Programme Specification

All italicised guidance notes shown throughout the template must be deleted prior to submission of the documentation for approval.

1	Awarding Institution/Body	Leeds City College
2	Delivery Location(s)	*University Centre*
3	Programme Externally Accredited by (e.g. PSRB)	
4	Award Title(s)	*FD Game Programming*
5	FHEQ Level [see guidance]	*5*
6	Bologna Cycle [see guidance]	*Short cycle*
7	HECoS Code and Description	*This relates to the subject groupings that are used to code provision and advice can be sought from HEDO*
8	Mode of Attendance [full-time or part-time]	*Full-Time*
9	Relevant QAA Subject Benchmarking Group(s)	Computing 2019 and Art and design 2017 Foundation Degree September 2015
1	Relevant Additional External Reference Points (e.g. National Occupational Standards, PSRB Standards)	
1	Date of Approval/ Revision	*2019*
1	Criteria for Admission to the Programme (select the appropriate Entry Criteria for the award and remove the others)	

Foundation Degree Entry Criteria
(text in red to be used where applicable)

	Typical offer	Minimum Offer
A Levels:	2xD grades	1xE grade
BTEC L3 Diploma or Extended Diploma:	MP, MPP grade	PP, PPP grade or a Subsidiary Diploma with an E grade
Access to HE Diploma:	Overall pass with 60 credits, with 24 credits to be at a Merit grade	Overall pass with 60 credits
IELTS:	IELTS 6.0 with no less than 5.5 in any component.	
International qualifications:	International qualifications will be assessed against these criteria	
Mature applicants:	Leeds City College welcomes applications from mature* applicants who may not have met the academic criteria, but who can demonstrate a wealth of experience in their chosen field. Candidates in this category and otherwise are likely to be interviewed to assess their suitability for the course and may be asked to provide a portfolio of evidence to support their application. *21 years and over at the start of the course	
RPL claims:	The course structure actively supports claims for Recognition of Prior Certified Learning (RPCL) or Recognition of Prior Experiential Learning (RPEL)	

1. Educational Aims of the Programme

The overall aims of the programme are to:
- Provide a comprehensive and challenging vocational programme in game programming, including core and specialist modules, which facilitate access and progression for a wide range of students from diverse backgrounds into various creative industry contexts.
- Offer a robust Foundation Degree programme that is relevant to current practices of programming and scripting in the games industry that will allow students to be autonomous and progress onto their chosen trajectory.
- Produce graduates who have the ability to critically reflect and learn from their practical and academic experience in and relate this experience to relevant theory.
- Produce graduates who have both subject specific skills (expressive, creative, technical) and transferable skills (communication, teamwork, project management) which are key to being employable within the games industry.
- Produce graduates with the ability to create robust and game ready systems.
- Prepare students for working in the industry with the skillset and software skills needed to become a games programmer and develop their own systems, mechanics and game scripts.
- Produce graduates to be able to utilise C#, C++, Computational Mathematics, AI, Unity, Unreal all with an underpinning of game theory.
- Produce graduates with entrepreneurial ability relevant to be a programmer and developer in the games industry
- Produce graduates who have an analytical and reflective understanding of games programming and its use within the context of the workplace today and in relation to the wider social and cultural environment.

14	**Learning Outcomes**	
	The programme will enable students to develop the knowledge and skills listed below. On successful completion of the programme, the student will be able to:	
	Knowledge and Understanding	
	K1	Critically evaluate the relevant theories, concepts and principles applicable to game programming.
	K2	Understand the role of the practitioner in the specialism of game programming.
	K3	Analyse appropriate research methodologies to underpin critical thinking.
	K4	Understand legal and ethical issues surrounding programming and its uses.
	Cognitive/Intellectual Skills	
	C1	Apply problem solving and solution-based methodologies to the discipline of game programming.
	C2	Evaluate and design, game-based systems using appropriate theories and techniques relevant to the discipline.
	C3	Apply appropriate practices and tools for the design and implementation of game-based features.
	C4	Employ balanced and logical arguments to critically explore programming and it used within games.
	Practical/Professional Skills	
	P1	Able to act with increasing autonomy with reduced need for supervision.
	P2	Apply a range of creative and technical skills in the creation of scripts and systems for use within a game.
	P3	Analyse and employ software tools relevant to context.
	P4	Build functioning and robust game ready systems.
	Key Transferable Skills *(insert additional rows as necessary)*	
	T1	Work effectively as individuals and in groups.
	T2	Use a range of specialist software appropriate to the discipline.
	T3	Increasingly utilise a range of academic skills to report and communicate findings effectively.
	T4	Develop practical and professional skills that match career aspirations.
15	**Key Learning & Teaching Strategy and Methods**	
	The learning and teaching strategy and methods employed throughout the course are designed to support students in meeting the learning outcomes by offering a range of opportunities, including individual and group practical and research projects, written and oral forms of presentation and the creation of game systems and scripts.	

Game Programming engages with a wide range of teaching methods: practical workshops, lectures, seminars, large and small group discussion and presentations, it is, therefore, inclusive for a variety of learning styles.

Teaching and Learning strategies will include lectures, one to one and group discussions. Individual consultations will underpin each module where such things as guidance on writing and presenting an effective brief and project proposals will be covered, as well as practical support.

The programme will provide support to allow students to work autonomously, with structured guidance from lecturers, project or task milestones will be agreed to track progress to support the transition to working more autonomously, especially at Level 4.

Guidance on working towards recognised industry practice will be provided through real world case studies. The simulation of industry practice will be embedded in the programme to develop independent working processes and approaches through the development of viable game ideas.

Lectures and discussion on critical and analytical thinking will be delivered as part of appropriate modules. Guidance on research procedures and methodologies will be embedded alongside academic skills development ensure students written work is up to acceptable academic stands expected on the level of study.

One to one tutorials will be used to provide guidance and practical support to produce working game levels to professional standards and encourages the realisation of a range of practical skills in game development. Individual and small group consultations will be utilised to develop wider contextual understanding of how small teams of developers produce computer games in a range of contexts, through devising and developing practical game projects.

A range of formative and summative assessment strategies that will include, questioning, open ended questions, brainstorming, presentations, production diaries, work logs, observations, self-assessment, group discussion, peer assessment, questionnaires, reflective practice.

e-learning strategy
The programme will incorporate the use of Google Classroom where module resources will be uploaded. Students will be able to access all materials on of off-site, this will enable students to better fit their learning around their lifestyles and manage other commitments.

Using google classroom will allow staff to employ a range of tools to enhance the learning experience and will include online discussions, tutorial videos, links to module specific online video and podcasts

All assignments will be set in google classroom and students will upload their final submissions to google classroom.

Staff can engage with students outside of class using google Classroom ensure a broader range of support for students. This will also include a learning community via

a Facebook group where students can engage with one another to help, support and share resources.

Work Related Learning and Personal Development
There are no requirements for a formalised work placement, but the programme has a focus on preparing students for work in the games industry. This is done mainly through the simulation of industry working practices. Students are encouraged to work collaboratively in small development teams that are reflective of the makeup of real-world indie development teams.

Game Jams are also a focus on the course and students will take part in several game jams at L4 and L5 of the programme. Game Jams are a common feature in many games companies to encourage staff to quickly develop and prototype new game ideas and concepts. There are a number of external Game Jams students will take part in, the global Game Jam for example of a weekend long global competition where students will work towards developing a rapidly developed prototype based on a given theme.

The programme endeavours to develop students with an enthusiasm for enquiry into their discipline and the motivation to sustain it. Currently this happens in many guises, the game Jam is key to student buy in, as is the development of a studio atmosphere. Students are encouraged to use out of class time to socially interact through playing games within the University Centre to maintain enthusiasm for the subject. Culture Club Society, and the promotion of interdisciplinary practice help to support the student's integration into the wider creative context and to broaden skills and interests.

Employability is embedded into the programme and this will be underpinned with the development of an online portfolio and also through a scheme of visiting lecturers and industry practitioners who will provide insight and also portfolio advice, guidance and critique where appropriate.

In addition, students will be given the opportunity to develop a broad range of employability skills, often pitched as "soft Skills". These will include the ability to think creatively, work individually or as part of a team, plan and prepare budgets, chair and contribute to meeting, positive work ethic with good punctuality, excellent written and verbal communication skills.

16	**Key Assessment Strategy and Methods**
	A broad range of skills and knowledge are needed in the Game Development industry and assessments are tailored to the particular task being undertaken. Assessed tasks include the development of computer games and game assets, the application of theory to practical problems, team work, project work and the communication of ideas and concepts through reports and presentations. The assessment of these tasks are guided by programme and module learning outcomes. Modules are assessed by a combination of practical work, written essays, presentations, project logs.

Each module will have two assessment components. Learning outcomes will be assessed twice giving ample opportunity for students to meet the specified learning outcomes of each task and will also ensure that students are not over assessed.

Assignments tasks will be managed across the academic year ensuring there is sufficient time between assessments to support the completion of the programme.

The course promotes independent learning through the promotion of CPD when learning new software and when researching and applying new theories and concepts. Students are encouraged to adopt an analytical approach to their engagement with computer games, transitioning from player to developer by applying a critical eye to key game texts and independently applying new found approaches to their own game development concepts. greater autonomy is expected as students move from L4 to L5 of the programme and this is supported through the exploration, experimentation, development and application of key game theories in their coursework.

Formative assessments usually carry no weighting but are critical for the students' development and can be useful preparation for the related summative assessment. Formative assessment can take the form of a group or individual critique, and informal peer assessment through peer group discussions.

Formative assessment is a part of the individual tutorial system, featured in every module, and feedback is given verbally or in written format depending on the module. Each assessment is aligned with its intended learning outcomes and learning activities, so it is clear what is being assessed.

Formative assessment is a key feature of the first year and is featured early in the induction period of the first year to familiarise students with the formative feedback strategy.

Summative assessment will be given in written format using standard programme feedback forms. The feedback will discuss the final grade decision and how it was reached and also offer feedforward style feedback that will identify areas for improvement and suggest approaches that can be adopted in future assessments. This will help students to identify areas for improvement, and of current strengths which are to be developed.

All feedback will be presented inline with the institutions policy ensuring timely feedback is given to students for each assessment. |

Employability is built into the programme in core modules. Future employment are entrenched within the programme and practical modules are very much focused on the development of professional portfolio pieces that can support progression in to employment.

1	**Programme Modules**					
	Level 4					
Code	**Title**	**Credits**	**Core/ Option**	**Non-Compensatable**	**Compensatable**	**Variance**
	Game Engine Utilisation	40	Core	/		
	Principles of Programming	20	Core		/	
	Principles of Game Play	20	Core		/	
	Professional Development	20	Core		/	
	Project 1	20	Core		/	
	Level 5					
Code	**Title**	**Credits**	**Core/ Option**	**Non-Compensatable**	**Compensatable**	**Variance**
	Employability Skills	20	Core		/	
	Game Engine Development	20	Core		/	
	Emerging Technologies	20	Core		/	
	Project 2	20	Core		/	
	Introduction to AI	20	Core		/	
	Advanced Games Programming	20	Core		/	

17	**Programme Structure**

Full Time
Level 4

	Skills		WRL	Academic
Semester 1	**Principles of Programming 20 Credits**	**Game Engine Utilisation 40 Credits**	**Project 1 20 Credits**	**Professional Development 20 Credits**
Semester 2				**Principles of Gameplay 20 Credits**

Level 5

	Skills		WRL	Academic
Semester 1	**Introduction to AI 20 Credits**	**Game Engine Development 20 Credits**	**Project 2 20 Credits**	**Emerging Technologies 20 Credits**
Semester 2	**Advanced Games Programming 20 Credits**			**Employability Skills 20 Credits**

Part Time
Year 1 – Level 4

	Skills	Academic
Semester 1	**Game Engine Utilisation** **40 Credits**	
Semester 2		**Professional Development** **20 Credits**

Year 2 – Level 4

	Skills	WRL	Academic
Semester 1	**Principles of Programming** **20 Credits**	**Project 1** **20 Credits**	
Semester 2			**Principles of Gameplay** **20 Credits**

Year 3 – Level 5

	Skills	
Semester 1	**Introduction to AI** **20 Credits**	**Advanced Games Programming** **20 Credits**
Semester 2		**Game Engine Development** **20 Credits**

Year 4 – Level 5

	WRL	Academic
Semester 1	**Project 2** **20 Credits**	**Emerging Technologies** **20 Credits**
Semester 2		**Employability Skills** **20 Credits**

	The Foundation Degree is awarded on successful completion of both level 4 and level 5 of the award. The course offers a full-time and a part-time option, students studying on the foundation degree full time will attend University for 2.5 days per week full-time and 1 day per week part-time. Students, alongside core modules will have a tutorial which will have a study support theme to support students not only pastorally but also academically and technically through their modules. At both level 4 and level 5 Project runs through the entire year to ensure that students can utilise skills gained throughout all the modules into a team project. The Project module is a collaborative module that runs through Game Art, Game Development and Game Programming. At Level 4 the focus is on getting the students to learn the basics programming and utilising game IDE's. Understanding logic-based thinking and C# and C++ is the core of the entire course so ensuring they get to grasp early is vital. Game Engines runs throughout the year and allows a place for the student to develop their ability to code in an engine and create game worlds. This is underpinned with understanding and learning what makes a game work in relation to mechanics and play psychology, so the programmers understand what they are making and give them a deeper appreciations of the gameplay features, mechanics and psychology behind world, level and game design. At Level 5 they go into more advanced systems inside of game engines to create more immersive and deeper mechanics within their games. Using more advanced systems in Advanced Games Programming and Game Engine Development they will further their understanding of C#, C++ and Blueprints. Whilst the students are learning and developing these skills, they will also explore how to code systems for emerging technology. At the end of level 5 they will prepare themselves for industry and the interviews that may follow giving them a rounded understanding of art creation, game theory and work-related skills.	
18	**Apprenticeships**	

19	**Support for Students and Their Learning** The award adopts the following approach to student learning support. ● A robust and open communications are encouraged to give students access to lecturers and management when needed; this includes e-mail, the VLE and notice boards and open office policy. ● All necessary information about the programme is provided by means of the student handbook, module handbooks and the VLE. ● Each student is allocated a personal tutor for regular tutorials and personal development planning. This is implemented in the first term and continued throughout the year of study. ● Research Skills and academic writing support from the departments coaching tutor ● Formative assessment submissions are outlined in module handbook and formative feedback given for each module component. ● Practical work is supported by regular peer feedback at key points in the module ● Shared documents and folders between staff and students to support live editing and feedback on work. ● There is an extensive range of learning resources in the Library, supported by specialist staff that provide bespoke study skills sessions for students. ● The University centre provides an extensive range of services for students, including support for those with additional learning support, welfare, counselling, financial support such as bursary and student finance application support. ● Employability embedded throughout the programme ● The department has a coaching tutor who will support students with a range of support that will include, academic, time management, regular one to one tutorials, tracking submission and tracking and chasing attendance as and when needed.
20	**Distinctive Features** Students will be given the opportunity to work across a wide range of projects, developing skills in the specialism of Game Programming. Developing the workflows required to create scripts, programs and developing artificial intelligence in the context of Computer Games. Students will be developed as a creative individual, learning to appreciate and apply the technical and problem-solving techniques that form the core of contemporary games development. They will become well versed in the real world of computer games, learning how the past, present and future of computer games are vital to career and personal development. They will develop a range of skills that can be used across the creative industries, such as Computer Programming, AI developer, Software developer and many others. The focus of the programme is preparing students for a career in the games industry either as a self-employed practitioner or as an employee of an SME or AAA company. There is an overall emphasis on group working that reflects industry practice in game development. Work related progression is the focus of two modules with the aim of developing a professional identity and portfolio of game design and development assets. Enterprise is at the centre of one module to instil an ethos of wider understanding of the nature of starting and running a small games development studio.

Within Game Programming, the students have the opportunity to work with multiple disciplines to create and realise their game ideas. As the Games Programmers they will work alongside Artists and Developers to develop and work on as a team a group game. With games being such a diverse and collaborative environment the room to introduce sound designers, voice actors, concepts artists is available for students to outsource and work on their games.

Through the use of Game Jams and Group working the course itself will recreate industry practice to ensure that students get a good feeling of team work and game development before they enter the industry.

The institution currently offers games related studies from Level 1 to level 6, this supports students who develop better in a familiar environment with staff they know to achieve their full potential in a supportive environment.

The University has a proactive college business engagement team to provide students with career opportunities. In addition a focus of the programme is the development of a portfolio of game assets and playable game levels that will form the foundation of a varied portfolio and are a valuable resource to demonstrate practical experience to employers.

Strong teaching team with links to the games industry that brings opportunity to students and the provision of real experience of working within the industry is embedded throughout the programme through simulation of practice and a series of guest lectures. In addition we have strong relationships with local games groups including Yorkshire Games Toast, Gam-A-Yo and Game Republic

Students will have an opportunity to develop skills in coding. They will be supported by a member of staff who specialises in this field. Coding may take the form of a dedicated scripting language such as C and C# or by using modular code bases such as Unreal Engine Blueprints, thus being actively supportive of a range of learning styles and teaching strategies where coding is involved.

Stage Outcomes (Undergraduate Awards only)

No.	Programme Outcome	Stage/Level 4(1)
K1	Critically evaluate the relevant theories, concepts and principles applicable to game programming.	Describe, explain and use key concepts and theories relating to game programming.
K2	Understand the role of the practitioner in the specialism of game programming.	Describe and explain the specialist role of game programming within the industry.
K3	Critically analyse appropriate research methodologies to underpin critical thinking.	Analyse research methodologies to support critical thinking.
K4	Understand legal and ethical issues surrounding games.	Identify the legal and ethical issues surrounding games.
No.	Programme Outcome	Stage/Level 4(1)
C1	Apply problem solving and solution-based methodologies to the discipline of game programming.	Is able to use problem solving and solution-based methodologies to game programming.
C2	Evaluate and design, game-based systems using appropriate theories and techniques relevant to the discipline.	Recognise and create game-based systems based on appropriate theories and techniques.
C3	Apply appropriate practices and tools for the design and implementation of game-based features.	Is able to use tools and practices to aid in the design and implementation of game-based features.
C4	Employ balanced and logical arguments to critically explore programming and it used within games.	Justify balanced and logical arguments to explore game programming practice.
No.	Programme Outcome	Stage/Level 4(1)
P1	Able to act with increasing autonomy with reduced need for supervision.	Act with limited autonomy with reduced need for supervision and direction.
P2	Apply a range of creative and technical skills in the creation of scripts and systems for use within a game.	Demonstrate a range of creative and practical skills relating to the creation of scripts and systems for use within a game.
P3	Analyse and employ software tools relevant to context.	Utilise software tools relevant to the context.
P4	Build functioning and robust game ready systems.	Create function game ready systems.
No.	Programme Outcome	Stage/Level 4(1)

T1	Work effectively as individuals and in groups.	Can work as an individual and in a group.
T2	Use a range of specialist software appropriate to the discipline.	Use a range of appropriate software.
T3	Increasingly utilise a range of academic skills to report and communicate findings effectively.	Select and use a range of communication methods
T4	Develop practical and professional skills that match career aspirations.	Identify and articulate personal skills, abilities, interests and relate these to career goals.

Key: **K** = Knowledge and Understanding **C** = Cognitive and Intellectual **P** = Practical Professional **T** = Key Transferable [*see Section 16 programme specification*]

Map of Outcomes to Modules

Outcome Key															
Module Titles	K1	K2	K3	K4	C1	C2	C3	C4	P1	P2	P3	P4	T1	T2	T3	T4
Level 4																
Project 1		/	/			/				/		/	/	/		
Principles of Gameplay	/			/			/		/				/		/	
Professional Development		/	/	/	/										/	/
Game Engine Utilisation					/	/		/	/		/	/				
Principles of Programming	/						/	/		/	/			/		/
Level 5																
Project 2		/	/							/		/	/			/
Employability Skills		/		/									/		/	/
Game Engine Development					/	/		/	/					/		
Advanced Games Programming	/		/			/	/			/						
Introduction to AI	/						/	/			/	/		/		
Emerging Technologies				/	/				/		/				/	

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Map of Teaching and Learning Methods

Level 4

Module Titles	Methods								
	Lectures	Student led/ interactive/ shared learning seminars	Case Studies	Skills workshops	Practical (design and production sessions)	Group activities	Guest speakers	Independent / E Learning/ On-line forums	(insert other)
Game Engine Utilisation	✔	✔		✔	✔			✔	
Principles of Gameplay	✔	✔		✔	✔			✔	
Principles of Programming	✔	✔	✔				✔	✔	
Professional Development	✔	✔	✔	✔			✔	✔	
Project 1	✔			✔	✔	✔		✔	

Level 5

Module Titles	Methods								
	Lectures	Student led/ interactive/ shared learning seminars	Case Studies	Skills workshops	Practical (design and production sessions)	Group activities	Guest speakers	Independent / E Learning/ On-line forums	(insert other)
Emerging Technologies	✔	✔	✔				✔	✔	
Employability Skills	✔	✔		✔	✔			✔	
Game Engine Development	✔	✔		✔	✔		✔	✔	
Introduction to AI	✔			✔	✔			✔	
Project 2	✔		✔	✔	✔	✔		✔	
Advanced Games Programming	✔	✔		✔	✔			✔	

Map of Assessment Methods

Level 4

Methods										
Module Titles	Game Level	Code Breakdown	Retro Game	Reflective Essay	Game Deconstruction	Pitch Document	Presentation	Evaluative Response	Game level	Reflection
Game Engine Utilisation	3200 Words Week 25	2800 Words Week 30								
Principles of Game programming			1400 Words Week 12	1600 Words Week 15						
Principles of Gameplay					1800 Words Week 20	1200 Words Week 26				
Professional Development							1400 Words Week 8	1600 Words Week 13		
Project 1									2000 Words Week 26	1000 Words Week 29

Level 5

Methods										
Module Titles	Case Study	Interview and Pitch	Game Level	Code Breakdown	Project Creation	Technological Breakdown	Game Level	Reflection	Practical	Report
Employability Skills	1600 Words Week 19	2400 Words Week 24								
Game Engine Development			2400 Words Week 26	1600 Words Week 27						
Emerging Technologies					2400 Words Week 12	1600 Words Week 15				
Project 2							2800 Words Week 29	1200 Words Week 30		
Introduction to AI									2400 Words Week 21	1600 Words Week 28
Advanced Games Programming			2400 Words Week 12					1600 Words Week 15		