

Module Descriptor

Title	Immersive Sound			
Session	2025/26	Status		
Code	MUSC09030	SCQF Level	9	
Credit Points	20	ECTS (European Credit Transfer Scheme)		
School	Business and Creative Industries			
Module Co-ordinator	TBC			

Summary of Module

This module will explore immersive audio formats and their associated expanded sonic fields whilst allowing students to build upon traditional surround sound techniques which occur solely in the horizontal plane.

Students will examine both historical, current, and emerging immersive recording and reproduction technologies before planning for the development of their artefacts. The application of recording, mixing and final output in immersive audio formats will be evident throughout the production process combined with evidence of detailed session file management and archiving.

Students will have the option to work with immersive audio in a chosen area of interest. These options include Music Production, Audio Post-Production, and Experimental. Any prior knowledge and skills will be established within their completed artifacts.

Subject areas to include:

- Ambisonic spatial recording and reproduction
- Binaural recording and reproduction
- Fixed channel-based audio
- Object based audio and associated metadata
- Mixing in 3D sound
- Encoding immersive audio formats

Module Delivery Method	On-Campus	1	Hybrid²	Online	9 3		rk -Based earning ⁴
Campuses for	Ayr		Lanarks	hire			Distance
Module Delivery	☐ Dumfries		London		Learr	•	
			Paisley		\boxtimes C	other (s	specify)
					NCL		
Terms for Module	Term 1	\boxtimes	Term 2		Term	1 3	
Delivery							
Long-thin Delivery	Term 1 –		Term 2 –		Term		
over more than one	Term 2		Term 3		Term	1 1	
Term							
Learning Outcomes							

Lear	rning Outcomes
L1	Successfully plan for the organisation and development of immersive audio artefacts
L2	Record, mix, and encode immersive audio deliverables to an industry standard for 2 differing formats
L3	Evaluate the process and effectiveness of the final immersive audio artefacts
L4	
L5	

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	SCQF9			
and U)	Demonstrate and/or work with:			
,	An understanding of the scope and defining features of the subject/discipline/sector, and an integrated knowledge of its main areas and boundaries.			
	A critical understanding of a range of the principles, principal theories, concepts and terminology of the subject/discipline/sector.			
	Knowledge of one or more specialisms that is informed by forefront developments.			
Practice: Applied	SCQF9			
Knowledge and Understanding	Apply knowledge, skills and understanding:			

¹ Where contact hours are synchronous/ live and take place fully on campus. Campus-based learning is focused on providing an interactive learning experience supported by a range of digitally-enabled asynchronous learning opportunities including learning materials, resources, and opportunities provided via the virtual learning environment. On-campus contact hours will be clearly articulated to students.

² The module includes a combination of synchronous/ live on-campus and online learning events. These will be supported by a range of digitally-enabled asynchronous learning opportunities including learning materials, resources, and opportunities provided via the virtual learning environment. On-campus and online contact hours will be clearly articulated to students.

³ Where all learning is solely delivered by web-based or internet-based technologies and the participants can engage in all learning activities through these means. All required contact hours will be clearly articulated to students.

⁴ Learning activities where the main location for the learning experience is in the workplace. All required contact hours, whether online or on campus, will be clearly articulated to students

In using a range of the principal professional skills, techniques, practices and/or materials associated with the subject/discipline/sector. In using a few skills, techniques, practices and/or materials that are specialised and/or advanced. In practising routine methods of enquiry and/or research. To practise in a range of professional level contexts that include a degree of unpredictability. Generic SCQF9 Cognitive skills Undertake critical analysis, evaluation and/or synthesis of ideas, concepts, information and issues in the subject/discipline/sector. Identify and analyse routine professional problems and issues. Draw on a range of sources in making judgements. Communication, SCQF9 ICT and Use a wide range of routine skills and some advanced and specialised **Numeracy Skills** skills in support of established practices in a subject/discipline/ sector, for example: Present or convey, formally and informally, information on standard/mainstream topics in the subject/discipline/sector to a range of audiences. Use a range of ICT applications to support and enhance work. Interpret, use and evaluate numerical and graphical data to achieve goals/targets SCQF9 Autonomy, Accountability Exercise autonomy and initiative in some activities at a and Working with professional level in practice. **Others** Practice in ways that show awareness of own and others' roles and responsibilities. Seeking guidance where appropriate, manage ethical and professional issues in accordance with current professional and ethical

Prerequisites	Module Code	Module Title
	Other	
Co-requisites	Module Code	Module Title

codes of practices.

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.

The module is delivered through a series of lectures, studio-based workshops and tutorial activities focussing on the pre-production, implementation and format output of immersive sound formats.

A range of specialist workshops and lectures will initially focus on capture techniques including Ambisonics and Binaural methods, before focussing on immersive sound formats for mixing, playback and final industry standard deliverables.

Delivery will be facilitated by lecturing staff with a background in immersive sound with further input from industry professionals

Learning Activities During completion of this module, the learning activities undertaken	Student Learning Hours		
to achieve the module learning outcomes are stated below:	(Note: Learning hours include both contact hours and hours spent on other learning activities)		
Lecture / Core Content Delivery	20		
Laboratory / Practical Demonstration / Workshop	16		
Independent Study	164		
Please select			
Please select			
Please select			
TOTAL	200		

Indicative Resources

The following materials form essential underpinning for the module content and ultimately for the learning outcomes:

Zotter F, Mattias F 2019. Ambisonics: A Practical 3D Audio Theory for Recording, Studio Production, Sound Reinforcement, and Virtual Reality. 1st Ed. Springer International Publishing

Kuehnl E 2020. Surround Mixing and Immersive Audio Featuring Dolby Atmos. 1st Ed. Hal Leonard Publishing

Roginska A 2017. Immersive Sound: The Art and Science of Binaural and Multi-Channel Audio. 1st Ed. AES Publishing

Paterson J, Lee H 2021. 3D Audio. 1st Ed. Routledge

Dolby Laboratories 2021. Dolby Atmos Post-Production Learning. [Online]. [Viewed 25 October 2021]. Available from: https://learning.dolby.com/hc/en-us/sections/360010367372-Dolby-Atmos-Post-Production-Learning

(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 <u>Student Attendance and Engagement Procedure</u>, Students are academically engaged if they are regularly attending and participating in timetabled on-

related learning resources, and	d complete assessments and submit these on time.
For the purposes of this modul	e, academic engagement equates to the following:
Equality and Diversity	
	rsity and Human Rights Procedure can be accessed at the biversity and Human Rights Code.
(N.B. Every effort will be made diversity issues brought to the	by the University to accommodate any equality and attention of the School)
Supplemental Information	
Divisional Programme Board	Arts Media
Overall Assessment Results	Pass / Fail Graded
Module Eligible for Compensation	Yes No If this module is eligible for compensation, there may be cases where compensation is not permitted due to programme accreditation requirements. Please check the associated programme specification for details.
School Assessment Board	Arts & Media
Moderator	TBC
External Examiner	TBC
Accreditation Details	
Module Appears in CPD catalogue	☐ Yes ⊠ No
Changes / Version Number	
Assessment (also refer to Asse	essment Outcomes Grids below)
Assessment 1	
Successfully plan for the organi	sation and development of immersive audio artefacts – 10%
Assessment 2	
Record, mix, and encode immer formats – 70%	sive audio deliverables to an industry standard for 2 differing
Assessment 3	
Evaluate the process and effecti	veness of the final immersive audio artefacts – 20%
	Grids for the module (one for each component) can be found e how the learning outcomes of the module will be assessed.
	approximate times within the academic calendar when vill be provided within the Student Module Handbook.)

Component 1

campus and online teaching sessions, asynchronous online learning activities, course-

Assessment Type	LO1	LO2	LO3	LO4	LO5	Weighting of Assessment Element (%)	Timetabled Contact Hours
Essay / Planning						10	6
Component 2							
Assessment Type	LO1	LO2	LO3	LO4	LO5	Weighting of Assessment Element (%)	Timetabled Contact Hours
Studio work / Portfolio of practical work						70	24
Component 3 Assessment Type	LO1	LO2	LO3	LO4	LO5	Weighting of	Timetabled
						Assessment Element (%)	Contact Hours
Review / Critique						20	6
	Com	bined to	tal for a	ll comp	onents	100%	36 hours
Change Control What				Wh	en	Who	