Liverpool John Moores University

Title: MULTIMEDIA TECHNOLOGY
Status: Definitive
Code: **7006CCTV** (118650)
Version Start Date: 01-08-2011

Owning School/Faculty: Computing and Mathematical Sciences
Teaching School/Faculty: Computing and Mathematical Sciences

Team	emplid	Leader
Rubem Pereira		Y

Academic Level:	FHEQ7	**Credit Value:**	15.00	**Total Delivered Hours:**	38.00
Total Learning Hours:	150	**Private Study:**	112		

Delivery Options
Course typically offered: Runs Twice - S1 & S2

Component	Contact Hours
Lecture	12.000
Practical	12.000
Seminar	6.000
Tutorial	6.000

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	AS2	Examination.	75.0	2.00
Report	AS1	Individual Coursework. Theoretical/practical piece of work, involving the design of multimedia systems and their architectures (4,000 - 6,000 words).	25.0	

Aims

To evaluate the requirements associated with multimedia data and their processing in real-time.

To provide an advanced study of computer support for multimedia applications.
To examine the advanced resource allocation issues associated with real time multimedia processing.
To develop an understanding of the current hardware for sound and video, and relevant software development tools, supporting the development of general integrated multimedia applications.

Learning Outcomes

After completing the module the student should be able to:

1   Recognise and describe the main characteristics of media types associated with multimedia systems, such as Static Image, Sound and Video.
2   Demonstrate expertise in the main techniques associated with analogue/digital conversion of media types, and their storage requirements.
3   Select and apply appropriate tools for the development of multimedia systems.
4   Elicit the main requirements of multimedia systems, leading to successful design and implementation of appropriate solutions.

Learning Outcomes of Assessments

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

Examination	1	2
Design and architecture	3	4

Outline Syllabus

• *Media types and their attributes*
- *Sound: Speech, Music, MIDI etc.*
- *Static Images*
- *Moving images: Conferencing, Gesturing, etc.*
- *Text*

• *Analogue/Digital conversion*
- *Sampling*
- *Quantisation*
- *Coding*

• *Hardware components*
- *Sound and Graphics Cards; Video Display; Input Devices*

• *Software Components*
- *Drivers and other OS components*

• *Case Studies: Development of multimedia systems, integrating the use of various tools*

Learning Activities

Attend online lectures, tutorials, Seminars and practical work

References

Course Material	Book
Author	Li & Drew
Publishing Year	2004
Title	Fundamentals of Multimedia
Subtitle	
Edition	
Publisher	Prentice Hall
ISBN	013-61872-1

Course Material	Book
Author	Tanenbaum
Publishing Year	2008
Title	Modern Operating Systems
Subtitle	
Edition	
Publisher	Pearson
ISBN	0138134596

Course Material	Book
Author	Steinmetz, R. & Nahrstedt, K.
Publishing Year	2004
Title	Multimedia Systems
Subtitle	
Edition	
Publisher	Springer
ISBN	978-3-540408673

Course Material	Journal / Article
Author	
Publishing Year	
Title	Multimedia Systems
Subtitle	
Edition	
Publisher	Springer Verlag
ISBN	

Notes

The main aspects associated with multimedia technology are presented, ranging from relevant background information to the tools and techniques associated with the development of multimedia systems. In this module, multimedia hardware and software technologies are explored, including critical evaluation of technologies and associated standards.