2024 / 25

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Ollscoil Teicneolaíochta an Oirdheiscirt

South East Technological University

Module Descriptor

Creative Problem Solving (Computing and Mathematics)

Creative Problem Solving (A11142)

Short Title: Creative Problem Solving
Department: Computing and Mathematics
Credits: 5 **Level:** Intermediate

Description of Module / Aims

This module aims to help the learner understand the role of creativity, innovation, and problem solving in high technology industries. It will encourage the student to recognise the importance of diverse ideas, and to convey that recognition to others. It will cover methods for generating new ideas and ways to increase creative and problem solving abilities through independent research, assessment and discussion.

Programmes

		stage/semester/status
COMP-0605	BSc (Hons) in Computer Forensics and Security (WD_KCOFO_B)	1 / 2 / M
COMP-0605	BSc (Hons) in Software Systems Development (WD_KDEVP_B)	2 / 3 / E
COMP-0605	BSc in Applied Computing (WD_KCOMP_D)	2 / 3 / M
COMP-0605	BSc in Information Technology (WD_KINFT_D)	2 / 3 / M
COMP-0605	BSc in Software Systems Development (WD_KCOMC_D)	2 / 3 / E

Indicative Content

- Divergent and Convergent Thinking
- Creative Models and Methods
- Creativity and Observation
- Decision Making Methods
- Implementing Decisions
- Argument Analysis

Learning Outcomes

On successful completion of this module, a student will be able to:

1. Examine the role of creativity and innovation in high tech industries.
2. Apply systematic methods and logical reasoning to problems and decisions.
3. Employ creative models and methods to design, implement and evaluate solutions.
4. Construct and analyse arguments.
5. Complete research activities on their own initiative.

Learning and Teaching Methods

- Problem Based Learning
- Case Study Analysis
- Group work

Learning Modes

Learning Type	F/T Hours	P/T Hours
Lecture	12	6
Tutorial	24	12
Independent Learning	99	117

Assessment Methods

	Weighting	Outcomes Assessed
Continuous Assessment	100%	
Portfolio	50%	1,2,5
Group Project	50%	1,2,3,4

Assessment Criteria

<40%: Inability to identify and apply basic concepts of the knowledge domain.

40%–49%: Ability to identify and apply basic concepts of the knowledge domain.

50%–59%: Ability to distinguish and apply key concepts clearly and interpret their relative importance in the knowledge domain.

60%–69%: Ability to apply solutions to problems in a range of relevant contexts. An ability to employ a comprehensive range of specialised skills.

70%–100%: All of the above to an excellent level, with the ability to analyse and design solutions to a high standard for a range of complex or unseen problems.

Supplementary Material(s)

- "Technology, Entertainment and Design." www.ted.com
- Brockman, J. *Thinking: The New Science of Decision-Making, Problem-Solving, and Prediction.* New York: Harper Perennial, 2016.

Requested Resources

- Lecture Room: Loose Seated