### RESEARCH METHODOLOGY AND INTELLECTUAL PROPERTY RIGHTS

Course Code: 19HM2101 L P C

2 0 2

At the end of this course, students will be able to

**CO1**: Illustrate research problem formulation.

CO2: Analyse research related information and research ethics

**CO3:** Summarise the present day scenario controlled and monitored by Computer and Information Technology, where the future world will be ruled by dynamic ideas, concept, creativity and innovation.

**CO4**: Explain how IPR would take such important place in growth of individuals & nation, to summarise the need of information about Intellectual Property Right to be promoted among student community in general & engineering in particular.

**CO5**: Relate that IPR protection provides an incentive to inventors for further research work and investment in R & D, which leads to creation of new and better products, and in turn brings about economic growth and social benefits.

#### Unit-I

# Research Methodology: An Introduction

(8 Lectures)

Meaning of research problem, Sources of research problem, Criteria and 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.

### **Learning Outcomes:**

- 1. Explain the scope and objectives of a research problem (L2)
- 2. List out criteria and characteristics of a good research problem(L1)
- 3. Summarize the approaches of investigation of solutions for a research problem (L2)

#### Unit-II

## **Literature Survey and Ethics**

(6 Lectures)

Effective literature studies approaches, analysis Plagiarism, Research ethics.

# **Learning Outcomes:**

- 1. Outline the Literature study approaches (L2)
- 2. Adapt Research ethics in professional life (L6)
- 3. Explain legal compliances of Plagiarism (L2)

### Unit-III

# **Interpretation and Report Writing**

(6 Lectures)

Effective technical writing, how to write a report, Paper Developing a Research Proposal, Format of research proposal, presentation and assessment by a review committee.

# **Learning Outcomes:**

- 1. Demonstrate technical report writing (L2)
- 2. Develop research paper writing skills (L3)
- 3. Develop Power Point Presentation skills (L3)

### **Unit-IV**

# **Intellectual Property Rights and Patents**

(8 Lectures)

Nature of Intellectual Property: Patents, Designs, Trade and Copyrights. 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

# **Learning Outcomes:**

- Explain Intellectual Property Rights and differentiate among Patents, Designs, Trade Marks and Copyrights (L2)
- 2. Outline the process of patenting and development (L2)
- 3. Explain the procedure for granting patent (L2)

### Unit-V

# **Intellectual Patent Rights and Developments**

(6 Lectures)

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 / NITs/ IIITs.

## **Learning Outcomes:**

- 1. Explain patent right and its scope (L2)
- 2. Make use of Patent information and databases (L3)

3. Discover the new developments in IPR (L4)

# **TEXT BOOKS:**

- 1. C.R.Kothari, "Research Methodology", 3rd Edition, New Age International, 2017.
- 2.Ranjit Kumar, "Research Methodology A Step by Step for Beginner's", 2<sup>nd</sup> Edition, Pearson, Education, 2016.
- 3. T. Ramappa, "Intellectual Property Rights Under WTO", 2nd Edition, S Chand, 2015
- 4. Kompal Bansal & Parshit Bansal, "Fundamentals of IPR for Beginner's", 1st Edition, BS Publications, 2016.

# References

- Mark Saunders, Philip Levis, Adrain Thornbill, "Research Methods for Business Students", 3rd Edition (Reprint), Pearson Education, 2013.
- KVS Sharma, "Statistics made simple, Do it yourself", 2<sup>nd</sup> Edition (Reprint), Prentice Hall, 2010.