

University of the West of Scotland

Module Descriptor

Session: 2024/25

Title of Module: Sound Reinforcement Systems			
Code: COMP07052	SCQF Level: 7 (Scottish Credit and Qualifications Framework)	Credit Points: 20	ECTS: 10 (European Credit Transfer Scheme)
School:	School of Computing and Physical Sciences		
Module Co-ordinator:	Derek Turner		
Summary of Module			
<p>From presentations and guided reading, students will gain an understanding of the range and type of the components which make up a modern sound reinforcement system. Principles of operation and device specifications will be considered. Audio components will include microphones, analogue and digital interconnections, mixing consoles, signal processing equipment, amplification, and speaker systems.</p> <p>Practical demonstrations of audio signal path from source input to mixing console, processing, and amplification will provide students with the opportunity to practice sound reinforcement equipment connection and operation.</p> <p>All relevant aspects of health and safety associated with live sound, including manual handling, will be discussed, and implemented.</p> <p>Consideration will be given to the acoustic environments in which sound systems operate. This will include an introduction to sound propagation, the properties of sound waves and basic principles of acoustics.</p> <p>Problem Based Learning (PBL) will take place in group work scenarios where the development of cognitive load theory (CLT) will be encouraged.</p> <ul style="list-style-type: none"> This module embeds the key "I am UWS" graduate attributes and in particular: Work Ready: Knowledgeable, Digitally Literate and Problem-solver, Potential Leader Successful: Autonomous, Incisive, and Innovative Work Ready: Effective communicator, Influential and Motivated Professional 			

Module Delivery Method					
Face-To-Face	Blended	Fully Online	HybridC	Hybrid 0	Work-Based Learning
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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:
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Add name

Term(s) for Module Delivery

(Provided viable student numbers permit).

Term 1	Term 2	Term 3
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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 knowledge that is embedded in the main theories, concepts, and principles of acoustics in relation to sound reinforcement.
L2	Demonstrate an overall appreciation of the body of knowledge that constitutes relevant health and safety issues concerning live sound systems.
L3	Use a range of approaches to address defined and routine problems and issues in preparation for mixing a sound reinforced music performance.
L4	Apply knowledge skills and understanding to a routine context through the set-up and usage of a live sound system.

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)	<p>SCQF Level 7</p> <ul style="list-style-type: none"> • Demonstrate a broad knowledge of the nature of waves and basic principles of acoustics. • Demonstrate a broad knowledge of P.A. equipment.
Practice: Applied Knowledge and Understanding	<p>SCQF Level 7</p> <ul style="list-style-type: none"> • Apply acoustic principles to the configuration of P.A systems • Employ safe working practices in a professional environment.

	<ul style="list-style-type: none"> • Practice use of P.A. equipment 	
Generic Cognitive skills	<p>SCQF Level 7</p> <ul style="list-style-type: none"> • Make aesthetic judgements in a technical environment. • Think clearly under pressure in situations which may be unpredictable 	
Communication, ICT and Numeracy Skills	<p>SCQF Level 7</p> <ul style="list-style-type: none"> • Convey complex ideas in well-structured and coherent written format. • Communicate clearly with peers in a live situation. • Deal with numerate aspects of acoustics 	
Autonomy, Accountability and Working with others	<p>SCQF Level 7</p> <ul style="list-style-type: none"> • Work within a small team sharing responsibilities in a live situation. • Work with supervision under pressure of time. • Take account of the safety of self and others at all times in a live situation. 	
Pre-requisites:	Before undertaking this module the student should have undertaken the following:	
	Module Code:	Module Title:
	Other:	
Co-requisites	Module Code:	Module Title:

*Indicates that module descriptor is not published.

Learning and Teaching	
<p>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.</p> <p>This module develops knowledge and practice through video presentations synchronous tutorials and hands-on practice.</p> <p>Students will gain initial experience of working in the context of a music venue.</p>	
<p>Learning Activities During completion of this module, the learning activities undertaken to achieve the module learning outcomes are stated below:</p>	<p>Student Learning Hours (Normally totalling 200 hours): (Note: Learning hours include both contact hours and hours spent on other learning activities)</p>

Tutorial/Synchronous Support Activity	12
Laboratory/Practical Demonstration/Workshop	36
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 a modern audio mixing console and PA system is required.

Key texts are:

Reference Guide V1.5.0 Issue 6 Reference Guide (no date). Available at: https://www.allen-heath.com/content/uploads/2023/05/SQ_ReferenceGuide_V1_5_0.pdf (Accessed: 16 April 2024).

Loar, J. (2019). *The sound system design primer*. New York, Ny: Routledge.

Everest, F. Alton (2021) *Master Handbook of Acoustics*. S.L., McGraw-Hill Education.

Consultation of the following extension references will also be useful:

Boyce, T. (2020) *Introduction to Live Sound Reinforcement: the science, the art, and the practice*. Friessen Press

Biederman, B and Pattison P (2013) *Basic Live Sound Reinforcement: A Practical Guide for Starting Live Audio*, Routledge.

Reference to the following websites and others linked via Aula will provide extension resources.

“Dante Certification Program | Audinate | Dante AV Networking.”
www.audinate.com, www.audinate.com/learning/training-certification/dante-certification-program. (Accessed 16 April 2024).

Health and Safety Executive

Sound Advice (2008) Available at: <https://www.hse.gov.uk/pubns/priced/hsg260.pdf> (Accessed: 16 April 2024)

Health and Safety Executive

Manual Handling at work (no date) Available at <https://www.hse.gov.uk/msd/manual-handling/index.htm> (Accessed: 21/03/2022)

LIVE SOUND REINFORCEMENT MICROPHONE TECHNIQUES (2014). Available at:

<https://content-files.shure.com/Pubs/microphone-techniques-for-live-sound-reinforcement/microphone-techniques-for-live-sound-reinforcement-english.pdf> (Accessed: 16 April 2024).

How To Mix Live Music Chapter 1 - Introduction (no date) www.youtube.com. Available at: https://www.youtube.com/watch?v=eKbBQvidT4o&list=PL3rjqgoqj7LJqxJSdPih25tGIm_SCchfq (Accessed: 16 April 2024).

Audix. (n.d.). *Tutorials Archive*. [online] Available at: <https://audixusa.com/tutorials/> [Accessed 16 April 2024].

Audio Technica Basic recording Techniques series, for example: "Basic Recording Techniques: Strings." www.youtube.com, www.youtube.com/watch?v=em4b9eq54mE&t=48s. (Accessed: 16 April 2024).

Please ensure the list is kept short and current. Essential resources should be included, broader resources should be kept for module handbooks / Aula VLE.

Resources should be listed in Right Harvard referencing style or agreed professional body deviation and in alphabetical order.

(*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.

For the purposes of this module, academic engagement equates to the following:

Engagement for this module equates to submission of CW 1 and CW2, attendance at training in the safe handling and operation of live sound equipment and submission of CW3.

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](#).

This module is designed to provide equal opportunities for all students irrespective of their age, additional support requirements, gender, sexual orientation, race, colour, nationality, ethnicity, religion, beliefs, or sexual orientation. Students may take differing viewpoints with respect to their cultural, religious or family backgrounds. Reasonable adjustments can be made if related issues arise.

(N.B. Every effort will be made by the University to accommodate any equality and diversity issues brought to the attention of the School)

Divisional Programme Board	Computing
Assessment Results (Pass/Fail)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
School Assessment Board	Creative Computing
Moderator	Colin Grassie
External Examiner	G N Aurriccio
Accreditation Details	This module is accredited by JAMES as part of BSc (Hons) Music Technology.
Changes/Version Number	Module delivery method set to face-to-face. Resources checked.

Assessment: (also refer to Assessment Outcomes Grids below)
Assessment 1 (25%) Class Test
Assessment 2 (25%) Practical (Individual): Software configuration
Assessment 3 (50%) Practical (Group): System connection and operation
(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
Class test (written)	✓	✓				25	2

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
Design/ Diagram/ Drawing/ Photograph / Sketch			✓			25	4

Component 3							
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
Clinical/ Fieldwork/ Practical skills assessment/ Debate/ Interview/ Viva voce/ Oral				✓		50	4
Combined Total for All Components						100%	10 hours

Change Control:

What	When	Who

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Version Number: MD Template 1 (2023-24)