

**Session: 2023-25**  
**Master of Science (Botany) Semester-IV**  
**Course Title: Field Study and Research Techniques**  
**Course Code: MBTP -4079**

**Course outcomes:**

After passing this course the student will be able to:

**CO1: Understand plant collection, their preservation and importance in taxonomic studies**

**CO2: Understand a general definition of research design**

**CO3: Identify the overall process of designing a research study from its inception to its report.**

**CO4: Understand ethical issues in educational research.**

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**LTP: 0-2-0**

**Max. Marks- 50**

**Evaluation Report - 40**

**CA – 10**

**Field Study:**

1. Collection of Plants identification and preservation  
(a) from local excursion (short) (b) Major excursion (long)
2. Preparation of Herbarium.
3. Preservation of collected plant species.
4. Submission of report for every field study
5. Submission of compiled herbarium at the time of End Sem. Exam.

**Research Techniques:**

1. Introduction: Research design, principles, execution of work, interpretation of results.
2. Review of literature: Structure of a scientific library, journals, books, Digital library and E books
3. Layout of a Research Paper, Journals in Botanical Science, Impact factor of Journals
4. Google Scholar, Open source, bibliography management system.
5. Methods of data collection
6. Data analysis: Measures of Central tendencies (Mean, mode, median,) Standard deviation, the variance and coefficient of variation, Correlation and regression, ANOVA using SPSS
7. Ethics in research related to publishing, Plagiarism and Self-Plagiarism

**Reference Books:**

1. Thomas, C. G. (2021). *Research methodology and scientific writing*. Thrissur: Springer.
2. Bairagi, V., & Munot, M. V. (Eds.). (2019). *Research methodology: A practical and scientific approach*. CRC Press.
3. Jain, S. (2019). *Research methodology in arts, science and humanities*. Society Publishing.