CREATIVE THINKING AND PROBLEM-SOLVING SKILLS
Course Syllabus

1. General Information

Course name: Creative thinking and problem-solving skills

Course code: MAR

Number of credits: 1

Instructor 1: Pham Thi Thai Quynh, email: quynhptt@ptit.edu.vn, phone number: 0938060691

Instructor 2: Tran Thanh Huong, email: huongtt@ptit.edu.vn, phone number: 0932235555

2. Objectives

The module been designed for the purpose of promoting and developing creative thinking and problem solving (CTPS) skills and addresses the need for individuals and teams who can 'think outside the box', and apply fresh thinking to practical, 'real world' problems. Practical demonstrations, exercises and task simulations will enable you to gain a deeper knowledge and understanding of creative tools and the capacity to re-apply them or facilitate their use to successfully apply them to a variety of different problems and issues requiring creative thinking.

3. Abstract

There are many definitions of creativity, but in business it refers to finding insights into problems. Any person seeking to further the interests of their organization needs to be able to think creatively. As we move towards the third decade of the current century this need has become an urgent necessity among businesses in the developed world. It not surprising that interest in creative problem solving has continued to be high. In a world that I constantly changing and presenting new challenges, pathways to the solution of new kinds of problems are always in demand. Nothing is certain and even long-established businesses can begin to crumble in a matter of months, so radical new ways of looking at problems seem to be very much the order of the day. However, creative thinking should not be seen as the 'universal antidote' capable of curing all, but it offers ways of examining problems that force us to questions fundamental issues. It makes us challenge basic assumptions. There are no such things as firm foundations – the bedrocks of civilization can crumble into dust while we look on in awe and trepidation.

This module provides a comprehensive and clear overview of the theory and practice of creative problem solving from a management perspective. Its structure works step by step through the creative thinking process. Beginning with theoretical frameworks, it considers ways of thinking, defining problems and structuring responses to them, techniques for generating ideas, evaluating and defining them, and finally how technology can be used within the creative problem-solving process.

4. **Teaching and learning methods**

    Lectures: 7h

    In class discussion & practice: 7h

    Individual reading: 1h

5. **Prerequisites**

    None

6. **Learning Outcomes**

    After studying this unit, you will be able to:

- Understand about creative thinking generally
- Understand about problem solving generally
- Be able to apply the creative thinking process
- Be able to generate ideas both analogically and non-analogically
- Be able to evaluate and implement ideas

7. **Assessment Criteria**

Learning outcomes On successful completion of this unit a student will:	Assessment criteria for pass, the student can:
LO1 Understand about creative thinking generally	- Understand about the definition of creative thinking and its theoretical frameworks - Determine what block to creativity
LO2 Understand about problem solving generally	- Determine nature of problems and its types - Understand about A common-sense approach to problem solving and The context of problem solving - Be able to apply The problem-solving process and Problem solving skills
LO3 Be able to apply the creative thinking process	- Understand about Wallas's model of the creative process - Be able to apply The creative problem-solving process and its techniques - Understand about paradigm shift, types of creative problem-solving techniques and analogical reasoning

Learning outcomes On successful completion of this unit a student will:	Assessment criteria for pass, the student can:
	- Be able to establish and define the problem by 3 steps: objectives finding, fact finding and problem finding
LO4 Be able to generate ideas both analogically and non-analogically	- Understand and be able to generate ideas non-analogically, using these techniques: checklists, attribute listing, morphological analysis, brainstorming and its variants, lateral thinking and its provocative method - Understand and be able to generate ideas analogically, using these techniques: synectics and its in action, story writing, free association, attribute association chains
LO5 Be able to evaluate and implement ideas	• Be able to use methods to evaluate ideas, including: Culling, rating, and scoring screens; Advantage-disadvantage tables; PMI: plus/minus/interesting; Castle technique; Forces-field analysis; Qualitative evaluation • Be able to examine the problems of implementing ideas: Ideas are not readily implemented; Sources of resistance to change; Role of communication in overcoming resistance to change; Putting ideas into practice; Post-implementation

8. **Outlines**

Chapter 1. Creative thinking

1.1 What is creative thinking?

1.2 Blocks to creativity

Chapter 2. Problem solving

2.1 Nature of problems and its types

2.2 A common-sense approach to problem solving

2.3 The problem-solving process

2.4 The context of problem solving

2.5 Problem solving skills

Chapter 3. The creative thinking process

3.1 Wallas's model of the creative process

3.2 The creative problem-solving process

3.3 The techniques

3.4 Paradigm shift and types of creative problem-solving techniques

3.5 Analogical reasoning

Chapter 4. Objectives finding, fact finding and problem finding- definitions

4.1 Objective finding

4.2 Problem finding-definition

4.3 Analytical techniques

Chapter 5. Idea generating

3.1 Non-analogical idea generating

3.2 Analogical idea generating

Chapter 6. Evaluation

6.1 Creative evaluation

6.2 Culling, rating, and scoring screens

6.3 Advantage- disadvantage tables

6.4 PMI: plus/minus/interesting

6.5 Castle technique

6.6 Forces-field analysis

6.7 Qualitative evaluation

Chapter 7. Implementing ideas

7.1 Ideas are not readily implemented

7.2 Sources of resistance to change

7.3 Role of communication in overcoming resistance to change

7.4 Putting ideas into practice

7.5 Post-implementation

9. **Required Textbooks**

Proctor, T. (2021), *Absolute essentials of creative thinking and problem solving*, London: Routledge

10. **Schedule**

Slot	Main contents	Specific contents and activities	Student's tasks before and after class
1	**Chapter 1. Creative thinking**	• What is creative thinking? • Blocks to creativity *Activity* - Discuss: "There are no theoretical underpinnings to the creative problem solving-process" - Discuss: Many organizations and their managers are backward looking. Assess the impact that this kind of thinking will have on creative thinking and problem solving in an organization.	Before class: • Reading the course's syllabus • Reading Chapter 1 and 2, *Absolute essentials of creative thinking and problem solving,* Proctor, T. (2021), pp 13- 36
2	**Chapter 2. Problem solving**	• Nature of problems and its types • A common-sense approach to problem solving • The problem-solving process • The context of problem solving • Problem solving skills *Activity* - Discuss: How the procedure recommended by the Bransford and Stein model differs from the common-sense approach - Discuss: Why a debate should over proposed solutions to a problem be a source of difficulty?	Before class: • Reading Chapter 3, *Absolute essentials of creative thinking and problem solving,* Proctor, T. (2021), pp 38- 49
3	**Chapter 3. The creative thinking process**	• Wallas's model of the creative process • The creative problem-solving	Before class: • Formulating the students' groups for the group assignment

Slot	Main contents	Specific contents and activities	Student's tasks before and after class
	Group Assignment Coaching	process • The techniques • Paradigm shift and types of creative problem-solving techniques • Analogical reasoning _Activity_ - Discuss: Indicate the main difficulties that might be encountered when using analogies. How can you be sure that you have found a suitable analogy to use with a problem? - Answer students' questions related to the group assignment	• Reading the requirements of the group assignment • Reading Chapter 4, _Absolute essentials of creative thinking and problem solving,_ Proctor, T. (2021), pp 50- 58
4	**Chapter 4. Objectives finding, fact finding and problem finding- definitions**	• Objective finding • Problem finding-definition • Analytical techniques _Activity_ - Discuss: Why it is often desirable to undertake problem redefinition when trying to find solutions for a problem? Take any management problem which you consider has many possible solutions and outline two methods which might be used to help redefine the problem - Answer students' questions related to the group assignment	Before class: • Reading Chapter 5, _Absolute essentials of creative thinking and problem solving,_ Proctor, T. (2021), pp 59- 71

Slot	Main contents	Specific contents and activities	Student's tasks before and after class
5	**Chapter 5. Idea generating**	• Non-analogical idea generating, including: checklists, attribute listing, morphological analysis, brainstorming and its variants, lateral thinking and its provocative method • Analogical idea generating, including: synectics and its in action, story writing, free association, attribute association chains *Activity* - Discuss: "Lateral thinking is more than a set of creative problem-solving techniques" - Illustrate the different forms of analogy that might be used in a synectics session - Answer students' questions related to the group assignment	Before class: • Reading Chapter 6 & 7, *Absolute essentials of creative thinking and problem solving,* Proctor, T. (2021), pp 72- 99
6	**Chapter 6. Evaluation** **Chapter 7. Implementing ideas**	• Evaluation methods: Culling, rating, and scoring screens; Advantage-disadvantage tables; PMI: plus/minus/interesting; Castle technique; Forces-field analysis; Qualitative evaluation • The problems of implementing ideas: Ideas are not readily implemented; Sources of resistance to change; Role of communication in overcoming resistance to change; Putting ideas into	Before class: • Reading Chapter 8 & 9, *Absolute essentials of creative thinking and problem solving,* Proctor, T. (2021), pp 100- 121

Slot	Main contents	Specific contents and activities	Student's tasks before and after class
		practice; Post-implementation *Activity* - Answer students' questions related to the group assignment	
7	**Oral presentations of group assignment** **General review and discussion**	• Oral presentation of interpersonal skills project by groups of students • Each oral presentation must not be longer than 10 minutes • Give comments on the group assignment • Give a general review of the course's contents and discussion	• Submitting project report • Preparing and submitting slides of oral presentation

11. Grading Policy

	Assignment	Importance
1	Class participation/In class activities	30%
2	Group assignment	70%

Class participation

Note: Punctual and regular attendance is a minimum expectation for this course. The students must not be absent more than 20% of total scheduled learning slots.

Group Assignment

For this assignment, you are required to work as a team. Given a common problem in the corporate environment, the team need to meet following requirements for the group assignment:

1. Working as a team, apply what you learned to identify a possible solution for the next 6 months

2. Develop possible solutions

3. Define criteria and evaluate solutions

4. Propose a plan to implement the solutions

Your team's result will be submitted in both a presentation and a detailed report