



**Shobhit  
University**

EDUCATION EMPOWERS



Top 101-125 Band  
in Pharmacy

## **CRITERION 3 – RESEARCH, INNOVATIONS AND EXTENSION**

**3.4.1 The Institution has a stated Code of Ethics for research, the implementation of which is ensured by the following:**

- 1. Research methodology with course on research ethics**
- 2. Ethics committee**
- 3. Plagiarism check**
- 4. Committe on Publication guidelines**

**To reduce enormous use of paper and printing the ensure data, sign and a seal by the Competent Authority for all the papers, we have used the Class-3 Digital Signatures where a Registration Authority i.e. Dr. Mahipal Singh, Registrar of our University authenticate the documents and responses claimed in this pdf file.**



**SHOBHIT UNIVERSITY, Gangoh**

[Notified by Government of U.P. Act No.3 of 2012, Established u/s 2(f) of UGC Act 1956]

Adarsh Institutional Area, Babu Vijendra Marg,  
Gangoh, Distt. Saharanpur - 247341, UP

**35**  
YEARS  
OF ACADEMIC  
EXCELLENCE





Babu Vijendra Marg, Adarsh Institutional  
Area Gangoh, Distt. Saharanpur (U.P.)  
247341, India  
Tel: +91 7830810052  
E-mail: [registrargangoh@shobhituniversity.ac.in](mailto:registrargangoh@shobhituniversity.ac.in)  
U.: [www.sug.ac.in](http://www.sug.ac.in)

## Course Content of Research Ethics



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## PH.D. COURSEWORK SYLLABUS

### RESEARCH METHODOLOGY

#### COURSE CODE-RM-901

**Objective:** This paper highlights the various postulates of research problems, research design, writing a thesis and modern statistical methods. This helps to carry out research problem individually in a perfect scientific method.

**Unit-I:** Meaning of Research - Function of Research Meaning of Research - Function of Research – Characteristics of Research – Steps involved in Research – Research in Pure and Applied Sciences - Inter Disciplinary Research.

Factors which hinder Research – Significance of Research - Research and scientific methods – Research Process– Criteria of good Research – Problems encountered by Researchers – Literature review.

**Unit - II:** Identification of Research Problem Selecting the Research problem – Necessity of defining the problem – Goals and Criteria for identifying problems for research. Perception of Research problem – Techniques involved in defining the problem – Source of problems – Personal consideration.

Methods of investigation-sampling techniques and theories, editing, classification and tabulation of data, and frequency distribution of data.

**Unit- III:** Research Design Formulation of Research design – Need for Research design – Features of a good design – Important concepts related to Research design. Different research designs – Basic principles of experimental designs – Computer and internet in designs.

**Unit-IV:** Interpretation and Report Writing Meaning and Technique of interpretation – Precautions in interpretation – Significance of report writing – Different steps in writing a report – Layout of a Research report.





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U.: [www.sug.ac.in](http://www.sug.ac.in)

Types of report – Mechanics of writing a research report – Precautions for writing a research report – Conclusion.

**Unit -V:** Statistical Techniques and Tools Introduction of statistics – Functions – Limitations – Measures of central tendency - Arithmetic mean – Median – Mode – Standard deviation – Coefficient of variation (Discrete series and continuous series) – Correlation – Regression- Multiple Regression. Sampling distribution – Standard error – Concept of point and interval estimation – Level of significance – Degree of freedom – Analysis of variance – One way and two way classified data – 'F'-test.

**Text Books and References:**

1. *A Hand Book of Methodology of Research*, Rajammall, P. Devadoss and K. Kulandaivel, RMM Vidyalaya press, 1976.
2. *Research Methodology Methods & Techniques*, C.R. Kothari – New Age international Publishers, Reprint 2008.
3. *Thesis and Assignment Writing*, J. Anderson, Wiley Eastern Ltd., 1997.
4. *Research Methodology*, Mukul Gupta, Deepa Gupta – PHI Learning Private Ltd., New Delhi, 2011.
5. *Fundamentals of Mathematical statistics*, S.C. Gupta and V.K. Kapoor, Sultan Chand & Sons, New Delhi, 1999.
6. *Statistical Methods*, G.W. Snedecor and W.G. Cochrans, Iowa state University Press, 1967

