

Dept of Pharm Tech.

- 1) Research Methodology : Meaning of Research, Objectives of Research, Motivations in Research, Significance of Research. What is Research Problem?, Selecting the Problem, Necessity of and Techniques in defining the problem, designing of work plan. Study population; Ethical considerations. Work Plan; Summary of the major components of a research proposal; Fieldwork; Writing a research report, defining deliverables
- 2) Quantitative methods
 - a) Sample Design: Variables; Sampling; Sample size determination, Implication, Steps. Criteria for selecting a sample procedure, Characteristics of Good sampling Procedure,
 - b) Methods of Data Collection: Collection of Primary Data, Observation Method, Interview method, Collection of Data through questionnaire and Schedules, Other methods.
 - c) Testing of Hypothesis: Meaning, Basic concepts, Flow diagram, test, Important parametric tests, Hypothesis Testing of Means,
 - d) Correlation & regression analysis.
 - f) Types of study designs/ Experiment design – Orthogonal array, Student's t-test, ANOVA, interaction,
- 3) Computer Applications:

Features for statistical data analysis, generating charts/graphs & other features. [Tools: Microsoft Excel, Open office and similar or other advanced tools]

 - b. Presentation tool: Introduction to presentation tool, features & functions, Tools used: Microsoft PowerPoint, Open Office or any other tool]
 - c. Web Search: introduction to internet, Use of Internet & www, using search engines using advanced search tools.
 - d. Thesis writing & Scientific editing tools.
 - e. copyright

4) Expected Outcome

References

- 1) Kothari, C.R., Research Methodology (Methods and Techniques), New Age Publisher
- 2) Montgomery, Douglas C. (2007) 5/e, Design and Analysis of Experiments (Wiley India)
- 3) Montgomery, Douglas C. & Runger, George C. (2007) 3/e, Applied Statistics & probability for Engineers (Wiley India)
- 4) Kothari, C.R., Research Methodology (Methods and Techniques), New Age Publisher
- 5) Montgomery, Douglas C. (2007) 5/e, Design and Analysis of Experiments (Wiley India)