

SS5783: PSYCHOLOGICAL RESEARCH DESIGN AND ANALYSIS

Effective Term

Semester A 2025/26

Part I Course Overview

Course Title

Psychological Research Design and Analysis

Subject Code

SS - Social and Behavioural Sciences

Course Number

5783

Academic Unit

Social and Behavioural Sciences (SS)

College/School

College of Liberal Arts and Social Sciences (CH)

Course Duration

One Semester

Credit Units

3

Level

P5, P6 - Postgraduate Degree

Medium of Instruction

English

Medium of Assessment

English

Prerequisites

MSSPSY Students : Nil

Non-MSSPSY Students : SS1101 Basic Psychology I or its equivalent

Precursors

Nil

Equivalent Courses

Nil

Exclusive Courses

Nil

Part II Course Details

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.

Course Intended Learning Outcomes (CILOs)

CILOs		Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	explain major theories and principles of research methodology in psychology;	20	x		
2	use appropriate research designs and statistical methods in the investigations of human behaviour;	20		x	x
3	execute quantitative analysis on behavioural data by hand and to manage and analyse them with the help of computer;	25		x	x
4	organize, synthesize, and differentiate the research literature for the planning of an investigation in an area of psychology; and	20	x	x	x
5	report, criticize, and communicate the research findings in a professional manner.	15	x	x	x

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 real-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.

Learning and Teaching Activities (LTAs)

LTAs		Brief Description	CILO No.	Hours/week (if applicable)
1	Lectures	Students will actively participate in lectures to explore key concepts and practices in research methodology and statistical analysis. They will collaborate with peers to enhance their comprehension of these foundational topics.	1, 2, 3, 5	

2	Practical Labs	Students will engage in practical, hands-on training sessions in which they will manipulate and analyze data using computer software. Working in small groups, they will complete exercises designed to strengthen their skills in data management and analysis.	2, 3	
3	Workshops	Students will work together to brainstorm research questions and design methodologies for their group projects. They will consult with their tutors to refine their ideas and obtain constructive feedback.	4, 5	

Assessment Tasks / Activities (ATs)

ATs		CILO No.	Weighting (%)	Remarks ("- for nil entry)	Allow Use of GenAI?
1	Research Proposal	1, 2, 4, 5	20	For proof editing only	Yes
2	Quizzes	1, 2, 3	60	-	No
3	Critique Assignment	1, 2, 4, 5	20	For proof editing only	Yes

Continuous Assessment (%)

100

Assessment Rubrics (AR)**Assessment Task**

Research Proposal (20%) (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

- 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.

Excellent

(A+, A, A-) 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

(B+, B, B-) 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

(C+, C, C-) 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.

Marginal

(D) 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.

Failure

(F) 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.

Assessment Task

Critique Assignment (20%) (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

- 1) Summarize the key components of a journal article;
- 2) Critically evaluate the quality of the journal article.

Excellent

(A+, A, A-) Attend 90-100 tutorial sections, be highly involved all activities in class, and submit all assignments and practice questions by deadlines.

Good

(B+, B, B-) Attend 80-90% of tutorial sections and be engaged in all class activities, and submit all assignments and practice questions by deadlines.

Fair

(C+, C, C-) Attend 70-80% of tutorial sections and participate in all class activities, and submit all assignments and practice questions by deadlines.

Marginal

(D) Attend 60-70% of tutorial sections and show a moderate level of engagement in class activities, and submit work by deadlines.

Failure

(F) Attend less than 60% tutorial classes and fail to submit work by deadlines.

Assessment Task

Quizzes (60%) (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

Understand statistical methods in the investigations of human behaviour.

Excellent

(A+, A, A-) Strong evidence of ability or knowledge in statistical methods.

Good

(B+, B, B-) Good evidence of ability or knowledge in statistical methods.

Fair

(C+, C, C-) Fair evidence of ability or knowledge in statistical methods.

Marginal

(D) Limited evidence of ability or knowledge in statistical methods.

Failure

(F) Insufficient evidence of ability or knowledge in statistical methods.

Assessment Task

Research Proposal (20%) (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

- 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.

Excellent

(A+, A, A-) 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

(B+, B) 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.

Marginal

(B-, C+, C) 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.

Failure

(F) 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.

Assessment Task

Quizzes (60%) (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Understand statistical methods in the investigations of human behaviour.

Excellent

(A+, A, A-) Strong evidence of ability or knowledge in statistical methods.

Good

(B+, B) Good evidence of ability or knowledge in statistical methods.

Marginal

(B-, C+, C) Fair to limited evidence of ability or knowledge in statistical methods.

Failure

(F) Insufficient evidence of ability or knowledge in statistical methods.

Assessment Task

Critique Assignment (20%) (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

- 1) Summarize the key components of a journal article;
- 2) Critically evaluate the quality of the journal article.

Excellent

(A+, A, A-) Attend 90-100% tutorial sections, be highly involved all activities in class, and submit all assignments and practice questions by deadlines.

Good

(B+, B) Attend 80-90% of tutorial sections and be engaged in all class activities, and submit all assignments and practice questions by deadlines.

Marginal

(B-, C+, C) Attend 60-80% of tutorial sections and show a moderate level of engagement in class activities, and submit work by deadlines.

Failure

(F) Attend less than 60% tutorial classes and fail to submit work by deadlines.

Part III Other Information**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

Reading List**Compulsory Readings**

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

Additional Readings

Title	
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