

<b>M.Tech Name of the programme (XXX)</b>			
<b>Outcome Based Education(OBE) and Choice Based Credit System (CBCS)</b>			
<b>SEMESTER - I</b>			
<b>RESEARCH METHODOLOGY AND IPR</b>			
<b>(Professional Core Course) and (Common to all M.Tech Programmes)</b>			
Course Code	18RMI17	CIE Marks	40
Number of Lecture Hours/Week	02	Exam Hours	03
Total Number of Lecture Hours	25	SEE Marks	60
<b>Credits - 02</b>			
<b>Course objectives:</b>			
<ul style="list-style-type: none"> <li>• To give an overview of the research methodology and explain the technique of defining a research problem</li> <li>• To explain the functions of the literature review in research.</li> <li>• To explain carrying out a literature search, its review, developing theoretical and conceptual frameworks and writing a review.</li> <li>• To explain various research designs and their characteristics.</li> <li>• To explain the details of sampling designs, and also different methods of data collections.</li> <li>• To explain the art of interpretation and the art of writing research reports.</li> <li>• To explain various forms of the intellectual property, its relevance and business impact in the changing global business environment.</li> <li>• To discuss leading International Instruments concerning Intellectual Property Rights. ■</li> </ul>			
<b>Module-1</b>			<b>Teaching Hours</b>
<b>Research Methodology:</b> Introduction, Meaning of Research, Objectives of Research, Motivation in Research, Types of Research, Research Approaches, Significance of Research, Research Methods versus Methodology, Research and Scientific Method, Importance of Knowing How Research is Done, Research Process, Criteria of Good Research, and Problems Encountered by Researchers in India. ■			<b>05</b>
<b>Revised Bloom's Taxonomy Level</b>	L <sub>1</sub> – Remembering, L <sub>2</sub> – Understanding.		
<b>Module-2</b>			
<b>Defining the Research Problem:</b> Research Problem, Selecting the Problem, Necessity of Defining the Problem, Technique Involved in Defining a Problem, An Illustration. <b>Reviewing the literature:</b> Place of the literature review in research, Bringing clarity and focus to your research problem, Improving research methodology, Broadening knowledge base in research area, Enabling contextual findings, How to review the literature, searching the existing literature, reviewing the selected literature, Developing a theoretical framework, Developing a conceptual framework, Writing about the literature reviewed. ■			<b>05</b>
<b>Revised Bloom's Taxonomy Level</b>	L <sub>1</sub> – Remembering, L <sub>2</sub> – Understanding.		
<b>Module-3</b>			
<b>Research Design:</b> Meaning of Research Design, Need for Research Design, Features of a Good Design, Important Concepts Relating to Research Design, Different Research Designs, Basic Principles of Experimental Designs, Important Experimental Designs. <b>Design of Sample Surveys:</b> Introduction, Sample Design, Sampling and Non-sampling Errors, Sample Survey versus Census Survey, Types of Sampling Designs. ■			<b>05</b>
<b>Revised Bloom's Taxonomy Level</b>	L <sub>1</sub> – Remembering, L <sub>2</sub> – Understanding.		
<b>Module-4</b>			

<b>Data Collection:</b> Experimental and Surveys, Collection of Primary Data, Collection of Secondary Data, Selection of Appropriate Method for Data Collection, Case Study Method. <b>Interpretation and Report Writing:</b> Meaning of Interpretation, Technique of Interpretation, Precaution in Interpretation, Significance of Report Writing, Different Steps in Writing Report, Layout	<b>05</b>
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<b>Module-4 (continued)</b>	<b>Teaching Hours</b>
<b>Interpretation and Report Writing (continued):</b> of the Research Report, Types of Reports, Oral Presentation, Mechanics of Writing a Research Report, Precautions for Writing Research Reports. ■	
<b>Revised Bloom's Taxonomy Level</b>	L <sub>1</sub> – Remembering, L <sub>2</sub> – Understanding, L <sub>3</sub> – Applying, L <sub>4</sub> – Analysing.

<b>Module-5</b>		
<b>Intellectual Property:</b> The Concept, Intellectual Property System in India, Development of TRIPS Complied Regime in India, Patents Act, 1970, Trade Mark Act, 1999, The Designs Act, 2000, The Geographical Indications of Goods (Registration and Protection) Act 1999, Copyright Act, 1957, The Protection of Plant Varieties and Farmers' Rights Act, 2001, The Semi-Conductor Integrated Circuits Layout Design Act, 2000, Trade Secrets, Utility Models, IPR and Biodiversity, The Convention on Biological Diversity (CBD) 1992, Competing Rationales for Protection of IPRs, Leading International Instruments Concerning IPR, World Intellectual Property Organisation (WIPO), WIPO and WTO, Paris Convention for the Protection of Industrial Property, National Treatment, Right of Priority, Common Rules, Patents, Marks, Industrial Designs, Trade Names, Indications of Source, Unfair Competition, Patent Cooperation Treaty (PCT), Advantages of PCT Filing, Berne Convention for the Protection of Literary and Artistic Works, Basic Principles, Duration of Protection, Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement, Covered under TRIPS Agreement, Features of the Agreement, Protection of Intellectual Property under TRIPS, Copyright and Related Rights, Trademarks, Geographical indications, Industrial Designs, Patents, Patentable Subject Matter, Rights Conferred, Exceptions, Term of protection, Conditions on Patent Applicants, Process Patents, Other Use without Authorization of the Right Holder, Layout-Designs of Integrated Circuits, Protection of Undisclosed Information, Enforcement of Intellectual Property Rights, UNSECO. ■		<b>05</b>
<b>Revised Bloom's Taxonomy Level</b>	L <sub>1</sub> – Remembering, L <sub>2</sub> – Understanding, L <sub>3</sub> – Applying, L <sub>4</sub> – Analysing.	

<b>Course outcomes:</b> At the end of the course the student will be able to:
<ul style="list-style-type: none"> <li>• Discuss research methodology and the technique of defining a research problem</li> <li>• Explain the functions of the literature review in research, carrying out a literature search, developing theoretical and conceptual frameworks and writing a review.</li> <li>• Explain various research designs and their characteristics.</li> <li>• Explain the art of interpretation and the art of writing research reports</li> </ul>

**Question paper pattern:**

Examination will be conducted for 100 marks with question paper containing 10 full questions, each of 20 marks.

- Each full question can have a maximum of 4 sub questions.
- There will be 2 full questions from each module covering all the topics of the module
- Students will have to answer 5 full questions, selecting one full question from each module
- The total marks will be proportionally reduced to 60 marks as SEE marks is 60

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**Textbooks**

1	Research Methodology: Methods and Techniques	C.R. Kothari, Gaurav Garg	New Age International	4 <sup>th</sup> Edition, 2018
2	ResearchMethodologyastep-by-stepguideforbeginners. (For the topic Reviewing the literature under module 2)	Ranjit Kumar	SAGE PublicationsLtd	3 <sup>rd</sup> Edition, 2011
3	Study Material (For the topic Intellectual Property under module 5)	Professional Programme Intellectual Property Rights, Law and Practice, The Institute of Company Secretaries of India, Statutory Body Under an Act of Parliament, September 2013		

**Reference Books**

1	Research Methods: the concise knowledge base	Trochim	Atomic Dog Publishing	2005
2	Conducting Research Literature Reviews: From the Internet to Paper	Fink A	Sage Publications	2009