University of the West of Scotland

Module Descriptor

Session: 2024/25

Title of Module: Audio Signal Processing			
Code: COMP08009	**SCQF Level: 9 (Scottish Credit and Qualifications Framework)**	**Credit Points: 20**	**ECTS: (European Credit Transfer Scheme)**
School:	School of Computing, Engineering and Physical Sciences		
Module Co-ordinator:	Robert Goldie		

Summary of Module
This module provides a deepening of the students' practical exposure and understanding of audio processing effects within audio and music technology. Students will undertake the research and critical assessment of existing effects and use a visual programming language tool to develop a bespoke effect of their own design. • Introduce the concepts of visual processing languages for the development of audio effects • Develop a deeper understanding of common effects in use within the audio/music industry and expand upon them with additional features • Research and assess existing effects and their GUIs • This module embeds the key "I am UWS" graduate attributes and in particular: Critical Thinking, digital literacy, encourages autonomy and rewards creative innovation.

Module Delivery Method					
Face-To-Face	**Blended**	**Fully Online**	**HybridC**	**Hybrid 0**	**Work-Based Learning**
☐	☒	☐	☐	☐	☐
See Guidance Note for details.					

Campus(es) for Module Delivery

The module will **normally** be offered on the following campuses / or by Distance/Online Learning: (Provided viable student numbers permit) (tick as appropriate)						
Paisley:	Ayr:	Dumfries:	Lanarkshire:	London:	Distance/Online Learning:	Other:
☒	☐	☐	☐	☐	☐	Add name

Term(s) for Module Delivery					
(Provided viable student numbers permit).					
Term 1	☐	Term 2	☒	Term 3	☐

Learning Outcomes: (maximum of 5 statements) **These should take cognisance of the SCQF level descriptors and be at the appropriate level for the module.** At the end of this module the student will be able to:	
L1	Demonstrate a critical understanding of the principal theories, concepts, and terminologies associated with effect design and audio signal processing.
L2	Apply knowledge, skills and understanding using a range of the principle professional skills, techniques and practices associated with audio effect design for sound-design processing
L3	. Demonstrate some originality and creativity in the design and creation of an audio effect
L4	Undertake critical analysis, evaluation and synthesis of ideas and concepts within the area of audio effect software design

Employability Skills and Personal Development Planning (PDP) Skills	
SCQF Headings	During completion of this module, there will be an opportunity to achieve core skills in:
Knowledge and Understanding (K and U)	SCQF Level **9** Knowledge and understanding of techniques for representing, manipulating and analysing audio signals and systems using computer hardware and software.
Practice: Applied Knowledge and Understanding	SCQF Level **9** Applying the above knowledge and understanding to the design, creation and testing of audio effect prototype plug in software using personal computer hardware and software.
Generic Cognitive skills	SCQF Level **9**

	Apply creative practices within a technical environment. Use a range of approaches to the construction of musical output. Be aware of style and aesthetic considerations in musical contexts. Interpret and reinforce visual information with audio.
Communication, ICT and Numeracy Skills	SCQF Level **9** Applying the above knowledge and understanding to the design, creation and testing of audio effect prototype plug in software using personal computer hardware and software.
Autonomy, Accountability and Working with others	SCQF Level **9** Development of a reflective logical engineering approach to problem solving. Integrating relevant knowledge from a variety of sources. Consider usability in the organization of graphic components of a software interface.

Pre-requisites:	Before undertaking this module the student should have undertaken the following:	
	Module Code: COMP08064	**Module Title:** Music Recording & Production
	Other:	Equivalent at appropriate Higher National level.
Co-requisites	**Module Code:**	**Module Title:**

*Indicates that module descriptor is not published.

Learning and Teaching	
In line with current learning and teaching principles, a 20-credit module includes 200 learning hours, normally including a minimum of 36 contact hours and maximum of 48 contact hours.	
Learning Activities During completion of this module, the learning activities undertaken to achieve the module learning outcomes are stated below:	**Student Learning Hours** (Normally totalling 200 hours): (Note: Learning hours include both contact hours and hours spent on other learning activities)
Lecture/Core Content Delivery	12
Tutorial/Synchronous Support Activity	12
Laboratory/Practical Demonstration/Workshop	24

Independent Study	152
	200 Hours Total

Indicative Resources: (eg. Core text, journals, internet access)
The following materials form essential underpinning for the module content and ultimately for the learning outcomes: Access to appropriate software packages and their Help documentation. Access to standard office word processing and spreadsheet packages. Cipriani, A and Maurizio Giri (2019). *Electronic music and sound design : theory and practice with Max 8*. Volume 1 Rome, Italy: Contemponet. Cipriani, A and Maurizio Giri (2019). *Electronic music and sound design : theory and practice with Max 8*. Volume 2 Rome, Italy: Contemponet.
(**N.B. Although reading lists should include current publications, students are advised (particularly for material marked with an asterisk*) to wait until the start of session for confirmation of the most up-to-date material)

Attendance and Engagement Requirements
In line with the Student Attendance and Engagement Procedure: Students are academically engaged if they are regularly attending and participating in timetabled on-campus and online teaching sessions, asynchronous online learning activities, course-related learning resources, and complete assessments and submit these on time.

Equality and Diversity
The University's Equality, Diversity and Human Rights Procedure can be accessed at the following link: UWS Equality, Diversity and Human Rights Code. Please ensure any specific requirements are detailed in this section. Module Co-ordinators should consider the accessibility of their module for groups with protected characteristics..
(N.B. Every effort will be made by the University to accommodate any equality and diversity issues brought to the attention of the School)

Supplemental Information

Divisional Programme Board	Computing

Assessment Results (Pass/Fail)	Yes ☐No ☒
School Assessment Board	Creative Computing
Moderator	Graeme Truslove
External Examiner	N. Auricchio
Accreditation Details	This module forms part of the BSc (Hons) Music Technology, which is accredited by JAMES.
Changes/Version Number	2.14

Assessment: (also refer to Assessment Outcomes Grids below)
Assessment 1 – Research and critical analysis of chosen effect field (25%)
Assessment 2 – Planning, design, and development of a complete audio effect and creation of a user-manual (75%)
(N.B. (i) **Assessment Outcomes Grids** for the module (one for each component) can be found below which clearly demonstrate how the learning outcomes of the module will be assessed. (ii) An **indicative schedule** listing approximate times within the academic calendar when assessment is likely to feature will be provided within the Student Module Handbook.)

Assessment Outcome Grids (**See Guidance Note)**

Component 1							
Assessment Type (Footnote B.)	**Learning Outcome (1)**	**Learning Outcome (2)**	**Learning Outcome (3)**	**Learning Outcome (4)**	**Learning Outcome (5)**	**Weighting (%) of Assessment Element**	**Timetabled Contact Hours**
Essay	X			X		25	4

Component 2							
Assessment Type (Footnote B.)	**Learning Outcome (1)**	**Learning Outcome (2)**	**Learning Outcome (3)**	**Learning Outcome (4)**	**Learning Outcome (5)**	**Weighting (%) of Assessment Element**	**Timetabled Contact Hours**
Portfolio of practical work		x	x	X		75	40

	Combined Total for All Components	**100%**	**44 hours**