Liverpool John Moores University

Title:	Electronic Audio Systems
Status:	Definitive
Code:	**5002AMP** (120136)
Version Start Date:	01-08-2019
Owning School/Faculty:	Electronics and Electrical Engineering
Teaching School/Faculty:	Electronics and Electrical Engineering

Team	Leader
Tony McKenna	Y

Academic Level:	FHEQ5	**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
Exam	AS1	Exam	60	2
Technology	AS2	Lab assignment - practical build	40	

Aims

To provide a practical knowledge of electronics for Audio Engineers

Learning Outcomes

After completing the module the student should be able to:

1	Evaluate and analyze the principles underlying the design of audio circuits
2	Design and build simple audio circuits
3	Test and measure the characteristics of electronic components and simple circuits
4	Use data sheets and specifications in a professional manner

Learning Outcomes of Assessments

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

Exam	1	4
Lab assignment practical build	2	3

Outline Syllabus

Data sheets, equipment specifications
Tolerance and characteristics of real components
Diodes, zener diodes, led's, capacitors, resistors, potentiometers
Testing methods and test equipment
Fault diagnosis
Transistors, BJT, FET
Biasing
Design of audio circuits
Amplifier classes: A, AB, C etc
Valve amplifiers
Audio frequency tone generators
Magnetism
Transformer, inductor applications
Electromagnetic transducers
Filter circuits
Op Amps
Soldering and prototyping techniques
Safe systems of work, risk assessment
Fabrication
Audio technology
Noise: S/N ratio

Learning Activities

Practical sessions, demonstrations, seminars

Notes

This module provides a practical knowledge of audio electronics for audio engineers. It is to be taught in the laboratory with strong emphasis on design, building and testing of audio electronic circuits