Liverpool John Moores University

Title:	MULTIMEDIA TECHNOLOGY
Status:	Definitive
Code:	**7010COMP** (103269)
Version Start Date:	01-08-2011
Owning School/Faculty:	Computing and Mathematical Sciences
Teaching School/Faculty:	Computing and Mathematical Sciences

Team	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: Semester 1

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
Report	AS1	Group assessment. Theoretical/practical piece of work, involving the design of multimedia systems and their architecture.	25.0	
Exam	AS2	Examination.	75.0	2.00

Aims

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.

To evaluate the requirements associated with multimedia data and their processing in real-time.
To provide an advanced study of computer support for mutimedia applications.
To examine the advanced resource allocation issues associated with real time multimedia processing.

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:

Design and architecture	1	2	3	4
Examination	1	2		

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 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

Lectures, Tutorials, Labs and Seminars

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.

Group Coursework: Students will be differentiated through peer review for marking purposes.