

Liverpool John Moores University

Title: AUDIO AND VIDEO SIGNALS AND DEVICES
Status: Definitive
Code: **5041TECH** (105424)
Version Start Date: 01-08-2011

Owning School/Faculty: Engineering
Teaching School/Faculty: Engineering

Team	Leader
Tony Moore	Y

Academic Level: FHEQ5
Credit Value: 12.00
Total Delivered Hours: 38.00
Total Learning Hours: 120
Private Study: 82

Delivery Options

Course typically offered: Semester 1

Component	Contact Hours
Lecture	24.000
Practical	12.000

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	AS1	Exam 4 From 6 Questions	50.0	2.00
Essay	AS2	Assignment	20.0	
Essay	AS3	Studio laboratory report	30.0	

Aims

*To explain the nature and composition of broadcast signals. To describe the operation of broadcast devices such as cameras and recorders.
To identify broadcast signal properties using appropriate monitoring devices*

Learning Outcomes

After completing the module the student should be able to:

- 1 Analyse the nature of mono and stereo sound signals
- 2 Analyse video scanning and the nature of component and composite signals
- 3 Explain how audio and video recording works
- 4 Appreciate issues involved in colour representation and the use of cameras
- 5 Describe the synchronisation requirements of video equipment
- 6 Identify video signals on appropriate monitoring displays
- 7 Carry out measurements on video signals

Learning Outcomes of Assessments

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

EXAM	1	2	3	4
CW	5			
CW	6	7		

Outline Syllabus

Video Signal, Scanning, Bandwidth
Gamma, linterlace
Visibility of Colour
Component Signals
Composite Audio
Composite Video
Relationship between subjective colour perception and signal values
Cameras
Analogue video and audio tape recording
Synchronizing, Genlock
Introduction to digital standards for broadcast signals

Learning Activities

A series of lectures and video studio sessions

References

Course Material	Book
Author	Dennis N. Pim
Publishing Year	1988
Title	Television and Teletext
Subtitle	
Edition	

Publisher	Macmillan New Electronics
ISBN	

Course Material	Book
Author	Watkinson, J.
Publishing Year	1996
Title	Television Fundamentals
Subtitle	
Edition	
Publisher	Focal Press
ISBN	

Notes

An introduction to broadcast signals and systems for broadcasting. Topics also covered are recording, cameras, and digital standards.