

Semester Plan

Research Methodology and Scientific Writing

Week	Date	Topics	Sub-topics	Pre-class Activity	In-class Activity	Post-class Activity
Week 01	18/04/2024	Introduction to Research Methodology and Topic Selection	Understanding the basics of research methodology. Importance of research. Introduction to different research paradigms. Techniques for effective topic selection.	Case Studies/ Videos/ Discussion Forum	Brainstorming session for potential research topics	Every student must submit a research topic. Since one group has 3 members at least, one group should have at least 3 topics. [10 Marks]
Week 02	25/04/2024	Literature Review and Problem Identification - Part I	Importance of literature review in research. Searching and selecting relevant literature. Evaluating the credibility of sources. Identifying key themes and trends.	Case Studies/ Videos	Searching and selecting some relevant research articles	Students need to select one topic from the submitted topics and should submit a draft literature review of their chosen topic. [20 Marks]
Week 03	02/05/2024	Literature Review and Problem Identification - Part II	Techniques for synthesizing literature. Identifying gaps and research opportunities. Formulating research questions based on literature review.	Case Studies/ Videos	Identifying potential research problems	Students need to finalize their supervisor/s and should submit their research problem after getting the approval from the principal supervisor. [20 Marks]
Week 04	09/05/2024	Formulating Research Questions and Objectives	Principles of formulating clear research questions. Writing clear and concise research questions. Setting specific, measurable, achievable, relevant, and time-bound (SMART) objectives. Aligning research questions with research objectives.	Case Studies/ Videos	Drafting research questions and objectives for proposed topics.	Students should finalize their research questions and objectives and should get the approval from the principal supervisor. [10 Marks]
Week 05	16/05/2024	Research Design and Methodology	Understanding different research designs (experimental, observational, etc.). Selecting appropriate research methodologies. Designing data collection methods and tools.	Case Studies/ Videos	Developing a research design for proposed topics.	Students should prepare their research design and methodology section. [20 Marks]
Workshop - Scientific Writing (17/05/2024 and 18/05/2024) [Dr. Ranga Rodrigo]						
Week 06 and 07	23/05/2024 and 30/05/2024	Mid-Break				
Week 08	06/06/2024	Data Collection and Analysis	Techniques for collecting primary and secondary data. Data preprocessing and cleaning. Introduction to statistical analysis and data visualization.	Videos	Planning data collection methods for proposed research.	Students should finalize their data collection plan and begin collecting data.
Week 09	13/06/2024	Proposal Structure and Writing Style	Structure and components of a research proposal. Writing style and formatting guidelines. Strategies for clear and concise writing.	Reading Materials/ Videos	Drafting sections of the research proposal.	Students should submit a draft of their research proposal. [10 Marks]

Week 10	20/06/2024	Ethical Issues in Conducting Research, Publications and Peer Review Process	Responsible conduct of research. Understanding plagiarism and avoiding it. Peer review process and publication ethics. Providing constructive feedback Addressing reviewer comments effectively Revision strategies	Reading Materials/ Videos	Discussing ethical dilemmas and case studies.	Students should peer-review another group proposal and provide feedback. [10 Marks]
In-class Assessment 01 - Quiz [Weight - 20%] -> All theory parts covered including the workshop will be tested here. 20 MCQs/ 30 Minutes						
Week 11	27/06/2024	Presentation Skills and Proposal Defense Preparation	Importance of effective presentations Structuring a research proposal defense Practice sessions for proposal defense Handling questions and feedback	Videos	Practice sessions for proposal defense.	Students should prepare and deliver a practice presentation of their proposal.
Take-home Assessment 01 - Presentation [Weight - 20%] -> 5 min. presentation of their proposal. Students need to record this as a video and upload. Specific comments will be given next week.						
Week 12	04/07/2024	Finalizing the Proposal and Preparing an Effective Poster	Incorporating feedback and revisions into the proposal. Proofreading and editing techniques. Designing an effective research poster.	Comments of the Take-home Assessment 01	Finalizing the research proposal by addressing the comments received.	Students should prepare a poster to present their proposal to the audience.
Week 13	11/07/2024	In-class Assessment 02 - Poster Presentation [Weight - 40%] -> Panel will be evalauted student's proposal using the poster.				
Take-home Assessment 02 - Post-class Activities [Weight - 20%] -> The mentioned post-class activities will be considered under this assessment. The mark distribution is given in each and every activity.						

Continuous Assessments (40%)			
Evaluation Criteria	Type	Submission Mode	Weight
In-class Assessment 01	Physical Examination	Individual	20%
In-class Assessment 02	Poster	Group	40%
Take-home Assessment 01	Video Presentation	Group	20%
Take-home Assessment 02	Post-class Activities	Individual and Group	20%
Total:			100%

Final Examination (60%)			
Evaluation Criteria	Type	Submission Mode	Weight
Final Proposal	Take-home	Group	30%
Systermatic Review Paper	Take-home	Group	30%
MCQs Paper	Physical Examination	Individual	40%
Total:			100%

Awards	
Best paper award - After a proper evalaution, the student group who is getting highest marks for the review paper will get a certificate.	