

COURSE SPECIFICATION DOCUMENT

Academic School / Department: School of Liberal Arts

Programme: Computer Science

FHEQ Level: 6

Course Title: Games Technology

Course Code: DGT 6105

Student Engagement Hours: 160

Lectures: 15

Lab: 30

Supervision: 40

Independent / Guided Learning: 75

Credits:
16 UK CATS credits
8 ECTS credits
4 US credits

Course Description:

This course introduces programming skills specific to games development (eg. C#) and game engines such as Unity. This course will build on skills in object-oriented programming. The course will also walkthrough procedural content generation and its possibilities along with aspects of artificial intelligence applicable to games.

Prerequisites:

DGT 5101 Programming for Industry.

Aims and Objectives:

By the end of this course, students will have programming skills and game engine knowledge specific to developing games. Students will also understand procedural content generation and have the opportunity to use aspects of artificial intelligence within games programming.

Programme Outcomes:

COMPSC: A2, A3, A5, A6, A7, B5, C2, C3 and C4

A detailed list of the programme outcomes are found in the Programme Specification.

This is located at the archive maintained by Registry and found at:

<https://www.richmond.ac.uk/programme-and-course-specifications/>

Learning Outcomes:

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

- Understand and use programming languages specific to games such as C#.
- Demonstrate knowledge of procedural content generation.
- Understand and use effective shader coding within game engines.
- Apply existing skills in object-oriented programming, data structures and algorithms within a gaming context.

Indicative Content:

- Object oriented programming within games.
- Data structures and algorithms within games.
- Games specific programming language such as C#.
- Game engines for shader coding such as Unity.
- Procedural content generation.

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:

- Lectures, practical demonstrations and step-by-step software tutorials, class workshops, one-to-one tutorials.

Indicative Text(s):

“Learning C# by Developing Games with Unity 2020: An enjoyable and intuitive approach to getting started with C# Programming and Unity” by Harrison Ferrone, 5th Edition, Packt.

“Unity 2018 Shaders and Effects Cookbook: Transform your game into a visually stunning masterpiece with 70 recipes” by John Doran and Alan Zucconi, 3rd edition, 2018, Packt.

“Complete Unity 2018 Game Development: Explore techniques to build 2D/3D applications using real-world examples,” by Alan Thorn, John Doran, Alan Zucconi, Jorge Palacios, 2019, Packt.

Journals

Click here to enter text.

Web Sites

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
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Revision – annual update	May 2023	