Syllabus of Users and Data Analysis

Chapter 1: Basic Operation of SPSS Statistical Software

1.1 Fundamental Contents

1.1.1 Concept of SPSS, application characteristics of SPSS, and startup and exit of SPSS. SPSS system operation management mode and window function.

1.1.2 SPSS basic concepts, the definition of SPSS variables and principles, SPSS basic operations, data input, and data editing.

1.2 Basic Requirements

1.2.1 Master and understand the characteristics and functions of SPSS.

1.2.2 Master the basic concepts of SPSS.

1.2.3 Proficient in data entry and editing.

1.3 Recommended Class Hours (6 credit hours)

Chapter 2: Data File Arrangement

2.1 Fundamental Contents

2.1.1 After the collected data is read into a data file, the data file is processed and sorted, including the sorting of records, the sorting of variable values, and the transposition of data files.

2.1.2 Data grouping concept, SPSS grouping process, and data file merging.

2.1.3 Data summary concept, SPSS process, and analysis variable selection.

2.2 Basic Requirements

2.2.1 Master the preliminary data sorting.

2.2.2 Skilled in data grouping.

2.2.3 Proficient in data summary.

2.3 Recommended Class Hours (6 credit hours)

Chapter 3: Overview of Statistical Analysis (1)

3.1 Fundamental Contents

3.1.1 Frequency analysis and description of statistical analysis concepts.

3.1.2 SPSS production of box diagram, stem and leaf diagram, and histogram.

3.2 Basic Requirements

3.2.1 Understand and master univariate descriptive statistical analysis methods and analysis indicators.

3.3.2 Understand and master univariate frequency analysis methods and analysis indicators.

3.3 Recommended Class Hours (6 credit hours)

Chapter 4: Overview of Statistical Analysis (2)

4.1 Fundamental Contents

4.1.1 Concept of independent sample T-test, paired sample T-test, and SPSS process.

4.1.2 ANOVA concept, ANOVA principle, hypothesis testing of multiple populations.

4.1.3 Concept of one-way ANOVA, multiple comparisons of one-way ANOVA, one-way ANOVA SPSS process.

4.2 Basic Requirements

4.2.1 Master the concept and analysis principle of independent sample T-test.

4.2.2 Master the concept and analysis principle of paired sample T-test.

4.2.3 Master the basic problems, basic terms, experimental design, and hypothesis testing of ANOVA.

4.2.4 Master the principle and analysis process of one-way ANOVA, and make multiple comparisons of one-way ANOVA.

4.2.5 Understand the multivariate analysis of multivariate variables.

4.3 Recommended Class Hours (10 credit hours)

Chapter 5: Overview of Statistical Analysis (3)

5.1 Fundamental Contents

5.1.1 Concept and structure distribution of contingency analysis.

5.1.2 Chi-square distribution and Chi-square test.

5.1.3 Application of contingency analysis, SPSS process of contingency analysis.

5.2 Basic Requirements

5.2.1 Master contingency table analysis of classified data.

5.2.2 Master the calculation and analysis of various data centralization trends and decentralization trends.

5.3 Recommended Class Hours (10 credit hours)

Chapter 6: Linear correlation and regression analysis

6.1 Fundamental Contents

6.1.1 The concept of correlation and the calculation of Pearson correlation coefficient, Spearman correlation coefficient, and Kendall correlation coefficient.

6.1.2 Test of correlation coefficient. Three correlation coefficients of the SPSS process.

6.1.3 Determination coefficient of unitary linear regression analysis and significance test of unitary linear regression model.

6.1.4 SPSS process for unitary linear regression analysis.

6.2 Basic Requirements

6.2.1 Understand and master the concept of variable correlation and the analysis process.

6.2.2 Master the analysis and test of a unitary linear regression model; Master multiple linear regression analysis and testing.

6.3 Recommended Class Hours (10 credit hours)