

Liverpool John Moores University

Title: Broadcast Audio
Status: Definitive
Code: **6537STE** (124050)
Version Start Date: 01-08-2021

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

Team	Leader
Karl Jones	

Academic Level: FHEQ6
Credit Value: 20
Total Delivered Hours: 41.5
Total Learning Hours: 200
Private Study: 158.5

Delivery Options

Course typically offered: Semester 1

Component	Contact Hours
Lecture	15
Workshop	25

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	Design	System Design and Rationale	60	
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 Design an audio specification for a live television event to a defined brief
- 2 Evaluate the choice and performance of specific technical solutions to key broadcast audio requirements
- 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:

System Design and Rationale	1	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; GPIO set-up and use

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; audio networking

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

Jon Thornton is the Module Leader (j.thornton@lipa.ac.uk)