

FACULTY OF ENGINEERING & TECHNOLOGY

Effective from Academic Batch: 2022-23

Programme: Master of Technology(Artificial Intelligence)

Semester: I

Course Code: 202300111

Course Title: Research Methodology and IPR

Course Group: Mandatory Course

Course Objectives: To give an overview of the research methodology and explain the technique of defining a research problem. To explain various forms of the intellectual property, its relevance and business impact in the changing global business environment.

Teaching & Examination Scheme:

Contact hours per week			Course Credits	Examination Marks (Maximum / Passing)				
Lecture	Tutoria l	Practical		Theory		J/V/P*		
				Internal	External	Internal	External	
2	0	0	2	-	-	50/20	50/20	
							100/40	

* J: Jury; V: Viva; P: Practical

Detailed Syllabus:

Sr.	Contents	Hours
1	Unit 1: 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.	4
2	Unit 2: Effective literature studies approaches, analysis. Plagiarism, Research ethics.	2
3	Unit 3: Effective technical writing, how to write report, Paper. Developing a Research Proposal, Format of research proposal, a presentation and assessment by a review committee.	3
4	Unit 4: 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.	5

5	Unit 5: Patent Rights: Scope of Patent Rights. Licensing and transfer of technology. Patent information and databases. Geographical Indications.	3
6	Unit 6: 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.	3
	Total	20

Reference 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"
4	Halbert, "Resisting Intellectual Property", Taylor & Francis Ltd ,2007
5	Mayall, "Industrial Design", McGraw Hill, 1992.
6	Niebel, "Product Design", McGraw Hill, 1974.
7	Robert P. Merges, Peter S. Menell, Mark A. Lemley, " Intellectual Property in New Technological Age", 2016.
8	T. Ramappa, "Intellectual Property Rights Under WTO", S. Chand, 2008.

Pedagogy:

- Direct classroom teaching
- Audio Visual presentations/demonstrations
- Assignments/Quiz
- Continuous assessment
- Interactive methods
- Seminar/Poster Presentation

Suggested Specification table with Marks (Theory) (Revised Bloom's Taxonomy):

Distribution of Theory Marks in %						R: Remembering; U: Understanding; A: Applying; N: Analyzing; E: Evaluating; C: Creating
R	U	A	N	E	C	
50%	20%	-	30%	-	-	

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.



Course Outcomes (CO):

Sr.	Course Outcome Statements	%weightage
CO-1	Understand research problem formulation.	10
CO-2	Analyze research related information	15
CO-3	Understand that today's world is controlled by Computer, Information Technology, but tomorrow world will be ruled by ideas, concept, and creativity.	25
CO-4	Understanding that when IPR would take such important place in growth of individuals & nation, it is needless to emphasize the need of information about Intellectual Property Right to be promoted among students in general & engineering in particular.	25
CO-5	Understand 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.	25

Curriculum Revision:

Version:	2.0
Drafted on (Month-Year):	June-2022
Last Reviewed on (Month-Year):	-
Next Review on (Month-Year):	June-2022