

Programme: M.Sc. (Microbiology)

Course Code: MIO 114

Title of the Course: RESEARCH METHODOLOGY [T]

Number of Credits: 1

Effective from Academic Year: 2018-19

Prerequisites	Basics of microbiology is necessary.	
Objective:	This course develops the concepts of research and covers all aspects ranging from biosafety in the laboratory, experimental protocol, presentation of data and viva voce.	
Content:		(12)
1.	Biosafety in laboratory	
2.	Ethics in research	
3.	Defining the problem	
4.	Literature survey	
5.	Defining the Aims and Objectives	
6.	Work Plan – Time-bound Frame	
7.	Research design	
8.	Experimental protocol	
9.	Presentation of data	
10.	Analysis and Conclusions	
11.	Presentations	
12.	Research manuscript writing	
13.	Thesis Writing	
14.	Viva Voce	
Pedagogy:	Lectures/tutorials/assignments/self-study	
References/ Readings	Kothari C. R., Research Methodology Methods and Techniques, New Age International.	
	Kumar, R. C., Research Methodology. APH Publ Corporation, New Delhi.	
	Good C. V., Scates, D. E., Methods of Research, Appleton-Century-Crofts.	
	Day R.A. How to write and publish a scientific paper, Part 274, Volume 994, Oryx Press.	
	Alley, M., The Craft of Scientific Writing, Springer Science and Business Media.	
	Cooray P.G. Guide to Scientific and Technical Writing.	
Learning Outcomes	Skills to design, conduct an experiment and successfully process and report the observations in the form of a scientific report/manuscript/thesis.	