

Liverpool John Moores University

Title: Advanced Live Sound
Status: Definitive
Code: **6532STE** (124041)
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: 59
Total Learning Hours: 200
Private Study: 141

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	18
Tutorial	5
Workshop	36

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Practice	Practical	Practical Project Work	85	
Portfolio	Portfolio	Portfolio of supporting technical documentation	15	

Aims

This module aims to provide the learner with the opportunity to extend understanding and knowledge gained in levels 4 and 5 and apply this in a wholly practical context. Much of the delivery of the module is built around providing the technical input to major performances and shows. In addition, a number of alternative, advanced technical approaches will be explored which will enable the student to achieve a

higher standard and work more efficiently.

Learning Outcomes

After completing the module the student should be able to:

- 1 Demonstrate a detailed knowledge and skilled use of speaker arraying technologies/methodologies, advanced live digital console function and applications, automation, show control and digital audio distribution/networking – design and deployment
- 2 Independently design, rig and operate a medium to large-scale sound reinforcement system to support a specific production
- 3 Undertake the organisational and technical roles and responsibilities of Sound Designer, Production Sound Engineer and Sound Number 1 and 2
- 4 Apply professional fault-finding skills and solve problems/apply solutions to complex/challenging live sound situations

Learning Outcomes of Assessments

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

Practical Project Work	1	2	3	4
Portfolio	1	2	3	

Outline Syllabus

*Large-scale event speaker system design and directivity control
Including line array theory and application, low frequency dispersion and management, system response prediction and modelling, processing and control
Live Sound Digital Mixing consoles –
Advanced features to support a variety of live sound production environments, working with recall and automation, remote pre-amps and mix layers
Digital audio transmission and networking for live sound applications
Audio infrastructure and network planning, design and implementation; varying approaches based on system/production requirements
Communications
Comms requirements and systems for large-scale events; RI and matrixed solutions; cue lights, video systems and distribution
Advanced Monitoring Techniques
Options and solutions for complex and challenging live sound monitoring requirements using wired and wireless systems and automated devices for increasing GBF
Advanced RF
Working with large-scale RF systems for live events including frequency planning and management; similarities and differences between analogue, digital and hybrid RF systems
Advanced System measurement and Optimisation
Advanced theory and practical application of SMAART for system measurement and*

optimisation including phase response and alignment

Show Control and Automation

Incorporating timecode and console automation in to live performance, automation of image shift and sound effect animation in live sound multi-channel applications

Learning Activities

This module is built around the specific technical requirements of a number of public performances at LIPA. Whilst these performances are in production, teaching will be based around lectures, workshops and tutorials designed to address the particular requirements of these shows. At other times, lectures and group workshops will be employed to cover advanced theoretical concepts and their practical application. Visiting practitioners will also provide input to specific technical areas and there will be the opportunity to take part in field trips to observe the design and deployment of large-scale sound reinforcement systems at a variety of external venues.

Notes

Chris Layton is the Module Leader (c.layton@lipa.ac.uk)