

## Liverpool John Moores University

Title: ONLINE GAMES DEVELOPMENT  
Status: Definitive  
Code: **6027COMP** (103016)  
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:** FHEQ6  
**Credit Value:** 12.00  
**Total Delivered Hours:** 36.00  
**Total Learning Hours:** 120  
**Private Study:** 84

### Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	12.000
Practical	12.000
Tutorial	12.000

**Grading Basis:** 40 %

### Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	Coursework 1 - Literature survey on recent papers, and writing-up an essay on online gaming issues.	50.0	
Report	AS2	Coursework 2 - group work covers: Programming Project involving online gaming design, architecture and programming	50.0	

### Aims

*This module will explore the various design, technical and interactivity issues involved in multiplayer games. By understanding these issues, developers can*

*identify the factors that affect them, and learn which architecture, techniques and methods to use in online games design and implementation.*

## **Learning Outcomes**

After completing the module the student should be able to:

- 1 Explain design issues involved in online gaming.
- 2 Define interactivity thoroughly as it relates to online games and other media productions.
- 3 Address the technical design and implementation issues involved in online games.
- 4 Explain how to use interactivity in online game design and how to use it as a critical evaluation tool.

## **Learning Outcomes of Assessments**

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

Literature survey	1	2	4
Programming Project	1	3	

## **Outline Syllabus**

*Introduction; Multiplayer Online Games as Media: History; Types; Online Games for the Mass Market; Online Games for the Hardcore Gamer; Issues and opportunities in online games; General Design; Networking Game Development: Architecture (peer-to-peer, client/server, floating server, (multiple)-Servers Network), Issues (latency, reliability, Bandwidth, Security, Scalability), Tools (protocols, APIs) and Techniques (Dead-Reckoning, Interest Management, etc...); Interactivity Design: The Importance of Interactivity; Interactivity for Multiplayer Online Games; Future trends: Wireless, Broadband.*

## **Learning Activities**

Lectures incorporating demonstrations will be followed by tutor-led seminar sessions. These will be supported by practical hands-on work in the Laboratory.

## **References**

<b>Course Material</b>	Book
<b>Author</b>	Armitage, G., Claypool, M., Branch, P.
<b>Publishing Year</b>	2006
<b>Title</b>	Networking and Online Games
<b>Subtitle</b>	Understanding and Engineering Multiplayer Internet

	Games
<b>Edition</b>	
<b>Publisher</b>	Wiley
<b>ISBN</b>	0470018577

<b>Course Material</b>	Book
<b>Author</b>	Mulligan, J., Patrovsky, B.
<b>Publishing Year</b>	2004
<b>Title</b>	Developing Online Games: An Insider's Guide
<b>Subtitle</b>	
<b>Edition</b>	
<b>Publisher</b>	New Riders Games
<b>ISBN</b>	1592730000

<b>Course Material</b>	Book
<b>Author</b>	Friedl, Markus
<b>Publishing Year</b>	2002
<b>Title</b>	Online Game Interactivity Theory
<b>Subtitle</b>	
<b>Edition</b>	
<b>Publisher</b>	Charles River Media
<b>ISBN</b>	1-58450-215-0

<b>Course Material</b>	Book
<b>Author</b>	Mulholland, A. & Hakal, T.
<b>Publishing Year</b>	2001
<b>Title</b>	Multiplayer Game Programming
<b>Subtitle</b>	Game Development Series
<b>Edition</b>	
<b>Publisher</b>	Premier Press
<b>ISBN</b>	0-7615-3298-6

<b>Course Material</b>	Book
<b>Author</b>	Jarett, A.
<b>Publishing Year</b>	2002
<b>Title</b>	IGDA Online Games White Paper
<b>Subtitle</b>	IGDA Online Games Committee (available from IGDA website at: <a href="http://www.igda.org/online_report.htm">http://www.igda.org/online report.htm</a> )
<b>Edition</b>	
<b>Publisher</b>	
<b>ISBN</b>	

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## Notes

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