



## MODULE SPECIFICATION

Part 1: Information			
Module Title	Introduction to Creative Coding		
Module Code	UFCF8L-30-1	Level	Level 4
For implementation from	2018-19		
UWE Credit Rating	30	ECTS Credit Rating	15
Faculty	Faculty of Environment & Technology	Field	Computer Science and Creative Technologies
Department	FET Dept of Computer Sci & Creative Tech		
Contributes towards	Digital Media [Sep][FT][Frenchay][3yrs] BSc (Hons) 2018-19 Digital Media [Sep][SW][Frenchay][4yrs] BSc (Hons) 2018-19 Digital Media [Sep][FT][SHAPE][3yrs] BSc (Hons) 2018-19 Digital Media [Aug][PT][SHAPE][6yrs] BSc (Hons) 2018-19		
Module type:	Standard		
Pre-requisites	None		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description
<p><b>Educational Aims:</b> This module will enable students to develop key creative and technical skills.</p> <p><b>Outline Syllabus:</b> Indicative areas of study will include:</p> <p>Introduction to creative computer programming            Creative applications programming environments, differences between languages like Java/Javascript (Processing) and C/C++ (OpenFrameworks/Cinder)            Basic drawing functions            Introduction to animation            Data types/ iteration (for and while)/ selection (if and switch) /functions</p>

## STUDENT AND ACADEMIC SERVICES

Introduction to object-oriented programming using particle systems  
 Classes, objects, and data-encapsulation  
 Algorithmic particle generation and control  
 Introduction to creating Graphical User Interfaces  
 Audio generation fundamentals  
 Audio Reactivity  
 Introduction to Creating with Data  
 Introduction to embedded creative computing

**Teaching and Learning Methods:** Developing software using open source and freely available frameworks, students will develop creative practices such as visual design, animation and basic interactivity. This will be balanced with the technical practices that enable them to produce these creative outputs. These skills lie at the core of the industries that graduates will work within.

### Part 3: Assessment

The assessment strategy in this module is based upon the module information covered in lectures, seminars, tutorial sessions and student's self-directed research.

Summative Assessment: Projects are evaluated on subject specific criteria clearly stated on each project brief at the outset of each project. Students will submit: A presentation on a generative drawing method or research approach from a prescribed list. (Component A)

A 2D generative drawing program that creates graphics based on code-driven drawing techniques (Component B1)

A functional, reactive algorithmic audio-visual application working in 2D or 3D and linking with sound generation (Component B2)

Formative Assessment: A mix of individual, peer-to-peer and group tutorials will be provided.

Feedback: Feedback will be given oral and written feedback through discussions in class, tutorials, written feedback on assignments and comments on students' research blogs.

Plagiarism: All submissions will checked using the university plagiarism software

First Sit Components	Final Assessment	Element weighting	Description
Project - Component B		30 %	Generative drawing project
Project - Component B		45 %	Creative audio-visual application project
Presentation - Component A	✓	25 %	Formal presentation (15 minutes)
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Project - Component B		30 %	Generative drawing project
Project - Component B		45 %	Creative audi-visual application project
Presentation - Component A	✓	25 %	Video presentation (about 15 minutes)

STUDENT AND ACADEMIC SERVICES

<b>Part 4: Teaching and Learning Methods</b>																			
Learning Outcomes	<p>On successful completion of this module students will be able to:</p> <table border="1"> <thead> <tr> <th colspan="2" style="text-align: center;"><b>Module Learning Outcomes</b></th> </tr> </thead> <tbody> <tr> <td>MO1</td> <td>Understand the foundations of creative programming, discuss uses of both C++ and java based programming environments within the creative applications context</td> </tr> <tr> <td>MO2</td> <td>Research contemporary digital artworks and online resources to aid creative and technical development</td> </tr> <tr> <td>MO3</td> <td>Develop small-scale reactive audio-visual programs that apply understanding of the foundations of both technical and creative approaches</td> </tr> <tr> <td>MO4</td> <td>Understand and use the basic programming constructs and Isolate and fix common errors in custom programs.</td> </tr> <tr> <td>MO5</td> <td>Manipulate various datatypes, such as arrays, strings, and pointers.</td> </tr> <tr> <td>MO6</td> <td>Apply object-oriented approaches to creative software problems</td> </tr> </tbody> </table>	<b>Module Learning Outcomes</b>		MO1	Understand the foundations of creative programming, discuss uses of both C++ and java based programming environments within the creative applications context	MO2	Research contemporary digital artworks and online resources to aid creative and technical development	MO3	Develop small-scale reactive audio-visual programs that apply understanding of the foundations of both technical and creative approaches	MO4	Understand and use the basic programming constructs and Isolate and fix common errors in custom programs.	MO5	Manipulate various datatypes, such as arrays, strings, and pointers.	MO6	Apply object-oriented approaches to creative software problems				
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Reading List	<p>The reading list for this module can be accessed via the following link:</p> <p><a href="https://uwe.rl.talis.com/modules/ufcf8l-30-1.html">https://uwe.rl.talis.com/modules/ufcf8l-30-1.html</a></p>																		