BSc (Hons) Games Development; BSc (Hon) Game Development with Work Experience;

Programme Specification

Awarding Institution:
University of London (Interim Exit Awards made by Goldsmiths' College)
Teaching Institution: Goldsmiths, University of London
Final Award:
BSc (Hons) Games Development
BSc (Hons) Games Development with Work Experience
Programme Name:
BSc Games Development
BSc Games Development with Work Experience
Total credit value for programme: 360 or 480 with work experience
Name of Interim Exit Award(s):
Certificate of Higher Education in Games Development
Diploma of Higher Education in Games Development
Duration of Programme:
3 years full-time (BSc Games Development)
4 years full-time (BSc Games Development with Work Experience)
6 years part-time (BSc Games Development)
7 year part-time (BSc Games Development with Work Experience)
UCAS Code(s):
HECoS Code(s): 100366 Computer Science (50%) 100368 Creative Computing (50%)
QAA Benchmark Group: Computing
FHEQ Level of Award: level 6
Programme accredited by: Not applicable
Date Programme Specification last updated/approved: October 2023
Home Department: Computing
Department(s) which will also be involved in teaching part of the programme:
Not applicable.

Programme overview

Game Industry revenue is estimated to be larger than Film and Music industry combined. Such a large market share means that there are countless opportunities out there to work as a professional in the game industry. Our BSc in Games Development provides you with a comprehensive technical understanding of how to develop games. As part of this degree program, you will learn all aspects of game development (theory, practice, and technology) that are essential to your careers as game developers.

This course emphasizes the following topics as key learning elements:

- Learning Programming
- Learning about game industry various roles and skill set needed
- Learning and developing projects using state of art game engine/creative tools used in the industry
- Creative thinking for game design and how to produce game design documents
- Learning about technology that can be utilized for game development such as game engines and web frameworks

Our specialist modules are delivered in a creative environment, you will have opportunities to collaborate and to use new technologies in your own practice.

As a graduate of this degree, you would have the skill set to create your own games using state of art game engines for a variety of platforms such as PC, Mobile and etc. You will have a portfolio of projects built using industry standard tools and have the skill set needed to work in game or creative industries.

Programme entry requirements

Successful applicants will be expected to have at least BBB at A2 level, or equivalent. 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.

Applicants should have a grade B in GCSE Mathematics, or equivalent.

If necessary, applicants may be called for an interview, at which time they may be asked to take a computer aptitude test.

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.

Applications cannot be directly made for admission to the MSci. Admission to the MSci year is only offered by progression from Level 6 of the BSc and is dependent on achieving an equivalent of a 2.1 or above at Levels 5 and 6 of the programmes.

Programme learning outcomes

As a graduate of this programme you will, have a comprehensive understanding of all aspects of Games Development including programming, game engine, design and art.

As a graduate you will have the:

- knowledge of game development technologies across a range of core and specialist topics
- knowledge of game development production pipeline from idea, game design document, Minimum Viable Product (MVP) and release phase of game
- you will also learn how to plan production of your game, how to break a large idea into small manageable sections that you can tackle one at a time
- ability to use tools and various technologies used in game industry
- ability to design and implement your own games targeting variety of platforms such PC, mobile and etc
- ability to work independently and in groups and effectively evaluate your own work.

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	Demonstrate knowledge of a programming language and its features	• Introduction to Programming • 2D Games Development

Code	Learning outcome	Taught by the following module(s)
A2	Demonstrate knowledge of contemporary practice in at least one sub domain of computing	• Front End Web • 2D Games Development
A3	Apply the mathematical and computational principles underlying computing	• Graphics 1 • 2D Games Development

Cognitive and thinking skills

Code	Learning outcome	Taught by the following module(s)
B1	Solve computational problems	• Introduction to Programming • 2D Games Development • Algorithms 1
B2	Analyse, the requirements of computing software from several perspectives (technical, creative, user-centred, social and business) and design a basic software solution based on this analysis	• 2D Games Development

Subject specific skills and professional behaviours and attitudes

Code	Learning outcome	Taught by the following module(s)
C1	Build simple computer software	• Introduction to Programming
C2	Develop and execute, simple computing projects, individually and in groups	• Introduction to Programming • 2D Games Development

Transferable skills

Code	Learning outcome	Taught by the following module(s)
D1	Demonstrate numeracy, literacy and IT skills to a graduate level.	• Introduction to Programming • 2D Games Development
D2	Present your work orally and in writing to a professional level.	• 2D Games Development

Students who successfully complete the **Diploma of Higher Education** in Computing will be able to:

Knowledge and understanding

Code	Learning outcome	Taught by the following module(s)
A1	Demonstrate, apply understanding of a range of topics in computing including web technologies, multimedia, networking, data bases and a few more advanced topics. Knowledge of most will be sufficient to apply to moderately complex application; some will be studied in greater depth.	• C++ Object Oriented Programming • Algorithms 2 • 3D Games Development • Visual Game Development • Generative Drawing • Graphics 2
A2	Demonstrate understating of programming languages, their features, and the differences between languages. Knowledge will be sufficient for professional level software development.	• C++ Object Oriented Programming • 3D Games Development • Visual Game Development • Generative Drawing • Algorithms 2

Cognitive and thinking skills

Code	Learning outcome	Taught by the following module(s)
B1	Apply computational thinking to the design and implementation of computing systems	• C++ Object Oriented Programming • 3D Games Development • Visual Game Development • Generative Drawing
B2	Analyse and evaluate complex computing systems and technologies with reference to efficiency and correctness. Build and evaluate systems using a user centred design approach.	• C++ Object Oriented Programming • 3D Games Development • Visual Game Development • Algorithms 2

Subject specific skills and professional behaviours and attitudes

Code	Learning outcome	Taught by the following module(s)
C1	Apply appropriate 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.	• 3D Games Development • Visual Game Development
C2	Develop and design a significant piece of creative work, under supervision of an expert	• 3D Games Development • Visual Game Development
C3	Demonstrate ability to use state of art game engines	• 3D Games Development • Visual Game Development

Transferable skills

Code	Learning outcome	Taught by the following module(s)
D1	Critically reflect and evaluate y o u r work and act on guidance and advice	• 3D Games Development • Visual Game Development • Game Design
D2	Proactively and collaboratively work in teams to effectively plan and execute a large-scale project.	• 3D Games Development • Visual Game Development • Game Design

Students who successfully complete the **BSc** programme will demonstrate knowledge & understanding, cognitive and thinking, subject specific and transferable skills as follows:

Knowledge and understanding

Code	Learning outcome	Taught by the following module(s)
A1	Demonstrate indepth understanding of topics underlying software systems and programming. This knowledge will be applicable to application to small-scale real-world problems.	• Final Project in Games Development
A2	Apply mathematical underpinnings of Computing and the use of mathematical and other forms of abstraction for modelling systems.	• Final Project in Games Development

Code	Learning outcome	Taught by the following module(s)
A3	Implement and apply processes and solve problems based on required specification to design software projects.	• Final Project in Games Development
A4	Critically evaluate the necessity, principles, and techniques for decomposition of large problems to make them comprehensible and computationally solvable and apply to small but complete software projects.	• Final Project in Games Development
A5	Apply a wide range of classes of problems and algorithms for their solution.	• Final Project in Games Development

Cognitive and thinking skills

Code	Learning outcome	Taught by the following module(s)
B1	Analyse specific real-world problems, make decisions on the algorithmic class in which it lies, and select and apply the specific optimal solution	• Final Project in Games Development
B2	Implement abstract and generalise complex problems into appropriate models, through decomposition	• Final Project in Games Development
B3	Critically analyse and evaluate abstract models and concrete implementations, in specific (limited) contexts, with reference to efficiency and correctness. Utilising an iterative user centred design approach and prototyping.	• Final Project in Games Development
B4	Critically assess computing systems, both to verify that they are correct and appropriate to the user and social context of use.	• Final Project in Games Development

Code	Learning outcome	Taught by the following module(s)
B5	Reflect critically and analyse the computing models and solutions that you create.	• Final Project in Games Development
B6	Propose, plan, develop and evaluate a significant piece of project work, under the supervision of an expert.	• Final Project in Games Development

Subject specific skills and professional behaviours and attitudes

Code	Learning outcome	Taught by the following module(s)
C1	Interpret and turn an abstract model into a fully implemented software system, using a specific and appropriate programming language	• Final Project in Games Development
C2	Implement and design solutions utilising specific tools and technologies.	• Final Project in Games Development
C3	Project manage development work on a local distribute system (intranet), with reference to storage, communication, and documentation	• Final Project in Games Development
C4	Program in a specific OO programming language (e.g. C#/C++) and report in detail some of its libraries (packages)	• Final Project in Games Development
C5	Manage large collections of data	• Final Project in Games Development
C6	Create a significant piece of creative work, under the supervision of an expert	• Final Project in Games Development
C7	Effectively apply state of art game engines	• Final Project in Games Development
C8	Execute a significant piece of work and document the design and production process, under supervision of an expert.	• Final Project in Games Development

Transferable skills

Code	Learning outcome	Taught by the following module(s)
D1	Use core numeracy, literacy and IT skills at graduate level	• Final Project in Games Development
D2	Critically reflect and evaluate your work from a range of perspectives, including ethical, social and cultural viewpoints.	• Final Project in Games Development
D3	Develop and design solutions independently	• Final Project in Games Development
D4	Demonstrate ability to work effectively in groups	• Final Project in Games Development
D5	Present your work orally and in writing to a professional level.	• Final Project in Games Development

The above learning outcomes are in concurrence with typical learning outcomes for Computing degrees as identified by the QAA subject benchmark.

Mode of study

On campus

Programme structure

Full-time mode BSc (Hons) Games Development

Academic year of study 1

Module Name	Module Code	Credits	Level	Module Type	Term
Introduction to Programming	IS51031B	15	4	Compulsory	1
Front End Web	IS51018C	15	4	Compulsory	1
Games Anatomy	IS51044A	15	4	Compulsory	1
2D Games Development	IS51045A	15	4	Compulsory	2
Graphics 1	IS51030B	15	4	Compulsory	2
Algorithms 1	IS51043A	15	4	Compulsory	2

Module Name	Module Code	Credits	Level	Module Type	Term
Logic and Computer Architecture	IS51042A	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
C++ Object Oriented Programming	IS52070A	15	5	Compulsory	1
Generative Drawing	IS52068A	15	5	Compulsory	1
Game Design	TBC	15	5	Compulsory	1
3D Games Development	IS52071A	15	5	Compulsory	1
Visual Game Development	IS52072A	15	5	Compulsory	2
Audio for Games and Immersive Experience	IS52066A	15	5	Optional	2
Graphics 2	IS52049A	15	5	Compulsory	2
Algorithms 2	IS52054A	15	5	Compulsory	2
Sound and Signal 2	IS52051A	15	5	Optional	2
The Goldsmiths Elective (Chosen from a list made available annually of modules which provide an opportunity to undertake study in another discipline without pre-requisites or prior knowledge)	Various	15	5	Optional	2

Academic year of study 3 (Work placement option)

Module Title	Module Code	Credits	Level	Module Status	Term
Work Placement	TBC	120	6	Compulsory	1,2,3

Academic year of study 3 (or year of study 4 Work placement option)

Module Name	Module Code	Credits	Level	Module Type	Term
Final Project in Games Development	IS53071A	45	6	Compulsory	1,2,3
Optional modules from an annually approved list		75	6	Optional	

Part-time mode-BSc (Hons) Games Development

Academic Year of Study 1

Module Name	Module Code	Credits	Level	Module Type	Term
Introduction to Programming	IS51031B	15	4	Compulsory	1
Graphics 1	IS51030B	15	4	Compulsory	2
Logic and Computer Architecture	IS51042A	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
Front End Web	IS51018C	15	4	Compulsory	1
Games Anatomy	TBC	15	4	Compulsory	1
2D Games Development	TBC	15	4	Compulsory	2
Algorithms 1	IS51043A	15	4	Compulsory	2

Academic Year of Study 3

Module Name	Module Code	Credits	Level	Module Type	Term
C++ Object Oriented Programming	IS52047A	15	5	Compulsory	1
3D Games Development	TBC	15	5	Compulsory	1
Graphics 2	TBC	15	5	Compulsory	2
Audio for Games and Immersive Experience	TBC	15	5	Optional	2
Sound and Signal 2	IS52051A	15	5	Optional	2
The Goldsmiths Elective (Chosen from a list made available annually of modules which provide an opportunity to undertake study in another discipline without pre-requisites or prior knowledge)	TBC	15	5	Optional	2

Academic Year of Study 4

Module Name	Module Code	Credits	Level	Module Type	Term
Generative Drawing	TBC	15	5	Compulsory	1
Game Design	TBC	15	5	Compulsory	1
Visual Game Development	TBC	15	5	Compulsory	2
Algorithms 2	TBC	15	5	Compulsory	2

Academic Year of Study 5 for BSc Games Development with Work Experience

Module Name	Module Code	Credits	Level	Module Type	Term
Work Placement		0	6	Optional	1,2,3

Academic Year of Study 5 (and 6 for BSc Games Development with Work Experience)

Module Name	Module Code	Credits	Level	Module Type	Term
Optional modules to a value of 60 credits from an annually approved list	Various	60	6	Optional	1,2,3

Academic Year of Study 6 (and 7 for BSc Games Development with Work Experience)

Module Name	Module Code	Credits	Level	Module Type	Term
Optional modules to a value of 15 credits from an annually approved list	Various	15	6	Optional	1
Final Project in Games Development	TBC	15	6	Compulsory	1,2,3

Academic support

Support for learning and wellbeing is provided in several ways by departments and College support services who work collaboratively to ensure students get the right help to reach your best potential both academically and personally.

All students are allocated a Personal Tutor (one in each department for joint programmes) who has overall responsibility for your individual progress and welfare. Personal Tutors meet with their student at least three times a year either face-to-face, as part of a group and/or electronically. The first meeting normally takes place within the first few weeks of the

autumn term. Personal Tutors are also available to students throughout the year of study. These meetings aim to discuss progress on modules, discussion of the academic discipline and reports from previous years if available (for continuing students). This provides an opportunity for progress, attendance and assessment marks to be reviewed and an informed discussion to take place about how to strengthen individual learning and success.

All students also have access to a Senior Tutor to enable them to speak to an experienced academic member of staff about any issues which are negatively impacting your academic studies, and which are beyond the normal scope of issues handled by Programme Convenors and Personal Tutors.

Students are provided with information about learning resources, the Library and information available on Learn.gold (VLE) so that they have access to department/ programme handbooks, programme information and support related information and guidance.

Taught sessions and lectures provide overviews of themes, which students are encouraged to complement with intensive reading for presentation and discussion with peers at seminars. Assessments build on lectures and seminars, so students are expected to attend all taught sessions to build knowledge and their own understanding of their chosen discipline.

All assessed work is accompanied by some form of feedback to ensure that students' work is on the right track. It may come in a variety of forms ranging from written comments on a marked essay to oral and written feedback on developing projects and practice as they attend workshops.

Students may be referred to specialist student services by department staff or they may access support services independently. Information about support services is provided on the Goldsmiths website and for new students through new starter information and induction/Welcome Week. Any support recommendations that are made are agreed with the student and communicated to the department so that adjustments to learning and teaching are able to be implemented at a department level and students can be reassured that arrangements are in place. Opportunities are provided for students to review their support arrangements should their circumstances change. The Disability and Wellbeing Services maintain caseloads of students and provide on-going support.

The Careers Service provides central support for skills enhancement, running The Gold Award scheme and other co-curricular activities that are accredited via the Higher Education Achievement Report (HEAR).

The Centre for Academic Language and Literacies works with academic departments offering bespoke academic literacy sessions. It also provides a programme of academic skills workshops and one-to-one provision for students throughout the year.

Placement opportunities and potential career opportunities

Our degrees include an optional industrial placement year after the second year of study. You will be responsible for securing a placement, but we can support you through this process. Although we encourage you to take the opportunity of a placement year, you can also complete your degree in three years.

We encourage and support students to gain work experience through embedded support in the curriculum and the support and guidance of Personal Tutors. Students on this programme have two options available to them for placements:

- Summer Placement which can be taken as a 3rd year elective module takes place in the summer after 2nd year and is for a minimum of 6 weeks.
    - Assessment for this module is based on:
        - a report written by the student to be submitted before end of term 1 of year 3
        - a report from the workplace supervisor who was responsible for the student's work on the placement
- Year out Work Placement which allows a student to upgrade from a 3 year to a 4 year "with Work Experience" degree. Minimum duration of 10 months.
    - This Work placement is valued as 120 credits
    - The University has a duty of care to the students, so two reports are required from the candidate and two reports from your workplace supervisor describing the progress throughout the placement

This programme aims to prepare students for a career in game development. As a graduate you have the skill set to work in smaller game/creative studio or larger game companies. Our graduates also can build and publish your own games as well. Our graduates have the skill set to pursue carrier in other relevant field such as software development, web development, creative computing and etc.

The following are potential carrier option for our students:

- Programmer in Games Industry, including casual, mobile, PC and console games
- Computer Game Designer or level design in the games industry, including casual, mobile, PC and console games

- Independent Game Developer (Indie Developer)
- Game Developer for serious Games and Gamification sectors.
- Creative Games and Interactive Technical Lead in an Advertising Agency
- Creative Technologist

Students are supported from the start to the finish of this programme to understand the different potential career journeys they can follow and to build a portfolio of work to demonstrate your 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).

Programme-specific requirements

Not applicable

Tuition fee costs

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

Specific programme costs

There are a variety of machines on campus, but students are expected to bring your own laptops to the lab sessions. Laptop specifications are not strictly enforced, as long as they are capable of software used in the class.