

NIRMA UNIVERSITY
INSTITUTE OF PHARMACY

SYLLABUS FOR PH.D ENTRANCE EXAMINATION 2023 - 24

(Pharmaceutics, Pharmacology, Pharmaceutical Chemistry, Pharmaceutical Analysis and Pharmacognosy)

SUBJECT: RESEARCH METHODOLOGY

1. Fundamentals of Research

- Objective & Types of Research
- Selecting a research problem
- Methods, Design and Tools used in research
- Literature Survey, Primary & Secondary Sources of Information
- Documentation types and techniques

2. The research Report/Paper writing/thesis writing and Scientific Writing

- E-Resources
- Presentation of Experimental Data
- Ethics in Research & Publication
- Plagiarism and software to detect plagiarism
- Writing scientific manuscript

3. Research Grants Writing

- Overview of various National and International Agencies
- Types of different Government and Private granting bodies
- Research Proposal Writing

4. Intellectual property rights (IPR) & Patents

- IPR: Introduction to patents, copy rights & trademarks
- Patent : Prior art search, patent filing in India and abroad, patent infringement

5. Statistics in research

- Fundamentals and applications of mean, median, mode, standard deviation, SEM, Regression and Correlation analysis, hypothesis testing (Z-test, t-test, chi square etc.), ANOVA etc. in pharmaceutical research with its interpretations.