

### Research Methodology & Intellectual property rights

<b>Course Code</b>	<b>21CS57</b>	<b>Course type</b>	<b>AEC</b>	<b>Credits L-T-P</b>	<b>1 – 0 - 0</b>
<b>Hours/week: L - T- P</b>	1 – 0 – 0			<b>Total credits</b>	<b>1</b>
<b>Total Contact Hours</b>	L = 15 Hrs; T = 0 Hrs; P = 0 Hrs Total = 15 Hrs			<b>CIE Marks</b>	<b>50</b>
<b>Flipped Classes content</b>	3 Hours			<b>SEE Marks</b>	<b>50</b>

<b>Course learning Objectives</b>	
1.	Understand the basic concepts of research and its methodologies
2.	Identify and select the appropriate research/sampling design methods.
3.	Create the awareness about Intellectual Property Rights for the protection of inventions.

**Required Knowledge of :** Probability & Statistics.

<b>Unit-I</b>	<b>5 Hours</b>
<b>Research Methodology: Introduction</b> Meaning, Objectives, types, Research Approaches. Significance of Research, Research Methods versus Methodology, Research and scientific method, research Process, Criteria of good research, Problems encountered by researchers. <b>Research Problem:</b> Defining a research problem, Selecting a research problem, necessity and techniques involved in defining the research problem.	

<b>Unit-II</b>	<b>5 Hours</b>
<b>Data Collection Methods:</b> Collection of Primary Data, Observation Method, Interview Method, Questionnaires, Schedules, Other Methods of Data Collection, Collection of Secondary Data, Case study method. <b>Processing and Analysis of Data</b> Processing operations, Elements/ types of analysis, Statistics in research- measures of central tendency or statistical averages, measures of dispersion, measures of asymmetry (skewness), measures of relationship, Simple regression analysis	

<b>Unit-III</b>	<b>5 Hours</b>
<b>Intellectual Property Rights – IPR-</b> Invention and Creativity- Intellectual Property-Importance and Protection of Intellectual Property Rights (IPRs)- A brief summary of: Patents, Copyrights, Trademarks, Industrial Designs- Integrated Circuits-Geographical Indications-Establishment of WIPO-Application and Procedures. Research ethics, Plagiarism, Prior art search.	

### Flipped Classroom Details

<b>Unit No.</b>	<b>I</b>	<b>II</b>	<b>III</b>
<b>No. for Flipped Classroom Sessions</b>	<b>1</b>	<b>1</b>	<b>1</b>

Self-Study Topics	
Unit No.	Topic description
I	Significance of Research Methodology.
II	Limitations of test of hypothesis.
III	Other measures-Index numbers, Time series analysis.

Books	
	<b>Text Books:</b>
1.	C R. Kothari, Research Methodology, New Age International Publishers, 2nd edition, 2007.
	<b>Reference Books:</b>
1.	Panneer Selvam, Research Methodology, PHI Learning Pvt. Ltd., 2007.
2.	Dr. B.L. Wadhera -Intellectual Property Rights, Universal Law Publishing Co. Ltd.. 2002
	William G Zikmund, Business Research Methods, Indian edition, South western Publishers, 8th Indian Reprint – 2009.
	<b>E-resources (NPTEL/SWAYAM. Any Other)- mention links</b>
1.	<a href="https://onlinecourses.swayam2.ac.in/cec20_ge37">https://onlinecourses.swayam2.ac.in/cec20_ge37</a> (Research Methodology)

Course delivery methods		Assessment methods	
1.	Chalk and Talk	1.	IA tests
2.	PPT and Videos	2.	Research Activity
3.	Flipped Classes	3.	Semester End Examination

Course Outcome (COs)			
<b>Learning Levels:</b> <b>Re - Remember; Un - Understand; Ap - Apply; An - Analysis; Ev - Evaluate; Cr - Create</b>			
At the end of the course, the student will be able to		<b>Learning Level</b>	<b>PO(s)</b>
1.	Identify and select an appropriate methodology for research.	Un	1,2,9,10
2.	Analyze and interpret data collected	Ap	1,2,9,10
3.	Discuss the significance of Intellectual Property Rights & report writing	Ap	1,2,3,9,10
			1,2,3

#### Scheme of Continuous Internal Evaluation (CIE):

Components	Addition of two IA tests	Research Activity	Total Marks
Marks	20+20=40	10	50

**IAs and Assignments: Minimum score to be eligible for SEE: 20 OUT OF 50**

The weightage of Continuous Internal Evaluation (CIE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50).

**Scheme of Semester End Examination (SEE):**

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| 1. | The pattern of the <b>question paper is MCQ</b> (multiple choice questions). The time allotted for SEE is <b>01 hour</b> .   |
| 2. | SEE paper shall be set for <b>50 questions, each of the 01 mark</b> .  |
| 3. | The weightage for Semester End Exam (SEE) is 50%. The minimum passing mark for the SEE is 35% of the maximum marks (18 marks out of 50).   |
| 4. | A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to the subject/ course if the student secures not less than 35% (18 Marks out of 50) in the semester-end examination (SEE), and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. |

CO-PO Mapping (planned)													CO-PSO Mapping (planned)		
CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
1	✓	✓							✓	✓			✓		
2	✓	✓							✓	✓			✓		
3	✓	✓	✓						✓	✓			✓	✓	✓
Tick mark the CO, PO and PSO mapping															