

Liverpool John Moores University

Title: Immersive Audio
Status: Definitive
Code: **6544STE** (127737)
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: 10
Total Delivered Hours: 70
Total Learning Hours: 100
Private Study: 30

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	5
Practical	40
Seminar	5
Workshop	20

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Portfolio	AS1	Immersive Audio Portfolio including: Individual Mix in agreed area, and Collaborative Project in agreed area.	100	

Aims

To evaluate and apply a variety of recording, processing and mixing tools relevant to the current practice in immersive audio.

To develop an awareness of the production options and conventions in the field of spatial audio.

Learning Outcomes

After completing the module the student should be able to:

- 1 Evaluate and apply a range of immersive audio software and hardware tools relevant to music, post production, game and theatre applications.
- 2 Employ and assess a range of spatial microphone capture techniques.
- 3 Confidently assemble and complete an audio production project with a focus on a specialist area of immersive audio.

Learning Outcomes of Assessments

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

Immersive Audio Portfolio 1 2 3

Outline Syllabus

Historical Overview of Spatial Audio (Music, Stereo, Multichannel)
Psychoacoustic Essentials (Duplex, HRTF, BMLD, Precedent)
Binaural Recording and Production (Dummy Head, 3D Panning Tools)
Multi Microphone Techniques
Ambisonics (FOA, HOA, Microphone options)
Music Ensemble Recording Applications
Electronic Music Production Applications
Film Post Production Applications
VR and Game Audio Applications
Spatial Metering
Overview of Current Research and Standards
Current Commercial Developments

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. Extended practical workshops will explore specific techniques and approaches in specific contexts. Individual tutorial sessions throughout the module will provide formative feedback and advice in the completion of the assessment portfolio. Students are also expected to undertake their own research under the guidance of the tutor.

Notes

Peter Philipson is the Module Leader (p.philipson@lipa.ac.uk).