Liverpool John Moores University

Warning: An incomplete or missing proforma may have resulted from system verification processing

Title:	Sound Technology
Status:	Definitive
Code:	**4505AMPCC** (127602)
Version Start Date:	01-08-2021
Owning School/Faculty:	Engineering
Teaching School/Faculty:	Coleg Cambria

Team	Leader
Colin Robinson	Y

Academic Level:	FHEQ4	**Credit Value:**	20	**Total Delivered Hours:**	55
Total Learning Hours:	200	**Private Study:**	145		

Delivery Options
Course typically offered: Semester 2

Component	Contact Hours
Lecture	32.5
Practical	6
Tutorial	16.5

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	Room & equipment calculations	70	
Test	AS2	Acoustics	30	

Aims

To introduce the principles of sound systems and sound waves, which can be applied to a wide range of acoustics and audio subjects.

Learning Outcomes

After completing the module the student should be able to:

1	Calculate relevant acoustic properties of typical environments and equipment
2	Propose solutions to problematic environments and equipment
3	Manipulate acoustic properties such as standard pressure level, intensity level, acoustic impedance etc to solve technical and practical problems

Learning Outcomes of Assessments

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

Room & equipment calculations	2	1
Acoustics	3	

Outline Syllabus

The nature of sound
Wavelength / Frequency
Spectra
Sound pressure and intensity
Inverse square law
Temporal considerations, Haas effect
Sabine's equation, RT60
Room modes, standing waves, resonance, harmonics
Sound proofing and sound treatment
Loudness perception / fidelity
Sound intensity, power and pressure levels
Decibels (for acoustics) and standards
Sound reproduction
Loudspeaker design & testing
Industry-standard software for emulating loudspeaker performance

Learning Activities

Attend all lectures, tutorial and practical sessions.
Engage with on-line learning materials via Canvas.
Research and produce the output for the practical assignment

Notes

This module presents the fundamentals and principles of acoustics and audio systems.