

COURSE SPECIFICATION DOCUMENT

Academic School / Department: Dept. Science, Innovation & Technology

Programme: Study Abroad

FHEQ Level: 4

Course Title: Creative Coding

Course Code: COMP 4601

Student Engagement Hours: 120

Lectures: 45

Seminar / Tutorials: 0

Independent / Guided Learning: 75

Credits: 12 UK CATS credits
6 ECTS credits
3 US credits

Course Description:

This is an introductory Creative Coding course that enables students to develop a practical understanding of the syntax of coding languages, such as Java Script, for visual images and Sonic Pi for music. It gives hands-on experience of structuring code to produce and edit ethical games for mobile phones using block code on applications, such as Hopscotch and Swift, progressing to writing full code on platforms such as p5js*. Alongside this, students are introduced to issues of bias in coding and gaming as cultural communication. This knowledge is then extended in a project that students build towards coding autonomous objects that flock, as well as being introduced to Craig Reynolds 'boids' code used in films. Students will be expected to produce a critically reflective digital notebook/blog of their learning. This class is relevant to students of all majors. It is highly recommended that students have access to the use of a laptop and a smartphone for the duration of the course.

Prerequisites:

None

Students will not be able to take the four-credit version of this course if they had previously taken this three-credit course.

Aims and Objectives:

The primary aim of this course is to introduce all students to the structure and syntax of digital code, to enable students to successfully communicate simple directions and control outcomes in this language to produce images, moving objects and sound. It will focus on Object-Oriented Programming for creative environments. .

Programme Outcomes:

A4I

B4I

C4I

D4I

A detailed list of the programme outcomes is found in the Programme Specification. This is maintained by Registry and located at: <https://www.richmond.ac.uk/programme-and-course-specifications/>

Learning Outcomes:

By the end of this course, successful students should be able to:

- Identify, analyse and evaluate a range of digital tools to produce creative digital outcomes.
- Use mobile and online applications to successfully generate and edit digital language and media.
- Produce functioning code or digital media outcomes that address the required tasks.
- Engage in self-directed research to problem solve technical issues to produce innovative solutions.

Indicative Content:

- An introduction to block coding.
- Using coding apps, such as Hopscotch, for mobile ethical gaming.
- Keeping a Reflective Technical Notebook to record problems solved.
- How to use online platforms, such as p5js*.
- Consideration of the current discourse on coding bias, and the implications of digital work on current debates on race, gender, surveillance, behaviour prediction.
- Assisting spotting bugs in peers' code.
- Understanding the application and career possibilities for CGI coding in film and other related industries.

Assessment:

This course conforms to the University Assessment Norms approved at Academic Board and located at: <https://www.richmond.ac.uk/university-policies/>

Teaching Methodology:

- Lecture presentations with the key concepts.
- Group discussions on journal articles and online resources.
- Lecture demonstration with the key applications and software.
- Teamwork solving technical problems.
- Individual research on online sites related to coding and the use of digital media.
- Videos and On-line demonstrations.
- Intra-net access to lecture notes, links to applications and online tutorials and reading material.

Indicative Text(s):

Benjamin, R. (2019) *Race After Technology: Abolitionist Tools for the New Jim Code*. USA: Polity.

Flanagan, D. (2020) *JavaScript, the definitive guide: Master the World's most-used Programming Language*. Sebastopol: O'Reilly.

Noble S. U. (2018) *Algorithms of Oppression: How Search Engines Reinforce Racism*. USA: NYU Press.

Kittler F. (1999) *Gramophone, Film, Typewriter (Writing Science)*. USA: Stanford University Press.

Spiller N. (2002) *Cyber Reader: Critical Writings for the Digital Era*. London: Phaidon Press.

Balbi G. and Magaudda P. (2018) *A History of Digital Media* UK: Routledge Press.

Eubanks V, (2019) *Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor*. USA: St Martin's Press.

Journals

Digital Scholarship in the Humanities Oxford Academic

Frontiers in Digital Humanities Journal

Boundary2 Journal

International Journal of Information and Coding Theory

Cultural Studies Journal

See syllabus for complete reading list.

Change Log for this CSD:

Nature of Change	Date Approved & Approval Body (School or AB)	Change Actioned by Registry Services
First Edition	Nov 2024	