Liverpool John Moores University

Title:	ADVANCED INTERACTION TECHNOLOGIES
Status:	Definitive
Code:	**6031COMP** (103021)
Version Start Date:	01-08-2011
Owning School/Faculty:	Computing and Mathematical Sciences
Teaching School/Faculty:	Computing and Mathematical Sciences

Team	Leader
David England	Y

Academic Level:	FHEQ6	**Credit Value:**	12.00	**Total Delivered Hours:**	38.00
Total Learning Hours:	120	**Private Study:**	82		

Delivery Options
Course typically offered: Semester 2

Component	Contact Hours
Lecture	12.000
Practical	24.000

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	A mini-project developing an application exploiting advanced interaction technologies	40.0	
Exam	AS2	Examination	60.0	2.00

Aims

To develop an understanding of advanced interaction technologies.
To examine the significance of Human Factors issues to the usability of interactive technologies.
To critically assess advanced input and display technologies.
To promote advanced skills in interactive systems development.

Learning Outcomes

After completing the module the student should be able to:

1 Critically assess the hardware and software required for advanced interactive systems.
2 Critically evaluate human factors issues in the application of advanced technologies.
3 Select appropriate interaction techniques and devices.
4 Build a high-quality, interactive application with appropriate tools.

Learning Outcomes of Assessments

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

Mini-project	3	4	
Exam	1	2	3

Outline Syllabus

Introduction to Advanced Interaction Technologies - History and definition of terms
Enabling software technologies - Discussion of the software technologies required to support advanced interaction
Human Factors Aspects of advanced interaction - Discussion of the physical and cognitive aspects.
Advanced Display Technologies
Advanced Input Technologies
Discussion of current applications of advanced interactive technologies.

Learning Activities

Lectures, in-lab tutorials and laboratory sessions.

References

Course Material	Book
Author	Dix, A. et al
Publishing Year	2004
Title	Human-Computer Interaction
Subtitle	
Edition	3rd Edition
Publisher	Prentice Hall
ISBN	0130461091

Course Material	Book
Author	Preece, Rogers & Sharp

Publishing Year	2007
Title	Interaction Design, beyond human-computer interaction
Subtitle	
Edition	2nd Edition
Publisher	John Wiley & Sons
ISBN	0471492787

Course Material	Book
Author	Ames, A.L., Nadeau, D.R., Moreland, J.L.
Publishing Year	1997
Title	The VRML 2.0 Sourcebook
Subtitle	
Edition	2nd Edition
Publisher	Wiley
ISBN	0471165077

Course Material	Book
Author	http://www.vapourtech.com/vrmlguide/
Publishing Year	0
Title	
Subtitle	
Edition	
Publisher	
ISBN	

Course Material	Book
Author	Sherman, C.
Publishing Year	2003
Title	Understanding Virtual Reality: Interface, Application and Design
Subtitle	
Edition	
Publisher	Morgan Kaufman
ISBN	1558603530

Course Material	Book
Author	Sowizral, H. Rushforth, K. Deering, M.
Publishing Year	1998
Title	The Java 3D API Specification
Subtitle	
Edition	
Publisher	Addison-Wesley
ISBN	0201710412

Course Material	Book
Author	Selman, D.
Publishing Year	2002

Title	Java 3D Programming
Subtitle	
Edition	
Publisher	Manning
ISBN	1930110359

Notes

This module presents the underlying principles of advanced interaction technologies and their applications. It assesses the technologies used and examines their human factors implications. It also looks at the development of relevant applications.