Ph.D Course work Syllabus for Physical Education, Research Process & Statistics

Unit I

1. Meaning, Nature, Need and Scope of Research in Physical Education.
2. Types of Research. Research Method vs. Research methodology,
3. Planning of statistical enquiry.
4. Collection of data – Primary and Secondary

Unit II

1. Population and Sampling, Types of sampling. Different methods of Sampling.
2. Research Design.
3. Control of Experimental Variables/Groups, Control Groups and Factors

   Affecting Experimental Outcome – Subjects, Age, Sex, Physiological,

   Psychological Variables etc.

Unit III

1. Dispersion and Skewness- Mean deviation, Standard deviation, Coefficient of variation and coefficient of variation.
2. Coefficient of correlation- Carl- Pearson method, Spearman's ranking method.
3. Regression- Simple and Multiple regressions up to three variables.
4. Standard error of estimate.

Unit IV

1. Hypothesis- Meaning of hypothesis, formulation of hypothesis, Characteristics of a good hypothesis, Type I and Type II error
2. Testing of hypothesis
3. Test of significance- Parametric 't' test, 'F' ratio, ANOVA, Post-hoc test, nonparametric Chi square test,.
3. Theoretical frequency Distribution- Normal distribution

Unit V

1. Introduction of computer Organization and architecture Types of Computers, Different parts of computers Input Output Devices. Processors. Memory, Storage Devices.
2. Use of computers in research- Statistical packages and Co state.
3. Working with Microsoft Word [Creating File, Edit, View, Insert, Format, Tools, Table]
4. Working with Microsoft Excel [Creating File, Edit, View, Insert, Format, Tools, Table]
5. Working with Microsoft Power Point Presentation [Creating File, Edit, view, Insert, Tools Slide Show]
6. Working With Internet – its basic concept, creating mail account sending & receiving mail and attachment.
7. Knowledge of SPSS.