

## **BSc Digital Arts Computing**

### **Programme Specification**

**Awarding Institution:** University of London (Interim Exit Awards made by Goldsmiths' College)

**Teaching Institution:** Goldsmiths, University of London

**Final Award:**

BSc (Hons) Digital Arts Computing

BSc (Hons) Digital Arts Computing with Work Experience

MSci (Hons) Digital Arts Computing

MSci (Hons) Digital Arts Computing with Work Experience

**Programme Name:** BSc/MSci (Hons) Digital Arts Computing

**Total credit value for programme:** 360 (480 Msci)

**Name of Interim Exit Award(s):**

Certificate of Higher Education in Digital Arts Computing

Diploma of Higher Education in Digital Arts Computing

**Duration of Programme:** 3 years full-time

**UCAS Code(s):** G452

**HECoS Code(s):**

(100366) Computer Science (50%)

(100361) Creative arts and Design (50%)

**QAA Benchmark Group:** Computing; Art and Design

**FHEQ Level of Award:** Level 6 (level 7 Msci)

**Programme accredited by:** Not applicable

**Date Programme Specification last updated/approved:** February 2023

**Home Department:** Computing

**Department(s) which will also be involved in teaching part of the programme:** Art

### **Programme overview:**

This programme is designed to prepare you for a career across the creative industries ranging from a career as an independent, studio-based digital artist practitioner through to a technology led creative in the media industries. The degree will nurture your development not just as a technical expert, but also as a critical creative thinker and innovative problem solver, allowing you to learn and explore through a combination of technology and

embedded creative practice. Digital Arts Computing prepares you for a career in computation for immersive media practices, the gaming industry and related areas by giving you both the technical understanding and the creative freedom to develop your ideas and creative practice.

The programme has three core components. The first equips you with a range of key technical skills in programming for audio and visual media. These skills are delivered at the same level as traditional courses in computing, but from a specifically audiovisual perspective, giving you the tools you need to develop your ideas. The second core component gives you the freedom to use these skills in your own practical projects, creating games, applications, websites, sound pieces and interactive artworks that showcase your skills in creative technologies. The third component is comprised of Critical Studies lectures and seminars where you will contextualize your creative projects within the wider canon of critical art theory; analyzing key artworks and theoretical texts in order to situate your own practice. In this way, you are encouraged to learn through experiencing the techniques of creative computation, whilst simultaneously developing your portfolio in critical arts practice.

## **Programme entry requirements:**

You will be expected to have either:

- An art foundation year or demonstration of a strong arts practice
- At least a B in a quantitative science A2 level or equivalent
- At least BBB or equivalent at A2 level and a portfolio demonstrating artistic aptitude.

An A2 level qualification, or equivalent, relating to science, technology and mathematics is preferred. However we encourage applications from those without a formal qualification in these areas who can demonstrate relevant knowledge, skills and experience.

All applicants may be called for an interview, at which time they may be asked to take a computer aptitude test. Applicants should have a grade B in GCSE Mathematics, or equivalent. We request up to 12 items of work for portfolio submission.

Applicants whose first language is not English must have received a score of 6.0 or more in the IELTS (or equivalent) examination for written English.

## **Programme learning outcomes**

The aim of this programme is to produce graduates who are independent, creative and reflective computing practitioners. Our graduates should have:

- Knowledge of computing technologies across a range of core and specialist topics
- Understanding of the contexts in which computing technologies subsist in industry, with an emphasis on the creative industries
- The ability to design and implement software systems
- The ability to work independently and in groups and reflectively evaluate their own work

The term computing applies to an increasingly diverse set of degree courses all based on the foundations of computer science. It is widely taught in joint and interdisciplinary courses. The content of this degree as set out in this specification approximate to a synthesis of elements from “Software Engineering” and “Information technology” as defined in the QAA Computing benchmark statement as well as elements from the Art and Design benchmark statement.

Students who successfully complete the **Certificate of Higher Education** will demonstrate the following knowledge, understanding, skills and personal attributes:

### Knowledge and understanding

Code	Learning outcome	Taught by the following module(s)
A1	Basic knowledge of a programming language and its features	Introduction to Programming
A2	Knowledge of contemporary arts practice in at least one sub domain of computing	Introduction to Digital Media
A3	The mathematical and computational principles underlying computing	Graphics I

### Cognitive and thinking skills

Code	Learning outcome	Taught by the following module(s)
B1	Computational Problem solving	Introduction to Programming
B2	Analyze, creative work involving computational technology	Critical Studies Introduction to Digital Media

### Subject specific skills and professional behaviours and attitudes

Code	Learning outcome	Taught by the following module(s)
C1	Program basic computer software	Introduction to Programming
C2	Develop complete, though limited creative projects projects using	Introduction to Digital Media

Code	Learning outcome	Taught by the following module(s)
	computational technology, individually and in groups	Creative Project 1

## Transferable skills

Code	Learning outcome	Taught by the following module(s)
D1	Have core numeracy, literacy and IT skills to a graduate level.	Numeracy and IT skills are core to a computing degree and will feature throughout the curriculum.
D2	Be able to effectively present themselves and their work orally and in writing to a professional level.	Assessment throughout the programme will include considerable written and oral presentation and a yearly public exhibition.

Students who successfully complete the Diploma of Higher Education will demonstrate the following knowledge:

## Knowledge and understanding

Code	Learning outcome	Taught by the following module(s)
A1	Explain and apply broad range of topics in computing including web technologies, multimedia, digital hardware and a number of more advanced topics.	Graphics 1 Physical Computing Dynamic Web Applications  3 <sup>rd</sup> Year Options
A2	Explain and Analyse Contemporary Practice in Computational Arts	Critical Studies Creative Projects

## Cognitive and thinking skills

Code	Learning outcome	Taught by the following module(s)
B1	Apply computational thinking to the design and implementation of moderately complex computing systems	Creative Projects 2
B2	Analyse and evaluate moderately complex computing systems and technologies with reference to efficiency, correctness and suitability to users' needs	Introduction to Programming  Dynamic Web Applications Creative Project 2
B3	Computational Problem solving	Introduction to Programming

Code	Learning outcome	Taught by the following module(s)
		Creative Projects 1 and 2
B4	Discuss the work of key contemporary artists in an imaginative and coherent way, orally and in writing	Critical Studies
B5	Discuss and analyse work critically and, through this, identify, examine and evaluate key issues in relation to your work and its concerns;	Creative Projects 1&2 Critical Studies
B6	Compare and integrated computational and artistic ways of thinking into distinctively interdisciplinary approaches to problem solving and practice.	Creative Projects 1&2 Critical Studies

## Subject specific skills and professional behaviours and attitudes

Code	Learning outcome	Taught by the following module(s)
C1	Specify, design and implement complete computer software systems with reference to user requirements	Introduction to Programming Physical Computing  Dynamic Web Applications
C2	Program computer software to a professional level.	Introduction to Programming Physical Computing  Dynamic Web Applications
C3	Apply specific technologies, methods and tools to the analysis, design and implementation of software. Some technologies will be known to a basic level and others in greater depth.	Introduction to Programming Physical Computing  Dynamic Web Applications
C4	Acquire and manipulate digital media to a professional level.	Introduction to Digital Media Creative Projects 1&2
C5	Make informed critical judgements about your work and its relationship to contemporary art practice;	Critical Studies

## Transferable skills

Code	Learning outcome	Taught by the following module(s)
D1	Have core numeracy, literacy and IT skills to a graduate level.	Numeracy and IT skills are core to a computing degree and will feature throughout the curriculum
D2	Be able to reflect on and evaluate their work	Goldsmiths 101 Critical Studies  Creative Projects 1&2
D3	Be independent and creative workers and learners	All modules
D4	Be able to present themselves and their work orally and in writing to a professional level.	Many modules will feature a section on self-presentation and will be examined in the final year public exhibition

The BSc Honours includes all learning outcomes of the Diploma of Higher Education, and also the following:

## Knowledge and understanding

Code	Learning outcome	Taught by the following module(s)
A1	A broad range of advanced topics in computing including web technologies, multimedia, networking, data bases and a number of more advanced topics. Knowledge of most will be sufficient to apply to moderately complex application; some will be studied in greater depth.	3rd year options
A2	Advanced mathematical and computational principles underlying the representation and manipulation of digital media.	3rd year options
A3	Demonstrate a coherent and detailed knowledge of the historical and theoretical contexts in which contemporary art practice has developed	Critical Studies

## Cognitive and thinking skills

Code	Learning outcome	Taught by the following module(s)
B1	Draw on your own research critically and coherently to analyse, discuss and debate the creative work of others, to the standards of academic study.	Critical Studies Dissertation
B2	Make imaginative and selective use of historical, theoretical and contemporary models for understanding and developing your practice	Critical Studies Dissertation, Final Project
B3	Propose, plan and evaluate a significant piece of creative and technical work, under supervision of an expert, supported by a high level of critical judgment in your work	Final year project and public exhibition

## Subject specific skills and professional behaviours and attitudes

Code	Learning outcome	Taught by the following module(s)
C1	Specify, design and implement a substantial complete computer software system with reference to the requirements of an artistic project	Final year project
C2	Apply specific, advanced technologies, methods and tools to the analysis, design and implementation of software. Some technologies will be known to a basic level and others in greater depth.	3rd year options
C3	Execute a significant piece of creative work, under supervision of an expert.	Final year project resulting in the public exhibition
C4	Make innovative critical judgments about your work and its relationship to contemporary art practice.	Critical Studies Dissertation, final project.

## Transferable skills (Elements)

Code	Learning outcome	Taught by the following module(s)
D1	Be able to reflect on and evaluate a substantial piece of their work	The final year project will have specific learning outcomes on reflection and self-evaluation
D2	Successfully complete a substantial piece of independent, creative work	Critical Studies Dissertation, Final year project resulting in public exhibition
D3	Be able to present themselves and their work in a substantial piece of writing to a professional level.	Dissertation, Final year project report

## Mode of study

On Campus

## Programme structure

### Academic year of study 1

Module Name	Module Code	Credits	Level	Module Type	Term
Introduction to Programming	IS51031B	15	4	Compulsory	1
Critical Studies in Computational Arts I	FA51024B	30	4	Compulsory	1,2
Creative Project 1	IS51025A	15	4	Compulsory	2
Graphics 1	IS51030B	15	4	Compulsory	2
Front End Web	IS51018C	15	4	Compulsory	1
Introduction to Digital Media	IS51037B	15	4	Compulsory	1
Sound and Signal 1	IS51029B	15	4	Compulsory	2

### Academic year of study 2

Module Name	Module Code	Credits	Level	Module Type	Term
Creative Embedded Systems		15	5	Compulsory	1
Generative Drawing	IS51028B	15	5	Compulsory	1
Critical Studies 2	FA51024B	30	5	Compulsory	1,2

Module Name	Module Code	Credits	Level	Module Type	Term
Digital Arts Computing Project 2	IS52055A	30	5	Compulsory	2&3
Option modules including Guaranteed Elective and option of Social Change Project		30	5	Optional	1&2

## Academic year of study 3

Module Name	Module Code	Credits	Level	Module Type	Term
Final Project in Digital Arts Computing	IS53047B	60	6	Compulsory	2,3
Option Modules from a list that will be published every year	Various	30	6	Optional	1
Dissertation in Critical Studies in Computational Arts	FA53045A	30		Compulsory	2

## Employability and potential career opportunities

This programme aims to prepare students for a career in digital and computational arts. This is an interdisciplinary field that can lead to a career in fine arts practice but also a variety of other careers at the intersection of technology and creative work such as interface design; computer graphics; games and animation; music production and cataloguing services; multimedia systems analysis; research and development in media and entertainment; Film/television production and special effects companies. Employers increasingly demand that new recruits are able to add immediate value to their organisation through a mix of creative and technological skills.

Students are supported from the start to the finish of this programme in order to understand the different potential career journeys they can follow and to build a portfolio of work to demonstrate their capability to gain employment or freelance work in that area. Assessment has been designed to facilitate this process through the development of transferable or soft skills listed in the section above. Regular guest lectures from industry support the development of sector knowledge and awareness of different career paths.

The Department's External Advisory Board ensures relevance of all our programmes to the current and future needs of employers. All programmes are designed in consultation with employers to make sure you develop transferable skills to improve your career opportunities and you will be applying your skills to real-world problems through live project briefs and group projects. The board and other employers attend showcase events where you can present your ideas, get feedback and build important connections.

We have dedicated employability resource within the department to build employer relations and manage additional initiatives to support your future career opportunities, including regular communication of external opportunities for mentoring and work experience and an annual Career week (a focussed week of career support every June in the department where you can access alumni panels by programme and a range of industry talks).

## **Tuition fee costs**

Information on tuition fee costs is available at: <https://www.gold.ac.uk/students/fee-support/>

## **Specific programme costs**

The physical computing module requires the purchase of a hardware kit