**STAT-311 Introduction to Statistics 03 Credit Hours**

**(General Course)**

This course intends to address this need of the program providing training in basic concepts, theory and utilization of statistics in peace and conflict studies. The nature and scope of the Statistics. Organizing of Data, classification of data, Graphs and Charts: Stem-and leaf diagram, Box and Whisker plots and their interpretation. Measures of Central Tendency and Dispersion: Their properties, usage, limitations, and comparison. Calculations for the ungrouped and grouped data. Measures of Skewness and Kurtosis and Distribution shapes. Probability Concepts, Addition and Multiplication rules, Bivariate frequency tables, joint and marginal probabilities, Conditional probability and independence, Bayes’ rule.

**Learning Objectives:**

1. To Provide orientation on basic arguments of Statistics

2. To enhance the understanding of the students regarding statistical tools and its application

3. To enhance the skill of the students for understanding of issues Related to research in terms of qualitative and quantitative data analysis.

**Course Contents**

1. The Nature and Scope of the Statistics.

2. Organizing of Data, Classification of Data,

3. Graphs and Charts: Stem-and Leaf Diagram, Box and Whisker plots and Their Interpretation.

4. Measures of Central Tendency and Dispersion: Their Properties, usage, Limitations and Comparison. Calculations for the Ungrouped and Grouped Data.

5. Measures of Skewness and Kurtosis and Distribution Shapes.

6. Probability Concepts,

7. Addition and Multiplication Rules,

8. Bivariate Frequency Tables

9. Joint and Marginal Probabilities, Conditional Probability and

10. Independence, Bayes’ Rule.

**Suggested Readings**

· Spiegel, M.R., Schiller, J.L. and Sirinivasan, R.L. (2000).Probability and Statistics, 2nd edition.New York: Schaums Outlines Series. McGraw Hill.

· Clark, G.M and Cooke, D. (1998).A Basic Course in Statistics, 4thedition, Arnold, London.

· Walpole, R.E., Myers, R.H and Myers, S.L. (1998). Probability and Statistics for Engineers and Scientist 6th edition, New York: Prentice Hall.

· Mclave, J.T., Benson, P.G. and Snitch, T. (2005).Statistics for Business & Economics,9th edition. New Jersey: Prentice Hall.

· Weiss, N,A.(1997).Introductory Statistics,4th edition. Addison-Wesley Pub. Company, Inc.

· Chaudhry, S.M.and Kamal, S. (1996).Introduction to Statistical Theory, P-I & P-II, 6th edition, Lahore: IlmiKitab Khan.