Course Outline (Higher Education)

Institute / School: Institute of Innovation, Science & Sustainability

Course Title: GAME DEVELOPMENT FUNDAMENTALS

Course ID: ITECH2001

Credit Points: 15.00

Prerequisite(s): (ITECH1101)

Co-requisite(s): Nil

Exclusion(s): (GPSIT2001)

ASCED: 020103

Description of the Course:

This course introduces you to Games development, emphasising a mix of creative content design, development, and technical specialisation. You will gain an understanding of the Games industry from its conception through to current trends. Initially, you will study the lifecycle of games development, focusing on story design, character design, game mechanics, and level design, as well as content development including textures and interface, 3D modelling, game development, and programming. You will learn event driven programming through triggers and updates in a games development environment.

Grade Scheme: Graded (HD, D, C, P, MF, F, XF)

Work Experience:

No work experience: Student is not undertaking work experience in industry.

Does Recognition of Prior Learning apply to this course? No

Placement Component: No

Supplementary Assessment: Yes

Where supplementary assessment is available a student must have failed overall in the course but gained a final mark of 45 per cent or above and submitted all major assessment tasks.

Program Level:

Level of course in Program	AQF Level of Program					
	5	6	7	8	9	10
Introductory						
Intermediate			✔			
Advanced						

Learning Outcomes:

Knowledge:

K1. Describe the games industry, technologies and cultures;

K2. Discuss games design and development methodologies;

K3. Identify and explain the appropriate and correct syntax and programming constructs for different game development requirements.

Skills:

S1. Select and apply appropriate games design and development approaches to align with industry needs;

S2. Design and develop a range of art and programming assets, implementing aesthetics and logic into a game project;

S3. Analyse, design, implement and test game concepts using a games engine and programming constructs;

Application of knowledge and skills:

A1. Utilise appropriate software packages to design, build and program game prototypes and assets that align with user experience and project expectations;

Course Content:

Topics may include:

- Definitions, characteristics, and mechanics of games;
- Uses and applications of games related skills and practice;
- Delivery platforms for games;
- 2D and 3D asset development;
- Game character design;
- Games story development;
- Game level design;
- Games design and development processes
- Current trends and developments in games;

- Programming constructs such as methods, basic Object Oriented Programming, event driven programming;
- Implementing object and character behaviours;
- Identification and utilisation of programming libraries;
- Testing and debugging code syntax and game logic;
- Documentation of code

FEDTASKS

Federation University Federation recognises that students require key transferable employability skills to prepare them for their future workplace and society. FEDTASKS (**T**ransferable **A**ttributes **S**kills and **K**nowledge) provide a targeted focus on five key transferable Attributes, Skills, and Knowledge that are be embedded within curriculum, developed gradually towards successful measures and interlinked with cross-discipline and Co-operative Learning opportunities. *One or more FEDTASK, transferable Attributes, Skills or Knowledge must be evident in the specified learning outcomes and assessment for each FedUni course, and all must be directly assessed in each program.*

FEDTASK attribute and descriptor		**Development and acquisition of FEDTASKS in the course**	
		Learning Outcomes (KSA)	**Assessment task (AT#)**
FEDTASK 1 Interpersonal	Students will demonstrate the ability to effectively communicate, interact and work with others both individually and in groups. Students will be required to display skills in-person and/or online in: • Using effective verbal and non-verbal communication • Listening for meaning and influencing via active listening • Showing empathy for others • Negotiating and demonstrating conflict resolution skills • Working respectfully in cross-cultural and diverse teams.	Not applicable	Not applicable
FEDTASK 2 Leadership	Students will demonstrate the ability to apply professional skills and behaviours in leading others. Students will be required to display skills in: • Creating a collegial environment • Showing self -awareness and the ability to self-reflect • Inspiring and convincing others • Making informed decisions • Displaying initiative	Not applicable	Not applicable
FEDTASK 3 Critical Thinking and Creativity	Students will demonstrate an ability to work in complexity and ambiguity using the imagination to create new ideas. Students will be required to display skills in: • Reflecting critically • Evaluating ideas, concepts and information • Considering alternative perspectives to refine ideas • Challenging conventional thinking to clarify concepts • Forming creative solutions in problem solving	K1, K2, K3, S1, S2, S3, A1	AT1, AT2

FEDTASK attribute and descriptor		Development and acquisition of FEDTASKS in the course	
		Learning Outcomes (KSA)	Assessment task (AT#)
FEDTASK 4 Digital Literacy	Students will demonstrate the ability to work fluently across a range of tools, platforms and applications to achieve a range of tasks. Students will be required to display skills in: • Finding, evaluating, managing, curating, organising and sharing digital information • Collating, managing, accessing and using digital data securely • Receiving and responding to messages in a range of digital media • Contributing actively to digital teams and working groups • Participating in and benefiting from digital learning opportunities	K2, S1, S2, S3, A1	AT1
FEDTASK 5 Sustainable and Ethical Mindset	Students will demonstrate the ability to consider and assess the consequences and impact of ideas and actions in enacting ethical and sustainable decisions. Students will be required to display skills in: • Making informed judgments that consider the impact of devising solutions in global economic environmental and societal contexts • Committing to social responsibility as a professional and a citizen • Evaluating ethical, socially responsible and/or sustainable challenges and generating and articulating responses • Embracing lifelong, life-wide and life-deep learning to be open to diverse others • Implementing required actions to foster sustainability in their professional and personal life.	Not applicable	Not applicable

Learning Task and Assessment:

Assessment for this course will be based on a number of tasks including practical assignments, laboratory exercises covering the creation and editing of multimedia assets, documentation and code implementation, as well as an end of semester examination covering theoretical aspects of the course.

Learning Outcomes Assessed	Assessment Tasks	Assessment Type	Weighting
K2, K3, S1, S2, S3, A1	Theoretical and practical demonstrations of design and technical skills in game production; including pitching, planning and creating functional prototypes.	Assignments	60% - 80%
K1, K2, K3, S1	Tests and/or examinations covering a range of taught game theory, design, development and programming topics.	Tests &/or examinations	20% - 40%

Alignment to the Minimum Co-Operative Standards (MiCS)

The Minimum Co-Operative Standards (MiCS) are an integral part of the Co-Operative University Model. Seven criteria inform the MiCS alignment at a program level. Although courses must undertake MiCS mapping, there is NO expectation that courses will meet all seven criteria. The criteria are as follows:

1. Co-design with industry and students
2. Co-develop with industry and students
3. Co-deliver with industry

4. FedTASK alignment
5. Workplace learning and career preparation
6. Authentic assessment
7. Industry-link/Industry facing experience

MiCS program level reporting highlights how each program embraces the principals and practices associated with the Co-Operative Model. Evidence of program alignment with the MiCS, can be captured in the Program Modification Form.

MICS Mapping has been undertaken for this course No

Date:

Adopted Reference Style:

APA

Refer to the library website for more information

Fed Cite - referencing tool