Course Title : Research Methods II (Applied Statistics and Data Analysis)

Course Code   : PSY-805

Credit Hours   : 2

Pre requisite: Research Methods 1

Course Description:

1.   This course will have primary emphasis Quantitative Research; it will provide an in-depth understanding of quantitative research methods and their application. In addition, this course will prepare students to select appropriate research design, analyze and interpret quantitative data. This course will also enhance students' statistical reasoning and data handling skills for quantitative research.

2.   **Objectives:**

   a. To deepen understanding of quantitative research methods.

   b. To develop skill in application of statistics in psychological research.

   c. To develop skills for analysis and interpretation of quantitative data using statistical software.

   d. To expand skills for reporting quantitative data.

Learning Outcomes:

3.   The course will enable students to:

   a. Use appropriate quantitative research methods.

   b. Develop their statistical reasoning ability.

   c. Apply quantitative design and analysis in psychological research.

   d. To use statistical soft wares for analyzing quantitative data.

   e. Interpret and Report quantitative results.

4.   **Course Content:**

   a. Research Designs

   b. Introduction to hypothesis testing and probability

   c. Sample estimation and Power Estimation.

   d. Choosing Statistical Analysis Techniques

   e. Data Exploration

   f. Data reduction and group formation

   g. Data Analysis by using Parametric Tests

   h. Correlation and regression

   i. Handling covariates and confounds

j. Data Analysis by using Non Parametric Tests

k. Data Interpretation and report writing

Suggested Readings:

1. Goodwin, C. J. (2002). Research in psychology: Methods and design. (3rd ed.). New York: John Wiley & Sons. 27.

2. Shaughnessy, J. J., Zechmeister, E. B., & Zechmeister, J. S. (2005). Research methods in psychology. (5th ed.). Singapore: McGraw-Hill.

3. Jones, S. (2010). Statistics in Psychology: Explanations without Equations. Palgrave Macmillan.

4. Hanna, D., & Dempster, M. (2012). Psychology Statistics For Dummies. John Wiley & Sons.

5. Field, A. (2013).Discovering Statistics using IBM SPSS Statistics. 4th ed. Sage Publications.