

GEN530:FUNDAMENTALS OF RESEARCH

Course Outcomes: Through this course students should be able to

CO1 :: develop research aptitude and get in-depth understanding of various methods of research.

CO2 :: identify the appropriate research problem and conduct research in an effective way.

CO3 :: understand indexing systems of various journals.

CO4 :: apply ethics of research in writing research paper and dissertation thesis.

CO5 :: understand the tools and techniques for presenting the research effectively

CO6 :: understand basics of intellectual property rights.

Unit I

Basics of research : meaning of research, objectives of research, motivations in research, types of Research, research approaches, significance of research, research process, criteria of good research, concept of theory: deductive and inductive theory

Unit II

Research topic selection/defining the research problem : literature survey and research gap identification, problem identification as per industrial and societal needs, potential and thrust areas, difference between scientific literature and advocacy literature, hypothesis: qualities of a good hypothesis, null hypothesis and alternative hypothesis, use of databases, search engines and research gateways, framing of timeline/Gantt chart

Unit III

Journal quality, metrics and indexing : types and classification of journals, journal indexing, role of indexing in defining the quality of journal, journal citation indices, h-index, h5-index, h5-median, g index, i-10 index, almetrics, JIF, JIF percentile, cite score, SJR, SNIP and eigen factor, research paper review process, citation, self-citation, funding agencies, Manupatra, academic social networks: google scholar, academia research gate etc

Unit IV

Research ethics : objectivity and subjectivity in research, integrity, carefulness, openness, respect for intellectual property, confidentiality, social responsibility, competence, legality and informed consent, definition of Plagiarism, use of turnitin/iThenticate software, role of referencing/bibliography in handling plagiarism, penalties and consequences, University Grants Commission's (UGC) policy for curbing plagiarism

Unit V

Research writing and presentation : research writing including research paper, research proposal, review writing, thesis writing, Microsoft word (grammar checking, formatting of documents, incorporating references), reference styles, poster preparation, coherence of the ideas, use of theory, Microsoft power point (creation of posters, slides for seminar/talk)

Unit VI

Intellectual property rights : introduction to intellectual property rights, concept and theories, kinds of intellectual property rights, introduction to patents, patent act 1970 – amendments of 1999, 2000, 2002 and 2005, copyright and neighboring rights concept and principles, historical development of the concept of trademark and trademark law-National and International, international regime relating to IPR TRIPS and other Treaties (WIPO,WTO, GATTs)

References:

1. RESEARCH METHODOLOGY : METHODS AND TECHNIQUES by KOTHARI C R, GARG, GAURAV, NEW AGE INTERNATIONAL
2. RESEARCH DESIGN QUALITATIVE, QUANTITATIVE, AND MIXED METHODS APPROACHES by JOHN W. CRESWELL, SAGE PUBLICATIONS
3. INTELLECTUAL PROPERTY RIGHTS (IPRS) by E. T. LOKGANATHAN, NEW CENTURY PUBLICATIONS
4. AN INTRODUCTION TO INTELLECTUAL PROPERTY RIGHTS by J P MISHRA, CENTRAL LAW PUBLICATION
5. THE PRESENTATION BOOK, 2/E: HOW TO CREATE IT, SHAPE IT AND DELIVER IT! IMPROVE YOUR PRESENTATION SKILLS NOW PAPERBACK by EMMA LEDDEN, PEARSON