



GAYATRI VIDYA PARISHAD
COLLEGE FOR DEGREE AND PG COURSES (AUTONOMOUS)

Affiliated to Andhra University || Accredited by NAAC and NBA

VISAKHAPATNAM

DEPARTMENT OF ORGANIC CHEMISTRY

M.Sc. (FINAL) CHEMISTRY SYLLABUS

SEMESTER-IV, PAPER-VIII Research Methodology

(Effective from the admitted batch of 2022-2023)

Credits: 2		Theory: 2 Hours
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Unit 1–Science and Research

[10 hours]

Definition – History – Evolution of Scientific Inquiry, Scientific Research: Definition, Characteristics, types, need of research. Identification of the problem, assessing the status of the problem, formulating the objectives, preparing design Actual investigation.

Unit 2-Introduction to Research Methodology

[10 hours]

Meaning and importance of Research – Types of Research – Selection and formulation of Research Problem Research Design –. Analysis of Literature Review – Primary and Secondary Sources, Web sources –critical Literature Review Hypothesis –Preparing Research papers for journals, Seminars and Conferences – Design of paper using template, Impact factor of a journal, citation Index, ISBN & ISSN. Preparation of Project Proposal - Title, Abstract, Introduction – Rationale, Objectives, Methodology – Time frame and work plan – Budget and Justification

Unit 3–Ethics and Documentation

[10 hours]

Ethical Issues –Bibliography Ethical Committees Reproduction of published material – Plagiarism – Citation and Acknowledgement – Reproducibility and accountability. Documentation and scientific writing Results and Conclusions, Preparation of manuscript for Publication of Research paper, Presenting a paper in scientific seminar, Thesis writing. Structure and Components of Research Report, Types of Report: research papers, thesis, Pictures and Graphs, citation styles, writing a review of paper.

BOOKS

1. Garg, B.L., Karadia, R., Agarwal, F. and Agarwal, U.K., 2002. An introduction to Research Methodology, RBSA Publishers.
2. Kothari, C.R. (2008). Research Methodology: Methods and Techniques. Second Edition. New Age International Publishers, New Delhi.
3. Sinha, S.C. and Dhiman, A.K., 2002. Research Methodology, Ess Ess Publications. 2 volumes.

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