**Course code: CP-306**

**Course title: Statistical Methods**

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| 1. **Course Learning Outcomes: (CLO’s)** | |
| CLO-1 | **Describe** the basic concepts of statistical methods relevant to psychological research. (C1) |
| CLO-2 | **Explain** the assumptions and utility of different statistical analysis.(C2) |
| CLO-3 | **Illustrate** the initial screening of research data using SPSS.(C2) |
| CLO-4 | **Apply** an appropriate type of statistical procedure relevant to hypothesis testing in psychological research. (C3) |

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|  | | CLO 1 | CLO 2 | CLO 3 | CLO 4 |
| **PLO-1**  **Cognitive** | **Psychology Knowledge:** Graduates will be able to comprehend the core concepts of Clinical Psychology—an ability to describe the manifestation of psychological issues |  |  |  |  |
| **PLO-2**  **Cognitive** | **Psychology Knowledge:** Graduates will be able to comprehend the core concepts of Clinical Psychology—an ability to describe the manifestation of psychological issues |  |  |  |  |
| **PLO-3**  **Psychomotor** | **Basic Assessment Skill Development**: An ability to demonstrate and interpret various assessment modalities. |  |  |  |  |
| **PLO-4**  **Psychomotor** | **Therapeutic Techniques and Implementation**: Graduates will be able to utilize the therapeutic skills and construct the intervention plan. |  |  |  |  |
| **PLO-5**  **Affective** | **Communication:**  Graduates will be able to communicate and demonstrate practical verbal and written skills |  |  |  |  |
| **PLO-6**  **Psychomotor** | **Case studies**: An ability to conceptualize individual clinical cases with diverse ethnic, religious, and cultural backgrounds along with integrated assessment and intervention skills |  |  |  |  |
| **PLO-7**  **Affective** | **Ethical considerations**: Graduates will ensure professional ethical guidelines and principles in clinical and community settings. |  |  |  |  |
| **PLO-8**  **Psychomotor** | **Research:** An ability to identify the need for significant indicators of mental health in a collectivistic culture to execute scientific research |  |  |  |  |
| **PLO-9**  **Psychomotor** | **Community Work**: Graduates will able to engage with different organizations to provide community services including recognition and bridging different resources to fulfill the psychological needs of communities such as marginalized population |  |  |  |  |
| **PLO-10**  **Psychomotor** | **Mental Health Awareness:** Graduates will be able to take initiative and design Programs for prevention and promotion of mental health wellness and quality of life in general population. |  |  |  |  |
| **PLO-11**  **Cognitive** | **Lifelong Learning**: Able to develop significant professional goals for life and recognize the importance of psychological skills in their personal and professional lives. |  |  |  |  |

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| 1. **Assurance of Learning and Assessment Items:**   *Specify Assessment Items that will assure student learning through application and achieve objectives of specific PLOs / CLOs* | |
| **Assessment Item** | **Application/ Outcomes**  **CLO / PLO** |
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| Assignment 1: Critical Review of Article | CLO1/PLO5 |
| Project | CLO4/PLO5 |
| Assignment 2: | CLO4/PLO8 |
| Quiz 1 | CLO1/PLO1 |
| Quiz 2 | CLO1/PLO1 |
| Midterm | CLO2 |
| Final Exam | CLO1,2,3,4,5 |

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| 1. **Weekly Sessions Plan:** | | | | |
| Week | Course Contents | CLO | **Blooms Taxonomy Level** | Reference Chapter(s) |
| 1 | **Introduction, Course Orientation,**   * Introduction, Course Orientation, Outline * Previous experience, apprehensions, expectations * First word of statistics * What makes statistics difficult * Ways to handle the statistics difficulties * Definition of statistics * What is data * What is a sample * What is population * What is variable * What is a parameter * What is a statistic | 1 | C1 | Chapter 1 Introduction to Statistics  Gravetter, F. J., & Wallnau, L. B. (2019). *Statistics for the behavioral sciences.* Cengage Learning Asia Pte Ltd. |
| 2 | **Variables and scales of measurements**  · Definition  · Discrete variables  · Continuous variables  · Scales of measurements  1. Nominal  2. Ordinal  3. Interval  4. Ratio | 2 | C2 | Chapter 1 Introduction to Statistics |
| 3 | **Frequency distribution and Graphs**  · Frequency distribution  · Shape of frequency distribution  1. Symmetrical distribution  2. Skewed distribution  · Graphs  1. Key elements of graphs  2. Types of graphs  3. Interpretations  · Percentile ranks | 3 | C2 | Chapter 2 Frequency Distributions |
| 4 | **Types of statistics and research and statistics**  Types of statistics  · Descriptive statistics  · Inferential statistics  Research and statistics  · Psychometric analysis  · Descriptive analysis  · Inferential analysis | 4 | C3 | Steele, C., Andrews, H., & Upton, D. (2012). Statistics in Psychology. Pearson Education Limited. |
| 5 | **Reliability and Validity**  Reliability  · Definition, Types, examples  Validity  · Definition, Types, examples | 2 | C2 | Steele, C., Andrews, H., & Upton, D. (2012). Statistics in Psychology. Pearson Education Limited. |
| 6 | **Central tendency**  **PRESENTATIONS**  Measures of central tendency  1. Mean (Definition, example, calculation)  2. Median (Definition, example, calculation)  3. Mode (Definition, example, calculation) | 2 | C2 | Chapter 3 Central Tendency |
| 7 | **A descriptive analysis of SPSS**  Frequency, percentages, mean, standard deviation, graphical representation, and their interpretation of the descriptive analysis. | 4 | C3 | Chapter 3 Central Tendency  Chapter 4 Variability |
| 8 | **Inferential statistics**  Discussed SPSS analysis and relate it with the result section of the thesis.  Inferential statistics  · Hypotheses testing  · Probability: concepts and uses  · Tests of association  · Tests of differences  · Task: identify tests of association and tests of differences, how to write descriptive analysis in sequences, and show a draft of the result section. | 4 | C3 | Chapter 8 Introduction to Hypothesis Testing |
| 9 | Mid term |  |  |  |
| 10 | **Reverse coding and Normality**  · Reverse coding  · Normality and how to find out these terms or procedures on SPSS.  · Psychometric analysis on SPSS (Cronbach’s alpha) | 4 | C3 | Chapter 15 Correlation |
| 11 | **Correlation analysis**  Test of association (Correlation analysis)  1. Rationale  2. Hypotheses  3. Assumptions  4. SPSS steps  5. Interpretation of output | 4 | C3 | Chapter 9 Introduction to the t Statistic and Chapter 10 The t Test for Two Independent Samples |
| 12 | **Tests of differences (T-test)**  The Guest lecture by Dr. Taskeen  Tests of differences (T-test)  1. Types  2. Rationale  3. Hypotheses  4. Assumptions  5. SPSS steps of independent sample t-test  **6.** Interpretation of output | 4 | C3 | Brace, N., Kemp, R., & Snelgar, R. (2006). SPSS for psychologists. London Lawrence Erlbaum Association. |
| 13 | **ANOVA**  ANOVA  1. Types  2. Rationale  3. Hypotheses  4. Assumptions  5. SPSS steps of independent sample one-way ANOVA  6. Interpretation of output | 4 | C3 | Brace, N., Kemp, R., & Snelgar, R. (2006). SPSS for psychologists. London Lawrence Erlbaum Association.  Steele, C., Andrews, H., & Upton, D. (2012). Statistics in Psychology. Pearson Education Limited. |
| 14 | **Practice of SPSS**  The practice of SPSS analysis like t-test, correlation, ANOVA, and descriptive analysis. | 3 | C2 | Chapter 15 Correlation |
| 15 | **Discussions**  Discussed all course evaluations and course outlines. |  |  |  |
| 16 | Final term |  |  |  |