) Understanding psychological research methodologies
Class 4	(2) Ethics in research
Class 5	Week 3: Literature Review & Research Questions (1) Tools for literature search
Class 6	(2) Defining research questions
Class 7	Week 4: Theory & Hypotheses (1) Developing testable hypotheses
Class 8	(2) Refining research questions
Class 9	Week 5: Variables and Sampling (1) Operational definitions
Class 10	(2) Sampling techniques

Class 11	Week 6: Experimental Design (1) Independent and dependent variables
Class 12	(2) Controlling extraneous variables
Class 13	Week 7: Psychological Measurement (1) Conceptual and operational definitions
Class 14	(2) Measurement reliability and validity
Class 15	Week 8: Midterm Exam ・Covers content from Weeks 1–7 ・Includes multiple-choice and short-answer questions
Class 16	Week 9: Descriptive Statistics I (1) Describing distributions
Class 17	(2) Measures of central tendency and variability
Class 18	Week 10: Descriptive Statistics II (1) Statistical relationships and correlations
Class 19	(2) Effect sizes
Class 20	Week 11: Surveys (1) Survey design and administration
Class 21	(2) Data analysis in survey research
Class 22	Week 12: Hypothesis Testing (1) Null hypothesis significance testing
Class 23	(2) Understanding p-values and errors
Class 24	Week 13: IMRaD Structure and Abstracts (1) Introduction to IMRaD (Introduction, Methods, Results, and Discussion)

Class 25	(2) How to read abstracts effectively
Class 26	Week 14: IMRaD Structure and References (1) Understanding the role of references in scientific research
Class 27	(2) Critical reading and interpretation of research design
Class 28	Week 15: Review (1) Consolidating knowledge of IMRaD and research design principles
Class 29	(2) Understanding APA referencing and introduction of Citation tools
Class 30	Week 16: Final Exam Wrap-Up