Prifysgol **Wrecsam**
Wrexham University

Module specification

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Module Code	CMT544
Module Title	Audio Design and Implementation for Games
Level	5
Credit value	20
Faculty	FACE
HECoS Code	100443 Media Production
Cost Code	GACT
Pre-requisite module	NA

Programmes in which module to be offered

Programme title	Core/Optional/Standalone
BA (Hons) Music and Sound Production	Core

Breakdown of module hours

Learning and teaching hours	30 hrs
Placement tutor support hours	0 hrs
Supervised learning hours e.g. practical classes, workshops	0 hrs
Project supervision hours	0 hrs
Active learning and teaching hours total	30 hrs
Placement hours	0 hrs
Guided independent study hours	170 hrs
Module duration (Total hours)	200 hrs

Module aims

This Module will explore key approaches to the creation and implementation of interactive audio for games. These will include the development of DAW based sound design skills; the development of Middleware skills, for example the use of FMod or WWise; and will help students to development an emerging awareness of how sound can be implemented through the latter and the context of key game development engines such as, for example, Unreal Engine.

Module Learning Outcomes

At the end of this module, students will be able to:

1	Identify key principles and techniques of interactive sound design creation
2	Demonstrate effective use of game audio implementation workflows
3	Demonstrate effective management of game audio projects and tasks.
4	Critically evaluate workflows for game audio design and implementation.

Assessment requirements.

1. **Portfolio:** Students will complete a sound design task that includes creating and replacing the following elements of a game studio production including for example, interactive sound design; and interactive loop based musical content. Students will develop their work in response to a provided gaming stimulus that they will provide audio content for. The work will demonstrate a consideration of how materials can be implemented into a gaming engine.

2. **Presentation:** Students will present a reflective account of how they responded to the portfolio aspect of the module submission. The presentation materials will include reference to relevant quality sources as support and justification of their approach.

Assessment number	Learning Outcomes to be met	Type of assessment	Duration/Word Count	Weighting (%)	Alternative assessment, if applicable
1	1, 2, 3	Portfolio	Circa 10 mins	70%	N/A
2	4	Presentation	10 minutes	30%	N/A

Derogations

None.

Learning and Teaching Strategies

The Active Learning framework (ALF) embraces accessible, engaging and flexible approaches to learning, teaching and assessment in order that students are afforded the very best opportunities to engage actively with their learning.

- Flexible, innovative, relevant and accessible assessment and feedback practices that optimise student engagement and achievement within a healthy learning environment;

- An approach to research informed-teaching that champions active and engaged inquiry and curiosity through useful, active, applied research and scholarship.

The module will be delivered to engage with ALF. The ALF model will be used to deliver asynchronous and synchronous lectures and content.

Instruction and learning are delivered through various methods, including lectures and follow on practical workshops. Many classes are exercise-based, promoting active student engagement in their learning process.

One-on-one tutorial consultations will support student learning and also support students in meeting the assessment requirements.

Welsh Elements

In collaboration with the University's Welsh Language Team, tutorial support and also assessment submission will be available through the Welsh Language should students elect to do so.

Indicative Syllabus Outline
- Sound FX
- Interactive sound design
- Dialogue design for game
- Interactive loop based musical design
- Audio middleware
- An introduction to gaming engines for the purpose of audio implementation
- Critical evaluative skills for continued professional development

Indicative Bibliography:

Essential Reads

Sinclair, J-L. (2021), *Principles of Game Audio and Sound Design. Sound Design and Audio Implementation for Interactive and Immersive Media*. Routledge.

Other indicative reading

Avid (2021). *Pro Tools For Game Audio (PT130) – EBOOK – EBOOK*. Avid.

Dolling, L. (2024), *The Game Dev Handbook: Programming Games Across Engines and Platforms.* Independently published.

FMod Website. https://www.fmod.com/learn

WWise – Audiokinetic website: https://www.audiokinetic.com/en/learning

Unreal Engine Website: https://dev.epicgames.com/community/unreal-engine/learning

Sound on Sound –Periodical / Website http://www.soundonsound.com/

Administrative Information

For office use only	
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Date and details of revision	
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