



Unit Title	Sound Interfaces
FHEQ Level	Level 5
Unit Code	EUSE181
Credit Value	15
Unit Type	Elective

Learning Hours			
Staff – Student Contact Hours		Independent Study Hours	
Classes	37.5	Independent Study	60
Supervised access to resources		Preparation for Assessment	30
		Unsupervised Access to Resources	22.5
Total			150

Unit Description

The history of electronic and ‘new music’ over the last century features many examples of new approaches to interaction and performance, with practitioners designing their own instruments, or ‘augmenting’ traditional instrument designs, in an attempt to make live performance of their work more expressive or improvisational. In addition, many consumer products incorporate sound in an interactive context, and installation experiences in galleries and museums make use of sound to enhance the visitor experience.

This unit introduces some of the fundamental aspects behind sound design, hardware interaction and audio environments, leveraging techniques and experience of visual interface development and exploring how that translates into the sonic realm. You will be introduced to contemporary thinking on creative process with sound as a digital medium. (Originate Principle)

Various audio-enabled hardware platforms and software systems are examined and utilised, with a view to enabling you to explore possible territories of sound design, interaction and installation, and look into the development of new, experimental audio-based products and user experiences. (Advocate Principle)

Musical knowledge or music-production experience is not assumed at the start of the unit.

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 Principles as stated below have been mapped against the Learning Outcomes relevant to each course unit and at each level (see Programme Specifications for full description of the Five Principles):

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 / creativity meets technology.

Unit Indicative Content

- An awareness of the history and culture of new sound and instrument design
- Practical experience of working with audio software to design and process sound and music
- Construction and demonstration of interactive audio systems
- Practical experience of working with simple electronic hardware to generate audio in specific contexts and settings
- Some reflective critical practice of user interface/experience design in relation to the generation of sound

Unit Aims

Gain an awareness of historical and contemporary aspects of audio design and processing in musical and interactive contexts.

Become familiar with the basic aspects of digital audio.

Gain an understanding of software and hardware systems that manipulate sound.

Explore concepts of interaction involving sound in a variety of contexts.

Gain experience communicating audio design information to a professional audience.

Unit Learning Outcomes

LO 2 Concept/Ideation

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

Related Principle: ORIGINATE

LO 5 Presentation /Storytelling For Influence

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.

Related Principle: ADVOCATE

LO 6 Critical and creative mindsets

Analyse conceptions of diverse practice and use this to inform a course of action.

Related Principle: ORIGINATE

Learning and Teaching Methods

Workshops and lectures will provide support and guidance in learning the principles of digital audio processing and hardware interface design. Feedback will be provided throughout the unit to provide strategies to overcome obstacles and the inherent challenges of the specific aims of the unit. Formative feedback is provided at the midpoint

of the unit and at the end of the unit summative assessment will be provided on the required assessment evidence for the unit.

Assessment methods and tasks

More detailed assessment tasks will be specified in the brief.

Assessment tasks	Weighting (%) (one grade or multi-grade unit)
Portfolio of project work with supporting models and digital material: <ul style="list-style-type: none"> Working physical prototype of a sound interface/instrument Supporting documentation including user instructions, design principles and background research 	Unit assessed holistically (100% of unit) (pass/fail)

Indicative Assessment Criteria

Assessment criteria are the basis on which the judgment of the adequacy of the work is made. A more detailed assessment criteria will be specified in the brief.

- Show an awareness of historical and contemporary aspects of audio design and processing in musical and interactive contexts (L05, L06)
- Show a basic understanding of digital audio (L05, L06)
- Show an understanding of software and hardware systems which manipulate sound (L05, L06)
- Demonstrate interactive concepts involving sound in a variety of contexts (L02, L05)
- Show ability to communicate audio design information to a professional audience (L05)

Essential Reading list

1. Bjørn, Kim (2017) Push Turn Move: Interface Design in Electronic Music, unknown: Bbooks Media
2. Cook, Mike (2015) *Arduino music and audio projects*, Berkeley: APress
3. Hardware: The Bela Platform <https://bela.io/>
4. Podcast: Art + Music + Technology <http://artmusictech.libsyn.com/>
5. Software: Max <https://cycling74.com/products/max>