Module specification

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Module Code	CMT703
Module Title	Digital Media Techniques (Music)
Level	7
Credit value	30
Faculty	FAST
HECoS Code	100221
Cost Code	GACT

Programmes in which module to be offered

Programme title	Is the module core or option for this programme
MA Creative Media Production (Music)	Core to the MA Creative Media Production (Music) pathway only

Pre-requisites

N/A

Breakdown of module hours

Learning and teaching hours	24 hrs
Placement tutor support	0 hrs
Supervised learning e.g., practical classes, workshops	7 hrs
Project supervision (level 6 projects and dissertation modules only)	0 hrs
Total active learning and teaching hours	31 hrs
Placement / work-based learning	0 hrs
Guided independent study	169 hrs
Module duration (total hours)	300 hrs

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Initial approval date	25th July 2022
With effect from date	January 2023

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Date and details of revision	
Version number	1

Module aims

This Module explores advanced Digital Music Processing and the creation and application of algorithms for Music for Digital Media production.

This module will enhance and develop the skill set and concepts of using the computer as a generative tool to enable computer music programming. The student will develop a knowledge of musical structures created by computer applications and will be capable of applying music computation software. The student will investigate digital music production and gain an enhanced ability to programme modern music developments.

Module Learning Outcomes - at the end of this module, students will be able to:

1	Critically analyse approaches to Digital Signal Processing (DSP) for music that use computer programming techniques
2	Select and utilise advanced digital signal processing strategies that can support the realisation of digital media production output in the area of music
3	Employ systematic visual coding strategies to create tools for the digital signal processing of music in order to support digital media production activities
4	Argue and debate specialist digital signal processing techniques and strategies in the context of music for digital media production

Assessment

Indicative Assessment Tasks:
Students will use advanced IT skills to create at least 3 digital music processing tools that will support music production for a digital media activity. The DSP tools could include standard music DSP Plugins, or DSP solutions for music structuring and sequencing activities such as temperament and tonal projects.

Examples of Digital Media projects the tools might support include sound processing for an interactive project, sound processing for a fixed media production or sound processing for live media production.

Students will be expected to submit the tools they have created as supporting materials to the module assessment process but will be assessed via an oral presentation. In the presentation students will be required to demonstrate in the context of their chosen media activity.

The presentation will be circa 20 minutes and will allow for students to give a thorough demonstration and explanation of their response to the assessment brief.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)
1	All	Presentation	100

Derogations

None

Learning and Teaching Strategies

Through a series of online and face to face lectures and seminars, students will develop knowledge in music manipulation and processing. This will be applied to the application of music for Media artefacts. Music Processing techniques will be taught through direct and guided engagement with IT coding platforms for music and by exploring digital techniques for processes such as the harmonic, dynamic, frequency related manipulation of music. The initial part of the lecture series will be co-taught with Sound and Screen pathway students and will afford students the opportunity to learn something of each other's practice, and support future collaborative dialogue. The lecture series will be supported with additional practical support workshops and one to one supervision to support the development of student work.

The module will support an Active Learning Framework (ALF) aligned student experience through the incorporation of a range of synchronous and asynchronous teaching and learning activities and associated materials.

Indicative Syllabus Outline

Review or introduction for the use of MAXMSP Jitter Gem and its application to music DSP

Development of music manipulation interfaces.

Improvisation as a learned technique.

Computer manipulation of frequency relationships within music modes

Music with aleatoric elements introduced by the composer or software

Music synthesis

Applying Mandelbrot techniques to production of music elements

Indicative Bibliography:

Please note the essential reads and other indicative reading are subject to annual review and update.

Essential Reads
Cipriani, A. and Giri, M (2019), Electronic *Music and Sound Design - Theory and Practice with Max 8 - Volume 1.* 4th Edition. Rome: Contemponet.

Other indicative reading
McGuire, S. and Van der Rest, N. (2016), *The musical art of Synthesis.* Taylor & Francis.

Miranda, E. (2001), *Composing Music with Computers*. Focal Press.

www.Cycling74.com

Roads, C. (1996), *The Computer Music Tutorial.* London: MIT Press.

Employability skills – the Glyndŵr Graduate

Each module and programme is designed to cover core Glyndŵr Graduate Attributes with the aim that each Graduate will leave Glyndŵr having achieved key employability skills as part of their study. The following attributes will be covered within this module either through the content or as part of the assessment. The programme is designed to cover all attributes and each module may cover different areas.

Core Attributes
Engaged
Creative
Ethical

Key Attitudes
Commitment
Curiosity
Resilience
Adaptability

Practical Skillsets
Digital Fluency
Critical Thinking
Emotional Intelligence
Communication