uc3m Universidad Carlos III de Madrid

Creativity applied to problem solving

Academic Year: (2018 / 2019) Review date: 09-01-2019

Department assigned to the subject: Transversal matters Coordinating teacher: TINEO ALVAREZ, ANGELES

Type: Compulsory ECTS Credits: 3.0

Year: 4 Semester:

OBJECTIVES

At the end of the program students will be able to:

- Identify characteristics of creative personality and assess the individual level of creativity.
- Get familiar with the main creative skills.
- Lear and apply different creativity tools.
- Improve the ability to use the creative thinking approach to problem solving.

DESCRIPTION OF CONTENTS: PROGRAMME

- 1. What is creativity?
- 2. Creative personality and creative skills
- 3. How creative are you? How to assess your creativity resources.
- 4. Supporting tools for creativity improvement.
- 5. Creativity tools applied in work environment.
- 6. Problem definition:
- Causes, present situation, consequences.
- Linear thing and systemic thinking
- Decision making tools.
- 8. Search and analysis of relevant information.
- 9. Taking decisions in group:
- Dialogue mapping
- Visual metaphors
- Team dialogue tools
- Six thinking hats, (De Bono)
- How to get to consensus
- 10. Follow-up and control of decisions.

LEARNING ACTIVITIES AND METHODOLOGY

Teaching hours are distributed in accordance to the following activities:

- Exposition of different topics related to the program content.
- ¿ Exercises and team dynamics related to the content specially those reflecting operative problems together with interaction problems (such the helium stick exercise).
- in-group comments and evaluation of exercises, including presenter's suggestions and practical advices.
- ¿ Video clips for reflection and analysis of models.
- ¿ Visual metaphor for solving problems in groups.

ASSESSMENT SYSTEM

Continuous evaluation: 10 points according to student's participation in classroom activities and exercises and activities.

Without final exam.

% end-of-term-examination: 0

% of continuous assessment (assignments, laboratory, practicals...):

BASIC BIBLIOGRAPHY

- Edward de Bono, Seis sombreros para pensar, 2ª ed. En español, , Paidós ibérica,, 2008,
- Marianna ¿Mljer¿ Bojer, Heiko Roehl, Marianne Knuth y Colleen Magner, Mapping dialogue, , Taos

Institute,, 2012,

- Mihaly Csikszentmilhayi, Creatividad: El fluir y la psicología del descubrimiento y la invención, , Paidós ibérica,, 1998,
- Tom Kelley y Jonathan Littman, Las diez caras de la innovación, , Paidós ibérica,, 2010,
- VV.AA., Creatividad en la solución de problemas, , Ed. M.A.D., 2005,