

SS3708: DESIGN AND ANALYSIS FOR PSYCHOLOGICAL RESEARCH II

Effective Term

Semester A 2022/23

Part I Course Overview

Course Title

Design and Analysis for Psychological Research II

Subject Code

SS - Social and Behavioural Sciences

Course Number

3708

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

B1, B2, B3, B4 - Bachelor's Degree

Medium of Instruction

English

Medium of Assessment

English

Prerequisites

SS3707 Design and Analysis for Psychological Research I

Precursors

Nil

Equivalent Courses

Nil

Exclusive Courses

Nil

Part II Course Details

Abstract

This course aims to provide further training in research designs and quantitative methods in psychology upon completion of basic training in SS3707. Upon completion of this course students will be able to conduct a psychological research study in the real world and to report and analyse the observations in a systematic manner.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	explain and apply major inferential statistical methods appropriately for psychological investigation;	30		x	
2	plan and implement research strategies and design in the process of observation;	20		x	
3	organize and analyse the data arising from empirical observation; and	20		x	
4	communicate research findings in a professionally acceptable manner.	30			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.

Teaching and Learning Activities (TLAs)

	TLAs	Brief Description	CILO No.	Hours/week (if applicable)
1	Lectures	Focused on explaining pertinent concepts and statistical analysis, applying appropriate statistical procedure to analyze real-life data, reporting and evaluating research findings.	1, 2	
2	Labs	Workshops on data manipulation & data analysis. Students will be given opportunities to work on real-life dataset that is generated by them.	2, 3	

3	Workshops	Students will be inspired to generate new and innovative ideas in analyzing their data, interpreting results, reporting findings, and evaluating the outcomes for their research projects.	2, 4	
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Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Short Assignment	3	10	
2	Quiz	1, 2	40	
3	Research Report (group)	3, 4	40	
4	Lab & Project Participation	4	10	

Continuous Assessment (%)

100

Examination (%)

0

Assessment Rubrics (AR)**Assessment Task**

1. Short Assignment

Criterion

Ability to differentiate and explain the research methods applied for different purposes

Excellent (A+, A, A-)

High

Good (B+, B, B-)

Significant

Fair (C+, C, C-)

Moderate

Marginal (D)

Basic

Failure (F)

Not reaching basic levels

Assessment Task

2. Quiz

Criterion

ABILITY to UNDERSTAND and EXECUTE statistical analyses

Excellent (A+, A, A-)

High

Good (B+, B, B-)

Significant

Fair (C+, C, C-)

Moderate

Marginal (D)

Basic

Failure (F)

Not reaching basic levels

Assessment Task

3. Research Report (group)

Criterion

ABILITY to USE computer for data analysis and to EXECUTE the research in action and to COMMUNICATE the results in a professional manner

Excellent (A+, A, A-)

High

Good (B+, B, B-)

Significant

Fair (C+, C, C-)

Moderate

Marginal (D)

Basic

Failure (F)

Not reaching basic levels

Assessment Task

4. Lab / project participation

Criterion

Positive ATTITUDE in engaging in inquiry and in collaborating with project members

Excellent (A+, A, A-)

Highly positive and fully engaged

Good (B+, B, B-)

Positive and engaged

Fair (C+, C, C-)

Moderately positive and engaged

Marginal (D)

Rather detached but showed some efforts to engage

Failure (F)

Detached and no efforts to engage

Part III Other Information

Keyword Syllabus

Introduction to ANOVA, factorial designs ANOVA, fixed and random effects, randomized block design and within-subject design, orthogonal polynomials and planned non-orthogonal contrast tests, post-hoc tests, introduction to multivariate analyses including basic concepts of general linear model, multiple regression and partial correlations, SPSS, report writing, research ethics.

Reading List**Compulsory Readings**

	Title
1	Coolican, H. (2009). Research methods and statistics in psychology. London: Hodder & Stoughton.
2	Gravetter, F., & Wallnau, L. (2017). Statistics for the Behavioral Sciences (10th Edition). Cengage Learning.
3	Norusis, M. J. (2012). IBM SPSS statistics 19 guide to data analysis. NJ: Prentice Hall.
4	Denis, D. J. (2021). Applied univariate, bivariate, and multivariate statistics: Understanding statistics for social and natural scientists, With Applications in SPSS and R. John Wiley & Sons. [Chapter 14]
5	Gravetter, F., & Forzano, L.B. (2019). Research Methods for the Behavioral Science (6th Edition). Cengage Learning.

Additional Readings

	Title
1	http://www.socialresearchmethods.net/
2	http://davidmlane.com/hyperstat/index.html
3	http://www.wadsworth.com/psychology_d/templates/student_resources/workshops/workshops.html
4	http://www.statsoft.com/textbook/stathome.html
5	http://www.apastyle.org/
6	http://www.apastyle.org/elecref.html
7	American Psychological Association. (2020). Publication manual of the American Psychological Association. American Psychological Association.
8	Baron, R.M., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. <i>Journal of Personality and Social Psychology</i> , 51(6), 1173-1182.
9	British Psychological Society. (1992). BPS Manual of Psychological Practicals: Experiment, Observation, and Correlation. Leicester: British Psychological Society.
10	Cohen, A., West, A., Leona S., Cohen, P, & West, S. G. (2015). Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences (3rd ed.). Routledge.
11	Cohen, R. J., Schneider. W. J., & Tobin, R. (2022). Psychological testing and assessment: An introduction to tests and measurement (10th Edition). New York: McGraw-Hill Education.

12	Creswell, J.W. (2017). <i>Research Design: Qualitative, Quantitative, and Mixed Methods Approaches</i> (5th Ed). London: Sage Publications.
13	Elliott, A. C., & Woodward, W. A. (2020). <i>Quick Guide to IBM® SPSS®: Statistical Analysis with Step-by-Step Examples</i> (3rd ed.). SAGE Publications.
14	George, D., & Mallery, P. (2019). <i>IBM SPSS statistics 26 step by step: A simple guide and reference</i> . Routledge.
15	Gray, D.B. (2018). <i>Doing Research in the Real World</i> (4th Ed). Sage Publications.
16	Healey, J. F. & Donoghue, C. (2020). <i>Statistics: A tool for social research</i> (11th ed.). Wadsworth Cengage Learning.
17	Kulas, J. T., Roji, R. G. P. P., & Smith, A. M. (2021). <i>IBM SPSS Essentials: Managing and Analyzing Social Sciences Data</i> . John Wiley & Sons.
18	Watkins, M. W. (2021). <i>A Step-by-Step Guide to Exploratory Factor Analysis with SPSS</i> . Routledge.