

Liverpool John Moores University

Title: Essential Sound
Status: Definitive
Code: **4538TPR** (124069)
Version Start Date: 01-08-2021

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

| Team | Leader |
|------------|--------|
| Mark Smith | |

Academic Level: FHEQ4 **Credit Value:** 10 **Total Delivered Hours:** 46
Total Learning Hours: 100 **Private Study:** 54

Delivery Options

Course typically offered: Standard Year Long

| Component | Contact Hours |
|-----------|---------------|
| Lecture | 17 |
| Practical | 12 |
| Seminar | 2 |
| Tutorial | 1 |
| Workshop | 13 |

Grading Basis: 40 %

Assessment Details

| Category | Short Description | Description | Weighting (%) | Exam Duration |
|----------|-------------------|---|---------------|---------------|
| Exam | Exam | Exam (one hour) | 30 | 1 |
| Practice | Practice | Coursework assignment culminating in practical assessment | 70 | |

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:

- 1 Examine physical and acoustic principles in relation to live sound, recording and reproduction to develop a good theoretical knowledge
- 2 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
- 3 Design, rig, optimize and operate a small PA system for use within a theatrical performance environment
- 4 Examine Health & Safety issues relating to sound reinforcement systems and value the ability to work well in a team
- 5 Recognise the processes involved in sound design for theatre 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:

| | | | | |
|-----------------------|---|---|---|---|
| Exam (one hour) | 1 | 5 | | |
| Coursework Assignment | 2 | 3 | 4 | 5 |

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 for live sound.

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/playback 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

This module is delivered in both lecture and workshop formats. Lectures will be used to cover underlying theory and broad concepts, whilst workshop sessions will put this theory in to practice by working with the relevant technical systems. Additionally, and to a lesser extent, seminars and tutorials will be used to support learning. The practical assessment will take place as an observed rig, test and performance of the chosen piece in a group setting.

Notes

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.

(Chris Layton is the Module Leader)