

Liverpool John Moores University

Title: Audio Principles and Music Production
Status: Definitive
Code: **4002AMP** (120132)
Version Start Date: 01-08-2016

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

Team	Leader
Tony McKenna	Y

Academic Level: FHEQ4 **Credit Value:** 24 **Total Delivered Hours:** 74
Total Learning Hours: 240 **Private Study:** 166

Delivery Options

Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	24
Practical	48

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Practice	AS1	Demonstration of the use of industry standard audio equipment, recorded audio productions, sound reinforcement setup.	50	
Exam	AS2		50	2

Aims

To introduce students to sound theory, the practical issues arising from recording audio pieces and live sound reinforcement

Learning Outcomes

After completing the module the student should be able to:

- 1 Demonstrate and apply an understanding of the theory of sound
- 2 Operate industry-standard hardware and software to produce CD quality 16bit 44.1kHz audio
- 3 Create recorded audio music productions to be used with video
- 4 Professional set-up live sound reinforcement equipment

Learning Outcomes of Assessments

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

Demonstration of equipment	2	3	4
Sound Theory Exam	1		

Outline Syllabus

Audio signal levels used in audio engineering – Decibels, metering, gain structure

Digital Audio Workstations, interfaces, bit rates, buffers, sampling rates, dsp

Impedance, Electrical, Acoustical

Balanced audio, non balanced audio, connectivity, cabling, connectors

Room Acoustics, Frequency response, absorption, reverberation

Properties of microphones, technical specifications, transducer types, polar patterns, phantom power

S.P.L Measurement,

Technical design aspects of PA systems, Amplifiers, Monitors, Loudspeakers,

Risk assessments, Safe systems of work & relevant legislation

Industry standard production techniques

Technical aspects of Audio Mixing Desks, signal flow, mic/line, channel strip, input gain, EQ, Aux, Pan, Solo, Mute, Faders

Non-linear editing, dubbing and effects using computers

Fletcher, Munson equal loudness curves, properties of the ear and auditory perception,

Learning Activities

Practical sessions and demonstrations. Student work groups.

Notes

The module encompasses an introduction to the theoretical knowledge and practical skills of audio & music production and to the equipment used in audio production.

The module will cover both 'live-broadcast' and 'recorded' production.

Students will be required to work both individually and in small groups using equipment to become familiar with its characteristics in a way that also demonstrates safe systems of work.