



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

RESEARCH METHODOLOGY AND IPR								
I Semester: AE, CSE, ES, EPS, & STE								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
BHSD01	Core	L	T	P	C	CIA	SEE	Total
		3	0	0	3	40	60	100
Contact Classes: 48	Total Tutorials: Nil	Total Practical Classes: Nil			Total Classes: 48			
Prerequisite: NIL								

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 student will try to learn:

- I. The Knowledge on formulate the research problem, characteristics of a good research and interpretation of collected data.
- II. The importance of research ethics while preparing literature survey and writing thesis to achieve plagiarism free report.
- III. The intellectual property rights such as patent, trademark, geographical indications and copyright for the protection of their invention done.

III. COURSE OUTCOMES:

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

- CO 1 Interpret the technique of determining a research problem for a crucial part of the research study.
- CO 2 Examine the way of methods for avoiding plagiarism in research.
- CO 3 Apply the feasibility and practicality of research methodology for a proposed project.
- CO 4 Make use of the legal procedure and document for claiming patent of invention.
- CO 5 Identify different types of intellectual properties, the right of ownership and scope of protection to create and extract value from IP.
- CO 6 Defend the intellectual property rights throughout the world with the involvement of world intellectual property organization

IV. COURSE CONTENT:

MODULE-I: INTRODUCTION (10)

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.

MODULE-II: RESEARCH ETHICS (09)

Effective literature studies approaches, analysis Plagiarism and Research ethics.

MODULE-III: RESEARCH PROPOSAL (09)

Effective technical writing, how to write report, Paper Developing a Research Proposal.

Format of research proposal, presentation and assessment by iare view committee.

MODULE-IV: PATENTING (10)

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.

MODULE-V: PATENT RIGHTS (10)

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.

V. TEXT BOOKS:

1. Panneerselvam, Ramasamy. Research methodology. PHI Learning Pvt. Ltd., 2014.
2. Goddard, Wayne, and Stuart Melville. Research methodology: An introduction. Juta and Company Ltd, 2004.
3. Ranjit Kumar, "Research Methodology: A Step-by-Step Guide for beginners". 2nd edition, 2007

VI. REFERENCE BOOKS:

1. Halbert, "Resisting Intellectual Property", Taylor & Francis Ltd, 2007.
2. Correa, Carlos M. Intellectual property rights, the WTO and developing countries: the TRIPS agreement and policy options. Zed books, 2000.
3. Niebel, "Product Design", McGraw Hill, 1974.
4. Asimov, "Introduction to Design", Prentice Hall, 1962

VII. ELECTRONICS RESOURCES:

1. <https://wac.colostate.edu/docs/books/try/chapter1.pdf>
2. <https://www.scribbr.com/dissertation/methodology/>
3. <http://nptel.ac.in/courses/107108011/>

VIII. MATERIALS ONLINE:

1. Course Template
2. Tutorial Question Bank
3. Assignments
4. Model Question Paper – I
5. Model Question Paper - II
6. Lecture Notes
7. Early Lecture Readiness Videos
8. Power point presentation