Liverpool John Moores University

Title:	Audio Electronic Principles
Status:	Definitive
Code:	**4001AMP** (120131)
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:**	72
Total Learning Hours:	240	**Private Study:**	168		

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
Test	AS1	In Class Test	15	
Portfolio	AS2	Practical Assignment	70	
Report	AS3	Practical Assignment	15	

Aims

To provide a solid understanding of the concepts upon which audio electronic principles are based.

Learning Outcomes

After completing the module the student should be able to:

1 Describe and solve basic problems using DC & AC circuit principles
2 Test and measure electronic components and measure the properties of simple electrical and electronic circuits
3 Describe and analyze circuits containing discrete semiconductor devices and audio oscillator circuits
4 Describe and analyze the properties of industry standard audio connectivity

Learning Outcomes of Assessments

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

In class test	1	
Practical Assignment 1	2	
Practical Assignment 2	3	4

Outline Syllabus

Basic quantities and SI units
Ohms law, series & parallel resistors
Simple dc circuit analysis
Power in audio circuits
Introduction to capacitance & inductance
Audio tone circuits
Audio connectivity and testing
Development of audio devices and technology
Introduction to thermionic valve technology
Electromagnetic and piezo transducers
Semiconductor devices
Loudspeaker theory and application
Transformer applications
Audio oscillators
Transistor characteristics and operations, (Biasing and DC load line). Transistor applications.
Ideal operational amplifiers, Inverting, non-inverting, summing.
Health and Safety issues

Learning Activities

Lectures, tutorial and practical sessions

Notes

This module provides a fundamental understanding of audio electronic principles for

the level 4 BSc Audio and Music Production programme.