

Effective from AY: 2021- 2022

Code: EMS003 Course Name: Creativity and Innovative Thinking Number of Credits: 2

<u>Prerequisites for the course:</u>	Nil	
<u>Objective:</u>	To create an awareness of the techniques for improving the flexibility and originality of thinking	
<u>Content:</u>	Creative thinking as a skill; Valuing diversity in thinking; Thinking preferences; Creativity styles; Creativity in problem solving: Problem Definition, Understanding & Representing; Pattern Breaking; Mind stimulation.	5 Hours
	General Strategies Idea-collection processes including Brainstorming/Brain-writing, The SCAMPER methods, Metaphoric thinking, Outrageous thinking; Mapping thoughts; Eight-Dimensional (8D) Approach to Ideation; Using Math and Science: Systematic logical thinking, Using math concepts;	6 Hours
	Systematic Inventive Thinking The TRIZ methodology; Levels of inventions; Evolution of technical systems; Ideality and the ideal final result (IFR); Stating contradictions and the contradiction table; Standards features and Inventive principles; Separation principles; Using physical, geometrical, and chemical effects, fields	7 Hours
	Decision and Evaluation Focused thinking framework; Six thinking hats, PMI (Plus, Minus, Interesting); Ethical considerations	4 Hours
	Introduction to intellectual property: Patents, Copyrights ©, Trademarks ®, Trade Secret, Unfair Competition	2 Hours
<u>Pedagogy:</u>	Lectures/ tutorials/laboratory work/ field work/ outreach activities/ project work/ vocational training/viva/ seminars/ term papers/assignments/ presentations/ self-study/ Case Studies etc. or a combination of some of these. Sessions shall be interactive in nature to enable peer group learning.	
<u>References/Readings</u>	1. Six Thinking Hats by Edward DeBono , Penguin Books, Latest Edition	

	<ul style="list-style-type: none"> 2. Creativity, Inc.: Overcoming the Unseen Forces That Stand in the Way of True Inspiration by <u>Ed Catmull</u>, & <u>Amy Wallace</u>, kogan Page, Latest Edition 3. Creativity and Innovation for Managers by Brian Clegg, Routledge; Latest Edition 2. Harvard Business Essentials – “Managing Creativity and Innovation “, Harvard Business Publishing 	
<u>Learning Outcomes</u>	<ul style="list-style-type: none"> 1. To be familiar with processes and methods of creative problem solving: 2. To enhance creative and innovative thinking skills 	