2024 / 25

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Module Descriptor

Creative Programming Fundamentals 2 (Computing and Mathematics)

Creative Programming Fundamentals 2 (A13728)

Short Title: Creative Programming 2
Department: Computing and Mathematics
Credits: 5 **Level:** Introductory

Description of Module / Aims

The purpose of this module is to further develop and enrich creativity by focusing on the creative thought processes, problem solving techniques and programming structures essential for developing systems responsible for more complex tasks underpinned by User Interface (UI) best practice. The student will further extend their knowledge by using their creativity when working with creative class libraries.

Programmes

		stage/semester/status
COMP-0587	BSc (Hons) in Creative Computing (WD_KCRCO_B)	1 / 2 / M
COMP-0587	BSc in Multimedia Applications Development (WD_KMULA_D)	1 / 2 / M

Indicative Content

- Employing and extending objects: Creating and using an array object; Catching exceptions
- Working with numbers and strings: Using built in objects and internal methods
- Working with the Window object in Creative Programs
- Working with core libraries
- Extend: Working with cameras in creative programs and using other libraries: Using video and video playback;adding camera images and analysis; manipulating the DOM; integrating existing scripting libraries

Learning Outcomes

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

1. Apply problem-solving strategies to various computing problems of increasing complexity.
2. Construct, write and test applications using more advanced programming constructs and data structures.
3. Construct visually creative applications consistent with UI best practice.
4. Demonstrate competence in the use of core libraries.
5. Demonstrate competence in the use of extended libraries.

Learning and Teaching Methods

- Lectures to introduce the theory and concepts of Creative Programming.
- Practical labs so that the students can put the theory into practice.
- Self-directed learning.

Learning Modes

Learning Type	F/T Hours	P/T Hours
Lecture	36	
Practical	24	
Independent Learning	75	

Assessment Methods

	Weighting	Outcomes Assessed
Continuous Assessment	100%	
In-Class Assessment	20%	1,2
Assignment	30%	3,4,5
In-Class Assessment	50%	1,2,3,4,5

Assessment Criteria

<40%: Unable to interpret and describe key concepts of creative programming.

40%–49%: Be able to interpret and describe key concepts of creative programming.

50%–59%: Ability to discuss key concepts of creative programming and ability to discover and integrate related knowledge in other knowledge domains.

60%–69%: Be able to solve problems within the creative programming domain by experimenting with the appropriate skills and tools.

70%–100%: All the above to an excellent level. Be able to analyse and design solutions to a high standard for a range of both complex and unforeseen problems through the use and modification of appropriate skills and tools.

Essential Material(s)

- "Home Page of P5.js." http://p5js.org/
- Mc Carthy, L., C. Reas and B. Fry. *Getting started with P5.js.* NY: Maker Media, Inc, 2015.
- Mc Grath, M. *Javascript in easy steps.* 5th ed. NY: In Easy Steps Limited, 2013.

Supplementary Material(s)

- "Home Page of Lauren Mc Carthy." http://lauren-mccarthy.com/

Requested Resources

- Room Type: Computer Lab