Unit Title	Music and Sound Design for Games
FHEQ Level	UG 2 – L5
Unit Code	MSD18205
Credit Value	30
Unit Type	Subject – Joint delivery Music and Sound students

Learning Hours

Staff – Student Contact Hours		Independent Study Hours	
Classes	60	Independent Study	150
Supervised access to resources	15	Preparation for Assessment	20
		Unsupervised Access to Resources	55
Total			**300**

Unit Description

Creating sound and music for games presents the composer or sound designer with a fundamental challenge: creating sound and music that is non-linear and interactive, and that is capable of adapting to support a narrative that can change in response to user input. This approach requires a new mind-set in the ability to think of sound and music as an *interactive system*, as opposed to the linear timeline of traditional media, such as film.

The games industry is a rapidly developing and growing sector. The rise of indie games developers has fundamentally changed the landscape of conventional gaming; successful games can be made on smaller budgets, yet still co-exist on the same distribution platforms as 'triple A' games that have significantly larger development budgets. Alongside conventional games, there are also applications that use the same technology to create interactive experiences with an alternative focus, for example, in-car sound design for the automotive industry to enhance the user experience, or applications designed for training purposes or therapy.

This unit aims to provide students with the technical skillset required for work in the games industry, alongside an understanding of the core approach to creative work in the sector. Alongside the technical and creative approaches, a further emphasis is placed on understanding how sound and music supports and enables game design - crucial to developing immersive interactive experiences.

The Five Principles underpin the Mindsets and Skillsets Manifesto and are the foundation upon which all course curriculum frameworks and unit specifications are based. The relevant following principles have been mapped against the Learning Outcomes relevant to each course unit and at each level. 1. Cultivate: Where the individual thrives. 2. Collaborate: where disciplines evolve. 3. Integrate: where education engages industry. 4. Advocate where purpose meets practice. 5. Originate: where creativity meets technology.

Unit Indicative Content

The unit is designed to provide students with the skills needed to work at all levels of the industry, from small indie developers to large studios. This is achieved by introducing students to a range of creative approaches, alongside a flexible mix of industry standard tools for implementing game audio, appropriate to all levels of industry.

Creating successful sound and music for games requires a combination of contextual awareness, creative problem solving and technical understanding. The unit looks to provide insight into these core areas separately, before bringing them together through practical work in the module. This provides opportunities for students to show they can synthesise diverse knowledge from the seminars and workshops, before applying this understanding to their practice based projects.

Indicative Content:

Games Industry Context:
- The history of game development
- How sound and music integrate into games
- Analysing game soundtracks and their effectiveness
- Using sound to support interactive narratives

Creative Approaches to Game Audio:
- Designing sound assets for games
- Composing music for interactive applications
- Recording source material for sound design
- Synthesis and sampling
- Understanding genre conventions

Technical Implementation
- How to implement sound and music into a game engine
- Using audio middleware
- How to increase variation through controlled randomisation
- Positioning sound within 2D and 3D virtual environments
- Understanding game events and parameters
- Implementing vertical music transitions (re-orchestration)
- Implementing horizontal music transitions (re-sequencing)
- How to implement stingers
- Creating evolving atmospheres for virtual worlds

Unit Aims

- To provide insight into the role of sound designer and composer within the games industry

- To enable students to create sound and music assets that can be implemented into interactive applications

- To provide students with the necessary technical skills to work as part of a team, producing a small, medium or large scale game

- To enable students to develop a critical awareness of how sound can support interactive narratives

Unit Learning Outcomes

LO 1 Research
Analyse and interpret information gathering techniques using a wide range of sources, providing visual, contextual and industry case-study research as appropriate.

LO 2 Concept
Analyse research materials leading to the generation of the ideation and concepts that inform and lead to project development.

LO 3 Development
Analyse a range of potential pathways that result in appropriate solutions, informed by an understanding of the principles of the creative process.

LO 5 Presentation and Storytelling
Select and employ effective methods of presentation and communication of projects in considering the audience/client and the purpose of the work, whether in visual, oral or written form.

Learning and Teaching Methods

The unit is delivered through a combination of seminars and workshops that focus on specific areas of the unit content. Through these sessions students can develop and explore the techniques that will be instrumental in delivering the assessable components of the unit. The teaching aims to provide students with sufficient knowledge of the audio implementation toolset to realise their own creative ideas and solve implementation issues themselves. The process of active enquiry is key to this approach, enabling an understanding of how, together, the combination of creativity and technical knowledge form the strongest skillset.

Alongside the practical work, students are required to keep a blog that details their creative approach to the project, time planning and technical choices in the final sound implementation. The blog must show evidence of research and be fully referenced with a bibliography. Engagement with resources outside the reading list is encouraged, especially from industry blogs or communities of practice online.

Within the games industry it is common for audio professionals to work across both sound design and music composition. For this reason, the unit aims to provide all students with a base knowledge of both skillsets. The ability to work collaboratively is also key to success, so the unit promotes both individual and small group working.

- Briefings

- Lectures

- Project work

- Workshops

- Group work

- Online learning

- Group presentations and reviews
- Self-directed independent study

Assessment methods and tasks

Formative peer assessment is structured into the unit.
Summative Assessment:
1. A blog that details coursework progress and application of individual research through the unit.
2. An individual project that requires students to create sound and music for implementation into a game engine.
3. A project in small groups or pairs where students choose to either focus on sound design or composing interactive music, implementing these into an audio middleware project.

Assessment tasks	Weighting (%) *(one grade or multi-grade unit)*
1. Practical Work	80%
2. Critical Reflection	20%

Indicative Assessment Criteria

- IAC1: Construct interactive sound and music systems that provide non-linear support to game narrative (LO2, LO3).
- IAC2: Develop sound and music that is suitable for game in relation to genre and user expectation (LO1, LO2, LO5).
- IAC3: Manage a complex implementation task, producing an organised project that another team member could understand and use (LO3).
- IAC4: Effectively document creative and technical methodology to show evidence of research and its application, experimentation and structured process (LO1, LO2).
- Integrate sound and music together to form a balanced mix, making use of interactive mixing techniques (LO3, LO5).

Essential Reading list

1. Brandon, A. (2005) *Audio for Games: Planning, Process and Production*. New Riders.
2. Childs, G. (2006) *Creating Music and Sound for Games*. Course Technology Inc.

3. Collins, K. (2008) *From Pac-Man to Pop Music: Interactive Audio in Games and New Media*. Ashgate.
4. Collins, K. (2008) *Game Sound: An Introduction to the History, Theory, and Practice of Video Game Music and Sound Design*. MIT Press.
5. Collins, K., (2013) *Playing with Sound, A Theory of Interacting with Sound and Music in Video Games*. MIT Press.
6. Farnell, A., (2010) *Designing Sound*. Cambridge, Mass.: MIT Press.
7. Marks, A. (2008). *The Complete Guide to Game Audio: For Composers, Musicians, Sound Designers, Game Developers (Gama Network Series)*. Focal Press.
8. Phillips, W. (2014) *A Composer's Guide to Game Music*. MIT Press
9. Stevens, R. and Raybould, D. (2011) *The Game Audio Tutorial, A Practical Guide To Sound and Music for Interactive Games*. Burlington, MA: Focal Press.