Liverpool John Moores University

Title:	TECHNICAL ISSUES IN BROADCASTING
Status:	Definitive
Code:	**5047TECH** (106308)
Version Start Date:	01-08-2016
Owning School/Faculty:	Electronics and Electrical Engineering
Teaching School/Faculty:	Electronics and Electrical Engineering

Team	Leader
David Ellis	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	48
Practical	24

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Essay	AS1	Report – technical setup of AV studio	50	
Exam	AS2	Examination	50	2

Aims

To explain the nature and composition of broadcast and media signals; to describe the operation of media equipment and broadcast operations; and to cover a range of media formats.

Learning Outcomes

After completing the module the student should be able to:

1 Analyse the nature of TV and radio signals
2 Explain the principles of studio equipment
3 Describe the synchronisation requirements of video equipment
4 Monitor and test video signals

Learning Outcomes of Assessments

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

CW	1	2	3	4
EXAM	1	2	3	

Outline Syllabus

Video Signals, Scanning, Resolution
Effect of Interlace, flicker, Gamma
Blanking/Active line/Visible lines
Synchronization
Audio Signals
Standard level, decibels:
Acoustics - Reverberation time
Microphones, Speakers
Colour Standards
Component and composite signals
Properties of composite signals, colour burst
Digital Signals, Rec 601
Sampling formats (e.g. 4:2:2), SDI
High Definition Issues
HD SDI, formats
MPEG
Nature of the bit-rate, Compression Techniques used, nature of artifacts
I,P,B frames, Causality, delays
Blocks, macro-blocks, motion vectors
Digital Video Effects, Colour Keying

Learning Activities

Lectures/Workshops

Notes

An introduction to general broadcast systems and technology for non-engineers.