



<b>Week No.</b>	<b>Course Items</b>
1	What is Research (Meaning of Research) <ul style="list-style-type: none"> <li>a. Objective of Research</li> <li>b. Motivation of Research</li> <li>c. Thesis Research</li> <li>d. Importance of Research</li> <li>e. Approaches of Research</li> </ul>
2	Research Methods and Research Methodology <ul style="list-style-type: none"> <li>a. Importance of Research Methodology in Research Study</li> </ul>
3	Types of Research <ul style="list-style-type: none"> <li>a. Basic Research</li> <li>b. Applied Research</li> <li>c. Normal and Revolutionary Researches</li> <li>d. Quantitative and Qualitative Methods</li> <li>e. Other Types of Research</li> </ul>
4	Characteristics of a Good Research
5	Research Process <ul style="list-style-type: none"> <li>a. Selection of a Research Topic and Problem               <ul style="list-style-type: none"> <li>*Can a Researcher Choose a Topic by Himself?</li> <li>* Identification of a Research Topic and Problems</li> <li>* Definition and Formulation of a Problem</li> <li>* What Makes a Good Proposal?</li> <li>* Reasons Why Research Proposals Fail</li> </ul> </li> <li>b. Effective Time Management</li> <li>c. Literature Survey and Reference Collection</li> <li>d. Development of Working Hypothesis</li> </ul>

	<ul style="list-style-type: none"> <li>e. Determining Sample Design</li> <li>f. Collecting the Data</li> <li>g. Data Management and Backups</li> <li>h. Executing the Project</li> <li>i. Data Analysis</li> <li>j. Hypothesis Test</li> <li>k. Results and Conclusions</li> </ul>
6	<p>Statistical Inference for Research</p> <ul style="list-style-type: none"> <li>a. Quantification and the Inferential Paradigm</li> <li>b. Foundations of Statistical Inference</li> <li>c. Bayesian Concepts</li> <li>d. Frequents Concepts and Hypothesis Testing</li> <li>e. Statistical Modeling</li> </ul>
7	<p>Scientific Inference</p> <ul style="list-style-type: none"> <li>a. Types of Scientific Inference</li> <li>b. Scientific Explanation</li> <li>c. Levels of Certainty</li> <li>d. The Deductive- Inductive Scientific Method</li> <li>e. Logic in Scientific Explanation</li> </ul>
8	.Mid Term Exam
9	<p>Layout of a Research Report / Ph. D. Thesis / Master Dissertation</p> <ul style="list-style-type: none"> <li>a. Preliminary Types</li> <li>b. Main Text. <ul style="list-style-type: none"> <li>*Introduction</li> <li>*Actual Research Work Performed and the Findings.</li> <li>*Summary and Conclusion</li> </ul> </li> <li>c. End Matters <ul style="list-style-type: none"> <li>*Appendices</li> <li>*Citation</li> <li>*References / Bibliography</li> </ul> </li> </ul>
10	<p>How to Construct Questionnaires</p> <ul style="list-style-type: none"> <li>a. Deciding Which Questionnaire to Use</li> <li>b. Wording and Structure of Questions</li> <li>c. length and Ordering of Questionnaire</li> <li>d. Piloting the Questionnaire</li> <li>e. Obtaining a High Response</li> </ul>

11	Ethics and Professionalism in Science a. What are 'Scientific Ethics'? b. Fraud (Plagiarism) c. Authorship d. Intellectual Property e. Professionalism f. The Social Responsibility of the Scientist
12	Writing a Research Paper a. What is Research Paper or Article? b. Why Should a Researcher Report his Findings? c. Finding a Proper Place to Publish the Research Work
13	Practice
14	Practice
15	Practice

Suggested References	
1	How to Write a Better Thesis by David Evans, Paul Gruba, Justin Zobel - 2014
2	Thesis Writing: Manual For All Researchers by F Abdul Rahim - 2007
3	How to Write a Thesis by Umberto Eco 2015
4	Writing the Successful Thesis and Dissertation by Irene L. Clark, Alfredo Mendoza, Chakarat Skawratananond 2006
5	Writing a Watertight Thesis: A Guide to Successful Structure Mike Bottery, Nigel Wright - 2019
6	Writing Your Thesis By Paul Oliver 2013