

MBS-555: RESEARCH METHODOLOGY

40 h

UNIT- I

14h

Scope, Formulation of Research Objectives, Hypothesis Testing, Components of research design, Good Laboratory practices, Bio-Safety level, Laboratory designing Literature Survey and Review: Report writing, Pre-writing considerations, Thesis writing, Formats of Report writing, Formats of Publications in Research Journals. Plagiarism: Tools and Software for detection

UNIT- II

14h

Biostatistics –Descriptive and Inferential Statistics, Test of Significances: Student *t*-test, F-test, Chi-square test, Correlation and regression, ANOVA, Multiple-range test, Statistical Data Analysis using Computers and Software; TOOLPAK, COSTAT, SPSS.

UNIT- III

12h

Intellectual Property Rights, Patent Laws, Patenting of Microorganisms, Bioethics, Institutional Ethics Committee, Model/Experimental Organisms: *E. coli*, *Drosophila melanogaster*, *Coenorhabditis elegans*, *Arabidopsis thaliana*, Mouse, Rat, Guinea pig, Rabbit. CPCSEA Guidelines- Maintenance, Handling, Treating and Collection of Biological Samples and Waste disposal

