PART - I

**Introduction to Science and Research:**

**Introduction to Research Methodology**
Meaning and importance of Research – Types of Research – Selection and formulation of Research Problem

Research Design – Need – Features – Inductive, Deductive and Development of models

Developing a Research Plan – Exploration, Description, Diagnosis, Experimentation, Determining Experimental and Sample Designs.

Analysis of Literature Review – Primary and Secondary Sources, Web sources – critical Literature Review

Hypothesis – Different Types – Significance – Development of Working Hypothesis


**Advanced Lessons in Research Methodology**

Clinical Research Methods: Case Reports, Case Series, Observational Studies, Clinical Trials, Blinding, Randomization, Arms of a Trial, Positive Control, Negative Control, Placebo, Nocebo, Four Phases of Clinical Trials

PART - II

**Research Methodologies adapted to the epistemology of Ayurveda**
Modern Methods of Research in Ayurveda: Reverse Pharmacology, Golden Triangle, Science Initiative in Ayurveda, WHO Guidelines for research on herbal medicine
New Methods for Research on Traditional Medicine: Limitations of RCTs, Linear, and Hierarchical Models versus Non-Linear and Circular Models, Whole Systems Research, and Network Pharmacology

**Ethical Considerations**


**Application of Computers, Databases and Search Engines in Research**


**TEXT BOOKS/ REFERENCES:**


17. SPSS – Operating Manual and handbook – Latest version