Creative and Scientific Thinking

Course Name: Creative and Scientific Thinking
Course Code: GEN112
Credit Hours: 2
Knowledge Domain: General Fundamentals.
Prerequisite(s): None

Learning Objectives:

Upon completion of this course, the student will be able to:

1. Understand the creative process (within the context of normal cognitive processing.
2. Comprehend and apply creative thinking techniques.
3. Evaluate generated ideas using objective evaluation criteria.
4. Develop an action plan to put valid ideas into effect.
5. Apply the problem solving model to handle business problems and innovate organizations.
6. Develop a brief history of the scientific method.
7. Present the central components and the basic steps of the scientific method.

Learning Outcomes

Upon completion of this course, students will be able to:

1. Gain increased knowledge of concepts and practices of innovation and creative thinking.
2. Become skilled in creativity and sensitivity to problem identification and generating creative solution to it.
3. Develop innovative approaches beyond the traditional practices through the use of creative techniques and frameworks.
4. Grasp the basic aspects of the scientific method whether through its central components or its basic steps.
5. Knowledge of the basic aspects of hypothesis formulation and the different reasoning techniques.

Overview and syllabus

Basic conceptual and practical background of creative thinking and innovation in modern organizations. Emphasis will be on techniques of creative thinking as a requirement for creativity and innovation. Students will be oriented- through this

course to generate original ideas and evaluate them and develop action plans needed to apply valid ideas. History of the scientific method. The central components of scientific and critical thinking. Basic steps in the scientific method.

Course Outline

	Topic
1	**Introduction to Creative thinking** Intelligence and Thinking Creativity Assessment Activities
2	**Creative thinking techniques.** Introduction To Creative Thinking Critical Thinking Brainstorming Assessment Activities
3	**Creative thinking and decision making** Solving problems Decision Making Assessment Activities
4	**Innovation** Innovation Applying The Innovation Assessment Activities
5	**History of the Scientific Method** Early forms of scientific methods The Modern Methodology The new forms of Methodology Assessment
6	**Basic Steps in the Scientific Method** Science and Technology The Scientific Method Assessment