Liverpool John Moores University

Title:	BROADCAST AUDIO
Status:	Definitive
Code:	**6522STE** (118581)
Version Start Date:	01-08-2019

Owning School/Faculty: Electronics and Electrical Engineering
Teaching School/Faculty: Liverpool Institute for Performing Arts

Team	Leader
Karl Jones	Y

Academic Level:	FHEQ6	**Credit Value:**	12	**Total Delivered Hours:**	31.5
Total Learning Hours:	120	**Private Study:**	88.5		

Delivery Options

Course typically offered: Semester 1

Component	Contact Hours
Lecture	10
Workshop	20

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Test	OP TEST	OPERATIONAL TEST	20	.5
Essay	DES DOC	DESIGN DOCUMENTATION	40	
Exam	EXAM	WRITTEN EXAM	40	1.5

Aims

This module aims to give students a deep understanding of the technical requirements, systems and operational considerations when working with audio for broadcast. Starting in the field of radio broadcasting, the module will also explore audio in the context of television production in both studio and outside broadcast contexts.

Learning Outcomes

After completing the module the student should be able to:

1	Operate a small format radio production studio to 'drive' live output delivered by others
2	Design an audio specification for a live television event to a defined brief
3	Recall and explain the key technical processes associated with audio for broadcast

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

OPERATIONAL TEST	1
DESIGN DOCUMENTATION	2
WRITTEN EXAM	3

Outline Syllabus

Transmission for Broadcast
AM/FM transmission; DAB, DTTV and MPEG2; modulation and intermodulation; sidebands and frequency planning; streaming audio

Metering Considerations
VU, PPM, QPPM, LUFS and EBUR128

Signal Processing for transmission
Phase Rotators, Limiting, Multi-band compression; use of DialNorm

Technical Requirements for Broadcast Studios
Mixer topology and function; TBU interfacing; mix minus generation and applications, communications (TB, RTB, Pres / Cont feeds); radio studio operation

Audio Formats for Broadcast
Mono, stereo, surround; analogue and digital signal distribution; Dolby E

Audio for Television
Visual considerations; microphone choice and placement; synch requirements – EBU/SMPTE, Tri-Level Sync

Outside Broadcast
Systems topology and structure; audio splitting; network audio distribution

Roles and Functions
Broadcast Assistants, Studio Manager, Sound Supervisor

Learning Activities

This module will be delivered using a combination of lectures and practical workshop activities.
The lectures will generally cover the theoretical material and the workshops will explore the practical application of theory and techniques covered in lectures.

Notes

Additional valuable input to this module will be in the form of guest lectures from visiting industry professionals, and a series of site visits to local and national broadcast centres.