

Liverpool John Moores University

Title: Lighting, Acoustics & Live Performance Technology
Status: Definitive
Code: **6119ENG** (117071)
Version Start Date: 01-08-2018

Owning School/Faculty: Electronics and Electrical Engineering
Teaching School/Faculty: Electronics and Electrical Engineering

Team	Leader
Paul Otterson	Y

Academic Level: FHEQ6 **Credit Value:** 24 **Total Delivered Hours:** 72
Total Learning Hours: 240 **Private Study:** 168

Delivery Options

Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	48
Off Site	6
Practical	6
Tutorial	12

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Test	Test	In Class test	15	
Technology	Tech	Technology	15	
Report	Rpt	Report	70	

Aims

To consolidate and extend knowledge of technical techniques used in the broadcast media and creative industries, with specific regard to the additional challenges encountered in technical management of live performances and acoustic optimization of various scenarios.

Learning Outcomes

After completing the module the student should be able to:

- 1 Apply acoustic properties such as standard pressure level, intensity level, acoustic impedance and calculate the acoustic properties of typical environments
- 2 Determine the best placement of microphones and loudspeakers
- 3 Identify safe systems of work relating to performance technology and its deployment
- 4 Develop technical specifications for a live performance scenario, evaluate and/or use appropriate live performance technology

Learning Outcomes of Assessments

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

In class test	1	
Technology	2	
Report	3	4

Outline Syllabus

Legislation for safe systems of technical work relating to live performance
The nature of sound: wavelength, sound pressure and intensity.
Sound in rooms and buildings: standing waves, reverberation time, transmission, Sound directivity
Use of decibels, octaves, semi-tones
Microphone types, directivity and placement; loudspeaker design principles
Sound reinforcement systems, control and signal routing
Acoustic tuning, sound dispersion control and feedback control
Audio monitoring for performers and for mix level control
Power system planning & implementation
Lighting and control technology for live performance
DJ & VJ technology
Video displays and control for large events

Learning Activities

Lectures, tutorials, practical sessions and demonstrations, including student work groups.

Notes

This module extends the knowledge gained in level 5 to encompass the additional

challenging technical requirements imposed when managing A-V aspects during live performance.