

2024 / 25

School of Science and Computing

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Module Descriptor

Audio Production (Computing and Mathematics)

Audio Production (A06882)

Short Title: Audio Production
Department: Computing and Mathematics
Credits: 5

Level: Intermediate

Description of Module / Aims

This module teaches the fundamentals of sound, sound recording and multi-track sound editing using timeline based tools. A large emphasis is placed on practical work - recording, editing, and mixing. Audio productions are created for use in media applications & trans-coded for delivery on multiple platforms.

Programmes

stage/semester/status		
COMP-0592	BSc (Hons) in Creative Computing (WD_KCRCO_B)	2 / 3 / M
COMP-0592	BSc in Multimedia Applications Development (WD_KMULA_D)	2 / 3 / M

Indicative Content

- Sound Theory: Characteristics of sound (amplitude, frequency, timbre); Harmonic series; Basic music theory; Music appreciation
- Voiceover Scripting
- Digital Audio: Introduction to analogue and digital recording; DAWs; Audio editing; Multi-tracking (including use of MIDI sequences); Loop based composition; Synchronising with visuals; DSP effects; Time stretch and pitch shifting; Beat syncing; Beat grids; Warping; Audio file types & compression (uncompressed v compressed, Lossy v Lossless)
- Publishing Audio
- Copyright
- Sample Projects: Commercial advertisement, Infomercial, Podcast, Beat matched music promo, Music mashup
- Essential Materials: Students are required to have studio reference monitor headphones (e.g. Samson SR-850) and professional media web hosting

Learning Outcomes

On successful completion of this module, a student will be able to:

1. Prepare a script, and record, edit, mix, and publish it as a sound production for multi-platform delivery.
2. Create, produce and publish sequences of multi-layered music and sound.
3. Demonstrate a theoretical understanding of the fundamentals of sound and professional sound editing, recording & publishing.

Learning and Teaching Methods

- This module will be characterised by student participation in both formal theoretical and practical/studio classroom activities in which students learn theoretical concepts and apply them immediately using dedicated hardware and software.
- Self-directed learning.
- Studio Classes will be delivered in two 2-hour blocks.
- Computer based assessment.
- Innovative pedagogical techniques (e.g. video, LMS, peer review, discussion forum, collaborative group work, flipped classroom, dynamic assessment, event based learning).
- Apple mac computer lab with relevant hardware & software (kept up to date at least annually e.g. GarageBand, Adobe Audition, Ableton Live).
- Accessible, professional sound proofed recording studios with professional microphones and audio workstations (Vibe FM studios).

Learning Modes

Learning Type	F/T Hours	P/T Hours
Workshop	48	
Independent Learning	87	

Assessment Methods

	Weighting	Outcomes Assessed
Continuous Assessment	100%	
Portfolio	60%	1,2
In-Class Assessment	40%	3

Assessment Criteria

<40%: Inability to identify and describe key concepts of the knowledge domain. Inability to meet ALL the learning outcomes.

40%–49%: Ability to identify and describe key concepts of the knowledge domain. Meets ALL the learning outcomes.

50%–59%: Ability to discuss key concepts clearly and interpret their relative importance in the knowledge domain.

60%–69%: Ability to apply solutions to problems in a range of relevant contexts. An ability to employ a comprehensive range of specialised skills.

70%–100%: All the above to an excellent level with the ability to analyse and design solutions to a high standard for a range of complex or unseen problems.

Supplementary Material(s)

- "Ableton Live Youtube Channel." <https://www.youtube.com/user/AbletonInc>
- "Adobe TV - Adobe Audition." <http://tv.adobe.com/product/audition/>
- "GarageBand Help." <http://help.apple.com/garageband/mac/10.1/>
- "MusicTheory.net." <http://www.musictheory.net/>
- "lynda.com." www.lynda.com
- Ableton, Inc. *Ableton Live 9 User Manual*. DE: Ableton, 2015.
- Kirn, P. *Real World Digital Audio*. CA: Thomson, 2006.

Requested Resources

- Equipment: MAC PCs
- Computer Lab: Multimedia Lab