

MODULE SPECIFICATION PROFORMA

Module Title:	Audio & Visual Science	Level:	4	Credit Value:	20
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Module code:	CMT423	Is this a new module?	Yes	Code of module being replaced:	CMT103 CMT408
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Cost Centre:	GACT	JACS3 code:	J930
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Trimester(s) in which to be offered:	1	With effect from:	September 16
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School:	Creative Arts	Module Leader:	Mike Wright
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Scheduled learning and teaching hours	48 hrs
Guided independent study	152 hrs
Placement	0 hrs
Module duration (total hours)	200 hrs

Programme(s) in which to be offered	Core	Option
BSc (Hons) Music Technology	✓	<input type="checkbox"/>
BSc (Hons) Sound Technology	✓	<input type="checkbox"/>
BSc (Hons) Television Production & Technology	✓	<input type="checkbox"/>
BSc (Hons) Professional Sound & Video	✓	<input type="checkbox"/>

Pre-requisites
None

Office use only

Initial approval August 16

APSC approval of modification *Enter date of approval*

Have any derogations received SQC approval?

Version 1

Yes No ✓

Module Aims

To introduce core principles of science as required for the Audio Visual Industry, this will prepare students for study at level 4/5/6. Mathematics will be delivered and developed as required throughout the module.
To create an understanding of the electrical principles of signal transmission.

Intended Learning Outcomes

Key skills for employability

- KS1 Written, oral and media communication skills
- KS2 Leadership, team working and networking skills
- KS3 Opportunity, creativity and problem solving skills
- KS4 Information technology skills and digital literacy
- KS5 Information management skills
- KS6 Research skills
- KS7 Intercultural and sustainability skills
- KS8 Career management skills
- KS9 Learning to learn (managing personal and professional development, self-management)
- KS10 Numeracy

At the end of this module, students will be able to

Key Skills

At the end of this module, students will be able to		Key Skills	
1	Understand safety requirements with regards to electricity and current. Safety requirements with respect to audio exposure.	KS3	KS10
		KS4	
2	Apply the range of units and measurements that define professional and semi-professional equipment	KS9	KS10
		KS4	
3	Specify the equipment chain for competent AV installations	KS8	KS6
		KS10	
4	Define the process how light and sound is perceived generally by humans. Deduce suitable resolutions for media consumption.	KS9	
		KS10	

Transferable/key skills and other attributes

Competent use of scientific measuring equipment.

Derogations

None

Assessment:					
A range of experiments will be demonstrated by engaging the students to explore key theory. Post demonstration there will be a time released multiple choice quiz made available through the VLE interface					
Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)	Duration (if exam)	Word count (or equivalent if appropriate)
1	1 - 4	Multiple Choice Questions	100%	N/A	

Learning and Teaching Strategies:
Lectures to deliver core science principles, demonstration and class interaction to explore science laboratories. Tutorial support and use of VLE for dissemination of material.

Syllabus outline:
<p>Science Principles: Revision of audio and light units; logarithmic calculation rules. Units and ratios to be covered, dB, dBspl, dBV, dBv, dBm. Ohms law, derivation of power, acoustic watts, electrical watts, impedance. Underpinning mathematical principles.</p> <p>Human Perception; Visual frame rate, blurring, resolution, audio perception</p> <p>Use of amplifiers, pre-amplifiers, power amplifiers, op-amps.</p> <p>Filters, LP BP HP, notch filters, active and passive filters, simple equalizer circuits.</p>

Bibliography:
Essential reading
<p>Cuttle, C.(2015) Lighting Design. Routledge http://hyperphysics.phy-astr.gsu.edu/hbase/hframe.html Rumsey, F. (2014) Sound and Recording. Focal Press</p>
Other indicative reading
<p>Millerson, G. (2013) Lighting for TV & Film. Focal Press www.aes.org</p>