

## Syllabus of Research Methodology

Subject Code: XE9031

Sl. No	SUBJECT	TOPICS	NATURE	Remarks	Lecture-Sessional		
					L	T	P
1.	English	Basics of Communication Skills for Professional Development. Academic Writing. Grammar and Editing: English Language Teaching, Lecturing in English. Presentation Techniques Personality Development. Audience analysis and persuasion techniques, Research topic related presentation and error correction through constructive feedback.	Compulsory	HSS (Eng.)	6	0	6
2.	Ethics and Plagiarism	Ethics: the concepts. Seeking consent Providing incentives Seeking sensitive information The possibility of causing harm to participants Maintaining confidentiality Ethical issues to consider relating to the researcher Avoiding bias Provision or deprivation of a treatment Using inappropriate research methodology Incorrect reporting Inappropriate use of the information Ethical issues regarding the sponsoring organisation Restrictions imposed by the sponsoring organisation The misuse of information.	Compulsory	MS	4	0	0
3.	Fundamentals of Research	What is research? Purpose of research, Classification of research, Fundamentals of research methods, Writing a research proposal, Problem Identification: Review of literature, broadening knowledge base in the specific research area, bringing clarity and focus to the research problem, Writing a research proposal, Writing a research report. Identifying variables: What is a variable? The difference between a concept and a variable, Converting concepts into variables, Types of variable, Types of measurement scale.	Compulsory	HSS (Eco.)	6	0	0
4.	Research Design	Selecting a study design: Differences between quantitative and qualitative study designs, Study designs in quantitative research, Data collection: Selecting a method of data collection, Differences in the methods of data collection in quantitative and qualitative research, Major approaches to information gathering, Methods of data	Compulsory	MS	6	0	0

		collection in qualitative research. Collecting data using attitudinal scales: Measurement of attitudes in quantitative and qualitative research, Attitudinal scales in quantitative research, Functions of attitudinal scales Difficulties in developing an attitudinal scale, Types of attitudinal scale, Attitudinal scales and measurement scales, Attitudes and qualitative research, Use of Excel & SPSS.					
5.	Fundamentals of Statistics	Frequency, Measures of Central Tendency, Dispersion, Regression and Interpretation of Results.	Compulsory	HSS (Eco.)	10	0	0
6.	Basics of Probability	Definition of Probability, Conditional Probability, Bayes' Random Variable, Probability Distribution.	Compulsory	Maths	6	0	0
7.	Optimisation Technique	Maxima & Minima, Conditions of optimality, Linear Programming Problem (Introduction, Formation of LPP, Graphical method of solution).	Compulsory	Maths	4	0	0
8.	Application of Software	Latex (Writing Paper, Thesis, Report, Bibliography), BEAMER for presentation.	Compulsory	CS	0	0	8