City University of Hong Kong
Course Syllabus

offered by Department of Social and Behavioural Sciences
with effect from Semester A 2022/2023

Part I   Course Overview

Course Title: **Psychological Research Design and Analysis**

Course Code: **SS5783**

Course Duration: **One semester**

Credit Units: **3 credits**

Level: **P5**

Medium of Instruction: **English**

Medium of Assessment: **English**

Prerequisites:
(Course Code and Title)   **MSSPSY Students : NIL**
Non-MSSPSY Students : SS1101 Basic Psychology I or its equivalent

Precursors:
(Course Code and Title)   **Nil**

Equivalent Courses:
(Course Code and Title)   **Nil**

Exclusive Courses:
(Course Code and Title)   **Nil**

Part II   Course Details

1. **Abstract**

   This course aims to provide essential training in research designs and quantitative methods commonly employed in psychology. Upon completion of the course students should be able to plan a psychological research study, to conduct the study in operation, to analyse the observation, and to report and communicate in a professional manner.

2. **Course Intended Learning Outcomes (CILOs)**
   (CILOs state what the student is expected to be able to do at the end of the course according to a given standard of performance.)

No.	CILOs#	Weighting (if applicable)	Discovery-enriched curriculum related learning outcomes (please tick where appropriate)		
			A1	*A2*	*A3*
1.	explain major theories and principles of research methodology in psychology;	20%	✓		
2.	use appropriate research designs and statistical methods in the investigations of human behaviour;	20%		✓	✓
3.	execute quantitative analysis on behavioural data by hand and to manage and analyse them with the help of computer;	25%		✓	✓
4.	organize, synthesize, and differentiate the research literature for the planning of an investigation in an area of psychology; and	20%	✓	✓	✓
5.	report, criticize, and communicate the research findings in a professional manner.	15%	✓	✓	✓
		100%			

   A1:   Attitude
   Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.
   A2:   Ability
   Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to self-life problems.
   A3:   *Accomplishments*
   Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

3. Teaching and Learning Activities (TLAs)

(TLAs designed to facilitate students' achievement of the CILOs.)

TLA	Brief Description	CILO No.						Hours/week (if applicable)
		1	2	3	4	5		
Lectures	Focus on explaining pertinent concepts and practices in research methodology and statistical analysis	✓	✓	✓		✓		
Practical Labs	Practical hands-on training in data manipulation and data analysis using computer software		✓	✓				
Workshops	Group project preparation and consultation				✓	✓		

4. Assessment Tasks/Activities (ATs)

(ATs are designed to assess how well the students achieve the CILOs.)

Assessment Tasks/Activities	CILO No.						Weighting	Remarks
	1	2	3	4	5			
Continuous Assessment: 100%								
Term Paper		✓		✓	✓		40%	
Quiz	✓	✓	✓				50%	
Practical Participation			✓				10%	
Examination: 0% (duration: , if applicable)								
							100%	

5. Assessment Rubrics

(Grading of student achievements is based on student performance in assessment tasks/activities with the following rubrics.)

Applicable to students admitted in Semester A 2022/23 and thereafter

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B)	Marginal (B-, C+, C)	Failure (F)
1. Term paper (40%)	1) Understand and explain major theories and principles of psychological concepts; 2) Use appropriate research designs and statistical methods to investigate human behaviour; 3) Report, criticize, and communicate the research findings in a professional manner.	Strong evidence of competencies in managing and analysing behavioural data arising from various designs, applying appropriate designs and strategies in the process of observation, communicating and reporting research findings in a professional manner.	Good evidence of competencies in managing and analysing behavioural data arising from various designs, applying appropriate designs and strategies in the process of observation, communicating and reporting research findings in a professional manner.	Fair to limited evidence of competencies in managing and analysing behavioural data arising from various designs, applying appropriate designs and strategies in the process of observation, communicating and reporting research findings in a professional manner.	Insufficient evidence of competencies in managing and analysing behavioural data arising from various designs, applying appropriate designs and strategies in the process of observation, communicating and reporting research findings in a professional manner.
2. Quiz (50%)	Understand statistical methods in the investigations of human behaviour.	Strong evidence of ability or knowledge in statistical methods.	Good evidence of ability or knowledge in statistical methods.	Fair to limited evidence of ability or knowledge in statistical methods.	Insufficient evidence of ability or knowledge in statistical methods.
3. Practical Participation (10%)	Attend all tutorial sections, be highly involved all class activities, and complete all assignments and practices in class.	Attend 90-100% tutorial sections, be highly involved all activities in class, and submit all assignments and practice questions by deadlines.	Attend 80-90% of tutorial sections and be engaged in all class activities, and submit all assignments and practice questions by deadlines.	Attend 60-80% of tutorial sections and show a moderate level of engagement in class activities, and submit work by deadlines.	Attend less than 60% tutorial classes and fail to submit work by deadlines.

Applicable to students admitted before Semester A 2022/23

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C, C-)	Marginal (D)	Failure (F)
1. Term paper (40%)	1) Understand and explain major theories and principles of psychological concepts; 2) Use appropriate research designs and statistical methods to investigate human behaviour; 3) Report, criticize, and communicate the research findings in a professional manner.	Strong evidence of competencies in managing and analysing behavioural data arising from various designs, applying appropriate designs and strategies in the process of observation, communicating and reporting research findings in a professional manner.	Good evidence of competencies in managing and analysing behavioural data arising from various designs, applying appropriate designs and strategies in the process of observation, communicating and reporting research findings in a professional manner.	Fair evidence of competencies in managing and analysing behavioural data arising from various designs, applying appropriate designs and strategies in the process of observation, communicating and reporting research findings in a professional manner.	Limited evidence of competencies in managing and analysing behavioural data arising from various designs, applying appropriate designs and strategies in the process of observation, communicating and reporting research findings in a professional manner.	Insufficient evidence of competencies in managing and analysing behavioural data arising from various designs, applying appropriate designs and strategies in the process of observation, communicating and reporting research findings in a professional manner.
2. Quiz (50%)	Understand statistical methods in the investigations of human behaviour.	Strong evidence of ability or knowledge in statistical methods.	Good evidence of ability or knowledge in statistical methods.	Fair evidence of ability or knowledge in statistical methods.	Limited evidence of ability or knowledge in statistical methods.	Insufficient evidence of ability or knowledge in statistical methods.
3. Practical Participation (10%)	Attend all tutorial sections, be highly involved all class activities, and complete all assignments and practices in class.	Attend 90-100 tutorial sections, be highly involved all activities in class, and submit all assignments and practice questions by deadlines.	Attend 80-90% of tutorial sections and be engaged in all class activities, and submit all assignments and practice questions by deadlines.	Attend 70-80% of tutorial sections and participate in all class activities, and submit all assignments and practice questions by deadlines.	Attend 60-70% of tutorial sections and show a moderate level of engagement in class activities, and submit work by deadlines.	Attend less than 60% tutorial classes and fail to submit work by deadlines.

Part III   Other Information (more details can be provided separately in the teaching plan)

1.   **Keyword Syllabus**

Research designs, descriptive and inferential statistics, normal distribution, analysing differences between means, analysing correlation, non-parametric tests of categorical data, power and effect size, analysis of variance, one-way and factorial models, fixed and random effects, randomized block design and within-subject design, polynomials and planned contrast tests, post-hoc tests, introduction to multivariate analyses including general linear model, multiple regression, partial correlations, exploratory factor analyses, report writing, research ethics

2.   **Reading List**
2.1   **Compulsory Readings**
   (Compulsory readings can include books, book chapters, or journal/magazine articles. There are also collections of e-books, e-journals available from the CityU Library.)

   Gravetter, F., & Wallnau, L. (2017). *Statistics for the Behavioral Sciences*. CA: Wadsworth. (e-book: https://julac.hosted.exlibrisgroup.com/permalink/f/48trit/CUH_IZ51527456980003408)

2.2   **Additional Readings**
   (Additional references for students to learn to expand their knowledge about the subject.)

1.	Coolican, H. (2009). Research methods and statistics in psychology. London: Hodder & Stoughton.
2.	Gravetter, F., & Forzano, L. B. (2009). Research methods for the behavioral science. Canada: Wadsworth.
3.	Smith, R. A., & Davis, S. F. (2010). The psychologist as detective. New Jersey: Pearson.
4.	Norusis, M. J. (2005). SPSS 13.0 Guide to data analysis. NJ: Prentice Hall.
5.	http://www.ats.ucla.edu/stat/spss/default.htm
6.	http://www.socialresearchmethods.net/
7.	http://davidmlane.com/hyperstat/index.html
8.	http://www.wadsworth.com/psychology_d/templates/student_resources/workshops/workshops.html
9.	http://www.statsoft.com/textbook/stathome.html
10	http://www.apastyle.org/apa-style-help.aspx