

Swarrnim Startup and Innovation University

(Doctorate Program)

Syllabus of Pre Ph.D. coursework Course

Title: Research methodology

1. Course Outcomes (COs)

CO1: Explain the significance, role, aims, objectives, and phases of research.

CO2: Understand the purpose and methodology of literature reviews, and locate, synthesize, and present relevant information.

CO3: Identify research gaps and formulate clear research problems and objectives.

CO4: Design research using qualitative and quantitative methods, including hypothesis formulation, statistical testing, and evaluation.

CO5: Organize and format theses, research papers, and technical reports, and deliver effective oral presentations.

CO6: Recognize and apply ethical standards in research, understand issues related to plagiarism, and comply with intellectual property laws.

2. Total Credits: 06

Credit hours: 90

3. Syllabus:

Unit-I: General Introduction to Research

[Credit hours: 08]

History of Science & Technology: Importance of research, role of research, aims & objectives, research process, phases of research.

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5. Text Books:

1. Research Methodology, Methods & Techniques, C.R. Kothari, Viswa Prakashan, 2nd Edition, 2009.
2. Research Methods- A Process of Inquiry, Graziano, A.M., Raulin, M.L, Pearson Publications, 7th Edition, 2009.
3. How to Write a Thesis, Murray, R. Tata McGrawHill, 2nd Edition, 2010.
4. Writing For Academic Journals, Murray, R., McGraw Hill International, 2009.
5. Writing for Publication, Henson, K.T., Allyn & Bacon, 2005.

6. LEARNING OUTCOMES (LOs)

The students will be able to describe the laboratory techniques, safety while using dangerous chemicals, use of internet and databases, online tools, designing a research problem and handling data using statistical tools.

