

16UMBDC602	Fundamentals of Research Methodology	2hrs/week	1 Credits
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### Objectives

After completion of this course, student will be able to:

1. Understand the concept of research and importance of studying research methodology
2. Gain knowledge regarding various components of research
3. Distinguish between various scientific documents
4. Understand the concept of thesis writing
5. Gain elementary knowledge regarding application of statistics in research

### UNIT-1: Introduction to Research Methodology (12 hrs)

- Introduction to Research and Research Methodology
- Objective of Research
- Types of research
- Significance of research
- Process of Research

### UNIT-2: Components of Research (12 hrs)

- Defining research problem
- Designing research
- Sample and sampling
- Data Collection
- Data Analysis

### UNIT-3: Scientific documents and standards (12 hrs)


- Scientific Documents: Types
- Journals: types and properties.
- Publication: Types, Ethics and standards
- Quality of Journal: Impact Factor, Citation.
- Google scholar

### UNIT-4: Dissertation/Thesis Writing and Presentation (12 hrs)

- Modes of presenting scientific data
- Basics of Poster Presentation
- Thesis/Dissertation writing: overview, components and order of presentation.
- Ethics of Publication and Thesis writing

### UNIT-5: Elementary statistics for Research (12 hrs)

- Hypothesis
- Hypothesis testing
- Measures of central tendency: Mean, Mode, Median
- ANOVA
- Chi Square test

  
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**Text Book**

1. C.R. Kothari.(2004) Research Methodology. 2<sup>nd</sup> Edition, New Age International Publisher. (UNIT-1-5)

16UMBDC604	DSE-Core 2 Practical : Fundamentals of Research Methodology	2hrs/week	1 Credits
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**List of Practicals**

1. Writing research proposal
2. Protocol filling and submission
3. Making data analysis using statistics

**Reference book:**

1. C.R. Kothari.(2004) Research Methodology. 2<sup>nd</sup> Edition, New Age International Publisher.



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