Subject Description Form

Subject Code	APSS 489
Subject Title	Research Methods in Applied Psychology: *Let the Data Speak*
Credit Value	3
Level	4
Pre-requisite / Co-requisite/ Exclusion	Pre-requisite: APSS222 Introduction to Psychology & APSS339 Statistics for Human Service Professionals

Assessment Methods	Specific assessment methods/tasks	% weighting	
	1. **Participation:** Class & LMS (Blackboard)	5%	
	2. **Test:** Multiple-Choice Questions	30%	
	3. Research Proposal Progress submissions	15%	
	4. Research Proposal: Oral presentation & Written Report	50%	
	Total	100 %*	

Objectives	This subject covers essential research concepts, tools, and language that enable students to organize, interpret, and utilize research findings arising from psychological studies. It is aimed at stimulating students with curiosity about how to deal with findings derived in psychology and social sciences. The students are provided with opportunity and supervision to engage in learning activities that allow independent planning and execution of psychological investigations on a chosen topic of interest from a pool of research projects in the Department. The ultimate objective is to focus on the application of acquired research knowledge and skills to examine complex difficulties and interventions in multi-disciplinary fields of social sciences and social programs in health, welfare and education.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: a. Acquire essential research knowledge and skills in applied psychology; b. Assess and evaluate empirical evidence critically in the format of quantitative, qualitative, or mixed-method analyses; c. Formulate research questions and make attempts to carry out empirical studies with relevance to their academic interests and/or on topics of interest in applied psychology;

	d. Make effective use of the basic research skills and tools acquired for writing up research reports independently, or at least with minimal assistance up to the implementation stage.
Subject Synopsis/ Indicative Syllabus	1. Behavioral Research, Scientific Inquiry and Ethical Considerations 2. Types of Research Methods and Experimental Designs 3. Systematic Review of Literature for Evidence 4. Observations and Measurement of Psychological Phenomena 5. Descriptive Statistics and Graphical Presentation: Describing Samples and Populations - Summarizing Scores Using Frequency, Distributions and Percentiles; - Summarizing Scores Using Measures of Central Tendency –The Mean, Median and Mode; - Summarizing Scores Using Variability –Range, Variance and Standard Deviation; - Describing Data with z-Scores and the Normal Curve Model /Normal Distribution 6. Hypothesis Testing and Estimation: Utility and Limitation of Statistics - Overview of Statistical Hypothesis Testing- The z-Test - Binomial Tests and Revisiting Probability – Making Decisions about Chance Events - Effect Size and Power Analysis 7. The Mean-based Family of Tests - Examining Differences Between Means: Testing a Single Mean or a Correlation Coefficient – The t-Test (for repeated measures); Testing Two Sample Means – The t-Test (for two independent groups); - Comparing Two or More Means by Analysis of Variances (ANOVAs): - Testing Two or More Means by One-Way classification of ANOVA; - Testing Means from Two Independent Variables by Two-Way classification of ANOVA; - Examining Relationships Between Variables: Describing / Measuring Relationships Using Correlation; Using Linear Regression to Predict Scores - Analyzing Other Forms of Data:

	Contingency Tables, Chi-square (χ^2) Tests for Frequencies, Odds Ratio, and 2X2 test - The Non-Parametric Tests: Mann-Whitney U Test, Spearman Coefficient 8. An Overview of Advanced Techniques in Applied Research - Principal Component Analysis (PCA), Exploratory Factor Analysis (EFA), Logistic Regression; - An introduction to Qualitative Methods and Analysis, and Mixed Methods 9. Formulating an Attainable Research Question, Choosing an Appropriate Design(s) and Statistical Test(s), and Mode of Presentation 10. Communicating Research Findings: Structure and Components of a Quantitative Research Paper Title, Abstract, Introduction, Method, Results, Discussion, Conclusion, Reference and Formatting
Teaching/Learning Methodology	Web-assisted with Instructor Facilitation Lectures / Seminars Research Project preparation Face-to-face / On-line Learning Activities in Class Tutorial and On-line Tutorial
Assessment Methods in Alignment with Intended Learning Outcomes	(see table below)

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)					
		a	b	c	d	e	
1. **Participation:** Class & LMS (Blackboard)	5%	√					
2. **Test:** Multiple-Choice Questions	30%	√					
3. Research Proposal Progress submissions	15%	√	√				
4. Research Proposal: Oral presentation & Written Report	50%	√	√				
Total	100 %*						

*The grade is calculated according to the percentage assigned.

	Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes: Students are expected to demonstrate their ability to write a research proposal. The assessments examine their abilities to formulate a research question, conduct a literature review, propose a research design and methods sections, and assemble these components and other relevant information into a formal research proposal and present it to the class. In addition, students are being assessed on their knowledge acquisition related to research methods with the test.

Student Study Effort Expected	Class contact:	Hours
	▪ Lecture	21
	▪ Tutorial	18
	Other student study effort:	
	▪ Proposal Preparation	30-60
	Total student study effort	69-99

Medium of Instruction	English

Medium of Assessment	English

Reading List and References	**Textbook** Goodwin, C. J. (2013). *Research in psychology: Methods and design* (7th ed.). New York: John Wiley & Sons. **References** Agresti, A. (2002). *Categorical data analysis* (2nd ed.). New York: Wiley. Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, N.J.: L. Erlbaum Associates. Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2002). *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences* (3rd ed.). New York: Routledge Academic. Goldstein, H. (2003). *Multilevel statistical models* (3rd ed.). London: Arnold. Martin, D. W. (2008). *Doing psychology experiments* (7th ed.). Belmont, CA: Wadsworth.

Rosnow, R. L., & Rosenthal, R. (2005). *Beginning behavioral research : A conceptual primer* (5th ed.). Upper Saddle River, N.J.: Pearson/Prentice Hall.

Silvia, P. J. (2007). *How to Write a Lot: A Practical Guide to Productive Academic Writing*. Washington D.C.: American Psychological Association.

Sternberg, R. J., & Sternberg, K. (2010). *The Psychologist's Companion: A Guide to Writing Scientific Papers for Students and Researchers*. New York: Cambridge University Press.Weiner, I. B. (Ed.). (2003). *Handbook of Psychology*. New York: Wiley. Available at http://onlinelibrary.wiley.com/book/10.1002/0471264385