

TRAINING COURSES ON RESEARCH METHODOLOGY
NATURAL SCIENCES BATCH
COURSE OUTLINE

Weeks, Saturdays (3 hrs per session) – MEF	<i>Week 1</i>	9.00 – 12:00	Introduction	Research experience of participants; Ethics; Exploring and defining a research problem BS – <i>Define one research problem</i>
	<i>Week 2</i>	9.00 – 12:00	Research Problem	Exploring and defining a research problem BS – <i>Define a clear research question to be answered during the course of this training</i>
	<i>Week 3</i>	9.00 – 12:00	Literature review	Reading and reviewing the literature BS – <i>Draft a brief literature review for the identified research question</i>
	<i>Week 4</i>	9.00 – 12:00	Literature review	Reading and reviewing the literature BS – <i>Fine tune the literature review from previous session</i>
	<i>Week 5</i>	9.00 – 12:00	Methods for Research	Designing the research methods – types and sources of data; quality and reliability of data BS – <i>identify the research design to be employed</i>
	<i>Week 6</i>	9.00 – 12:00	Methods for Research	Designing the research methods – Data collection techniques BS – <i>decide on data collection methods to be employed</i>
	<i>Week 7</i>	9.00 – 12:00	Undertaking research	Conducting the research – components of research methodology; purpose BS – <i>Collect/gather required data</i>
	<i>Week 8</i>	9.00 – 12:00	Undertaking research	Conducting the research – sampling; limitations BS – <i>Collect/gather required data and recognize limitations</i>
	<i>Week 9</i>	9.00 – 12:00	Data analysis	Analysing data – data preparation and analysis; basic statistics BS – <i>Identify what statistics would be suitable to be employed for the research</i>
	<i>Week 10</i>	9.00 – 12:00	Data analysis	Analysing data: Use of statistical software BS – <i>Application of for example SPSS& Statistica</i>
	<i>Week 11</i>	9.00 – 12:00	Data analysis	Analysing data: Use of statistical software; use of word templates and latex BS – <i>Application of for example SPSS& Statistica; use of latex & word templates for papers</i>
	<i>Week 12</i>	9.00 – 12:00	Writing Skills	Writing the research report – Abstract/Title/Introduction BS – <i>Draft preliminary title, abstract and introduction</i>
	<i>Week 13</i>	9.00 – 12:00	Writing Skills	Writing the research report – Methods & Results BS – <i>Draft preliminary method and result section</i>
	<i>Week 14</i>	9.00 – 12:00	Writing Skills	Writing the research report – Discussion & References BS – <i>Draft preliminary discussion and reference sections</i>
	<i>Week 15</i>	9.00 – 12:00	Presentations	Presentation of research work conducted BS – <i>present the research</i>
			Discussion Panel/feedback	Perspectives and Development in writing skills

For each session, there will be 1-1.5hrs of lectures followed by breakout sessions where students will work in groups of 4-5 people on activities that will lead them through the research process. BS=Breakout session. At the end of each session, participants will take the remaining work home. The previous homework will be discussed at the beginning of each session.