

<b>Name of Faculty</b>	:	Faculty of Humanities & Social Science
<b>Name of Program</b>	:	Master of Arts - Psychology
<b>Course Code</b>	:	2MAP02
<b>Course Title</b>	:	Applied Statistics in Psychology
<b>Type of Course</b>	:	Professional Core (PC)
<b>Year of Introduction</b>	:	2023-24

<b>Course Objective</b>	:	<p>Understanding basic statistical concepts and their theoretical foundations important for their appropriate use in data analyses. Know key terms and major contributors pertaining to psychological statistics.</p> <p>Understand the difference between descriptive and inferential statistics</p> <p>Be able to do calculations for descriptive and inferential statistics, and test hypotheses using the appropriate inferential distributions and formulae.</p> <p>Developing skills important for using statistical analyses in organizing and preparing data for psychological research and interpretation</p>
<b>Course Outcomes</b>	:	At the end of this course, students will be able to:
	CO1	Demonstrate their understanding of descriptive statistics by practical application of quantitative reasoning and data visualization
	CO2	Demonstrate their knowledge of the basics of inferential statistics by making valid generalizations from sample data
	CO3	Explain the logic and appropriate applications of statistical analyses for univariate or bivariate research designs, problems, or hypotheses
	CO4	Calculate the statistics necessary to solve problems (both manually and via computer)
	CO4	Communicate the meaning of statistical analyses in everyday language and professional formats

#### Teaching and Examination Scheme

Teaching Scheme (Contact Hours)			Credits	Examination Marks				
L	T	P		Theory Marks		Practical Marks		Total Marks
			C	SEE	CIA	SEE	CIA	
4	0	0	4	70	30	0	0	100

*Legends: L-Lecture; T-Tutorial/Teacher Guided Theory Practice; P - Practical, C - Credit, SEE - Semester End Examination, CIA - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)*

**Course Content**

Unit No.	Topics	Teaching Hours	Weightage %	Mapping with COs
1	<b>Introduction to Statistics:</b> Why do psychologists need to know about statistics? Types of Statistical Techniques, Measurement Scales in Statistics and its importance, Different concepts and terms used in Statistics - Null Hypothesis, Alternate Hypothesis, Levels of Significance, Sample Size, Types of Errors, Degrees of Freedom, One Tailed Tests, Two Tailed Tests.	12	20	CO1
2	Chi Square - Equal Probability, Normal Probability, 2 x 2 Contingency Table, Chi-Square for Independence, Contingency Co-efficient; T-Test for two samples of correlated/related/paired scores (one group design), T-Test for two samples of unrelated/uncorrelated scores (two group design)	12	20	CO1 CO2
3	Correlation - Raw Score Method, Product Moment Method, Pearson's Correlation Coefficient, Spearman Rank Order Correlation Coefficient, Assumed Mean Method; Special Correlation Methods - Correlation Ratio (ETA Correlation), Biserial Correlation, Point Biserial Correlation, Tetrachoric Correlation, Partial and Multiple Correlation	12	20	CO3
4	Analysis of Variance, One Way, Two Way, Three Way, ANCOVA; Regression and Prediction	12	20	CO3
5	Non-Parametric Tests - Mann-Whitney U Test, Wilcoxon Signed Rank Test, Kruskal Wallis Test, Friedman's ANOVA; SPSS - Introduction, Data entry, Calculation, Interpretation of Results	12	20	CO3 CO4

Suggested Distribution of Theory Marks Using Bloom's Taxonomy						
Level	Remembrance	Understanding	Application	Analyse	Evaluate	Create
Weightage	25	-	-	50	25	-

*NOTE: This specification table shall be treated as a general guideline for the students and the teachers. The actual distribution of marks in the question paper may vary slightly from above table.*

#### Reference Books

Sr. No.	Name of Reference Books
1	Mayers, Andrew, Introduction to statistics and SPSS in psychology, Pearson (2013)
2	Cramer, Duncan Howitt, Dennis, Introduction to statistics in psychology[with SPSS], Pearson (2014)
3	Arthur Aron, Elaine Aron, Elliot Coups, Statistics for psychology, Pearson Education, 2013
4	Hugh Coolican, Research Methods and Statistics in Psychology, Psychology Press (2014)
5	C.R. Kothari, Research Methodology - Methods and Techniques, 2 <sup>nd</sup> Revised Edition, New Age International Publishers, 2004