

## Liverpool John Moores University

Title: ESSENTIAL SOUND  
Status: Definitive  
Code: **4530TPR** (118565)  
Version Start Date: 01-08-2014

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

Team	Leader
Mark Smith	Y

**Academic Level:** FHEQ4      **Credit Value:** 12.00      **Total Delivered Hours:** 40.00  
**Total Learning Hours:** 120      **Private Study:** 80

### Delivery Options

Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	15.000
Practical	9.000
Workshop	15.000

**Grading Basis:** 40 %

### Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	EXAM	1 hour examination - see course notes	30.0	1.00
Essay	ESSAY	Written coursework assignment	70.0	

### Aims

*This Module is a ground up introduction to the basic theories, skills and technologies used in theatre sound reinforcement and design. This will allow students the opportunity to translate creative need into technological achievement and will equip them with a broad range of skills and understanding.*

*Students will learn safe working practice and be introduced to the professional standards of work required to gain and maintain employment as a sound technician or designer as well as the different roles within a professional sound crew, their responsibilities and how they relate to each other. Standard processes and techniques will be examined as will the appropriate planning documentation required for a successful production. The module will introduce the various technical components of a sound reinforcement system and provide a clear set of methodologies for its design, implementation and optimisation.*

## **Learning Outcomes**

After completing the module the student should be able to:

- LO1 Examine physical and acoustic principles in relation to live sound, recording and reproduction to develop a good theoretical knowledge
- LO2 Experiment with the recording, editing and playback of music, speech and FX using both analogue and digital systems to develop effective skills in sound reproduction
- LO3 Design, rig, optimize and operate a small PA system for use within a theatrical performance environment
- LO4 4. Examine Health & Safety issues relating to sound reinforcement systems and value the ability to work well in a team
- LO5 Evaluate the process of sound design and the roles and responsibilities of key personnel in a theatrical sound department

## **Learning Outcomes of Assessments**

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

EXAMINATION	LO1	LO5		
Written assignment	LO2	LO3	LO4	LO5

## **Outline Syllabus**

*The physics of sound; Amplitude, frequency and timbre. Sound transmission and speed. Wave motion and wave forms. Wavelength and its relationship to frequency. Basic Acoustic considerations.*

*Introduction to basic sound reinforcement systems; system components - architecture, operation, relationships and uses, interconnections; signal flow and gain structure; safe working practices. A look at some of the sound reinforcement equipment available. Health and safety issues relating to sound reinforcement.*

*Console architecture, gain structure and routing. Introduction to monitors. System set-up, connections, patching and balance.*

*Introduction to theatre sound design, system design and operation. Special considerations and concepts; roles within the sound department*

*Microphone theory and practice.*

*Introduction to analogue and digital recording principles and systems.*

*Digital recording and editing.*

*Getting it down on paper. Plots, plans, cues and running a show. Planning exercise. Interpersonal skills and teamwork.*

*Speaker design, amplifiers and impedance. Logical fault finding and testing. FX processors and FX loops. Production exercises.*

*Exam technique.*

*Production rehearsals and tutorials.*

## **Learning Activities**

Teaching will generally, though not always, consist of a lecture followed by a practical workshop. The lectures will focus on the theoretical elements of live sound and theatre design while the workshops will be hands on practical sessions, putting the theory into practice. A very important part of this module is the development of skills that will enable students to work within a multi-skilled environment, as is expected in current production practice. The workshops are designed to give students a basic hands-on session; it is expected that they will immerse themselves in live audio by using equipment outside of the taught sessions.

Working as a production team of two, students will choose a basic story as an outline and prepare an edited script for narration. They will design, source/record and edit a series of sound effects/musical accompaniments for the story; design and specify a PA system adequate for the live performance of the piece; rig the PA system and any playback systems required for the performance; perform the piece using a third party narrator. This will be followed by a short verbal question and answer session relating to the production process. They will therefore be required to produce and discuss appropriate documentation supporting the work.

## **Notes**

Examination - one hour written paper comprising of short essay questions on acoustic theory, sound reinforcement and recording systems, the roles, methodologies and issues of working with sound in a live theatrical context.