

RESEARCH METHODOLOGY AND IPR

III Semester: CSE, ES, CAD/CAM, AE, ST, PEED

Course Code	Category	Hours / Week			Credits	Maximum Marks		
BCSB31	Core	L	T	P	C	CIA	SEE	Total
		2	-	-	2	30	70	100
Contact Classes: 30	Tutorial Classes: Nil	Practical Classes: Nil			Total Classes: 30			

I. COURSE OVERVIEW:

This course imparts research methodology and philosophy of intellectual property rights, including basic concepts employed in quantitative and qualitative research methods, Patents, Copyrights, and Trademarks. It provides the research framework, research methodology research design, and formulation hypothesis, sampling techniques, data analysis and report writing. It implies on research skills and intellectual property rights to encourage new creations, including technology, artwork, and inventions, that might increase economic growth.

II. COURSE OBJECTIVES:

The course should enable the students to:

- I. Understand research problem formulation.
- II. Analyze research related information.
- III. Follow research ethics.
- IV. Understand that today's world is controlled by Computer, Information Technology; but tomorrow world will be ruled by ideas, concept, and creativity.

III. COURSE OUTCOMES:

After successful completion of the course, students should be able to:

CO1	Interpret the technique of determining a research problem for a crucial part of the research study.	Remember
CO2	Examine the way of methods for avoiding plagiarism in research.	Apply
CO3	Apply the feasibility and practicality of research methodology for a proposed project.	Apply
CO4	Make use of the legal procedure and document for claiming patent of invention.	Understand
CO5	Identify different types of intellectual properties, the right of ownership, scope of protection to create and extract value from IP.	Understand
CO6	Defend the intellectual property rights throughout the world with the involvement of world intellectual property organization	Apply

IV. SYLLABUS:

UNIT-I	INTRODUCTION	Classes: 07
Meaning of research problem, Sources of research problem, Criteria Characteristics of a good research problem, Errors in selecting a research problem, Scope and objectives of research problem. Approaches of investigation of solutions for research problem, data collection, analysis, interpretation, Necessary instrumentations		

UNIT-II	RESEARCH ETHICS	Classes: 05
Effective literature studies approaches, analysis Plagiarism, Research ethics.		
UNIT-III	RESEARCH PROPOSAL	Classes: 06
Effective technical writing, how to write report, Paper Developing a Research Proposal.		
Format of research proposal, a presentation and assessment by a review committee		
UNIT-IV	PATENTING	Classes: 06
Nature of Intellectual Property: Patents, Designs, Trade and Copyright. Process of Patenting and Development: technological research, innovation, patenting, development. International Scenario: International cooperation on Intellectual Property. Procedure for grants of patents, Patenting under PCT.		
UNIT-V	PATENT RIGHTS	Classes: 06
Patent Rights: Scope of Patent Rights. Licensing and transfer of technology. Patent information and databases. Geographical Indications.		
New Developments in IPR: Administration of Patent System. New developments in IPR; IPR of Biological Systems, Computer Software etc. Traditional knowledge Case Studies, IPR and IITs.		
Text Books:		
1. Stuart Melville and Wayne Goddard, "Research methodology: an introduction for science & engineering students" 2. Wayne Goddard and Stuart Melville, "Research Methodology: An Introduction" 3. Ranjit Kumar, 2nd Edition, "Research Methodology: A Step by Step Guide for beginners"		
Reference Books:		
1. Halbert, "Resisting Intellectual Property", Taylor & Francis Ltd , 2007. 2. Mayall , "Industrial Design", McGraw Hill, 1992. 3. Niebel , "Product Design", McGraw Hill, 1974. 4. Asimov , "Introduction to Design", Prentice Hall, 1962.		
Web References:		
1. Robert P. Merges, Peter S. Menell, Mark A. Lemley, " Intellectual Property in NewTechnological Age", 2016 2. T. Ramappa, "Intellectual Property Rights Under WTO", S. Chand, 2008		
E-Text Books:		
1. http://nptel.ac.in/courses/107108011/		