

Liverpool John Moores University

Title: ADVANCED MULTIMEDIA DEVELOPMENT
Status: Definitive
Code: **6519YCOM** (118249)
Version Start Date: 01-08-2018

Owning School/Faculty: Computer Science
Teaching School/Faculty: YPC International College (Kolej Antarabangsa YPC)

Team	Leader
Stephen Tang	Y

Academic Level: FHEQ6 **Credit Value:** 24 **Total Delivered Hours:** 72
Total Learning Hours: 240 **Private Study:** 168

Delivery Options

Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	24
Workshop	48

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Essay	AS1	Individual essay writing on Advanced Multimedia Development. Students will write an essay on topics relating to the module, based on assigned readings.	40	
Technology	AS2	Group work with peer assessment that covers design and development an interactive multimedia application.	60	

Aims

To develop a theoretical knowledge of the concepts and techniques required for the

design, development and evaluation of interactive and engaging multimedia applications such as Rich Internet Applications and Serious Games. To provide an opportunity to practice design and test the user experience of interactive multimedia applications. To enable students to design an interactive multimedia, architect a software solution and develop the interactive multimedia application.

Learning Outcomes

After completing the module the student should be able to:

- 1 Discuss key concepts and techniques used in the design of interactive multimedia applications such as rich internet applications and serious games.
- 2 Explain the importance of user experience for an interactive multimedia application.
- 3 Design and develop an interactive multimedia application with user experience considerations.
- 4 Explain and apply the techniques involved in the implementation of an interactive multimedia application.
- 5 Critically evaluate the techniques and challenges behind the design and development of an interactive multimedia application.

Learning Outcomes of Assessments

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

Adv Multimedia Dev	1	2	
Design and development	3	4	5

Outline Syllabus

Rich internet applications: concepts and definitions, modelling approaches, technologies.

User experience: concepts, lifecycle and benefit of UX, tools of UX (e.g. user testing, expert review, persona and etc.).

Serious Games: terminologies and taxonomy, applications of serious games, issues and challenges, guidelines and principles of serious games design.

Architecting interactive multimedia solution: information architecture design, dynamic content, data storage, technology integration, application optimization, security and etc.

Advance multimedia scripting: media scripting, interaction scripting, real-time animation scripting, data processing and visualization scripting.

Learning Activities

Formal lectures and seminars will deliver theoretical concepts while practical-based workshop sessions, which take place in computer laboratories, will be used to

introduce specific techniques and methods used in the development of advance multimedia applications.

Course Material	Website
Author	Marianne Busch, M. and Koch, N. - Programming and Software Engineering Unit (PST)
Publishing Year	2009
Title	Rich Internet Applications: State-of-the-Art, Technical Report 0902
Subtitle	http://uwe.pst.ifi.lmu.de/publications/maewa_rias_report.pdf
Edition	
Publisher	Institute for Informatics, Ludwig-Maximilians-Universität
ISBN	

Course Material	Book
Author	Unger, R. and Chandler, C.
Publishing Year	2009
Title	A Project Guide to UX Design
Subtitle	For User Experience Designers in the Field or in the Making (Voices That Matter)
Edition	
Publisher	New Riders
ISBN	0321607376

Course Material	Book
Author	Buxton, B.
Publishing Year	2007
Title	Sketching User Experiences
Subtitle	Getting the Design Right and the Right Design (Interactive Technologies)
Edition	
Publisher	Morgan Kaufmann
ISBN	0123740371

Course Material	Book
Author	Tullis, T. and Albert, W.
Publishing Year	2008
Title	Measuring the User Experience
Subtitle	Collecting, Analyzing, and Presenting Usability Metrics (Interactive Technologies)
Edition	
Publisher	Morgan Kaufmann
ISBN	0123735580

Course Material	Book
Author	Moggridge, B.

Publishing Year	2006
Title	Designing Interactions
Subtitle	
Edition	
Publisher	MIT Press
ISBN	0262134748

Course Material	Book
Author	Moore, D., Budd, R. and Benson, E.
Publishing Year	2007
Title	Professional Rich Internet Applications
Subtitle	AJAX and Beyond (Programmer to Programmer)
Edition	
Publisher	John Wiley & Sons
ISBN	0470082801

Course Material	Book
Author	Lawson, B. and Sharp, R.
Publishing Year	2010
Title	Introducing HTML 5 (Voices That Matter)
Subtitle	
Edition	
Publisher	New Riders
ISBN	0321687299

Course Material	Book
Author	Beres, J., Evjen, B. and Rader, D.
Publishing Year	2010
Title	Professional Silverlight 4 (Wrox Programmer to Programmer)
Subtitle	
Edition	
Publisher	John Wiley & Sons
ISBN	0470650923

Course Material	Book
Author	Gassner, D.
Publishing Year	2010
Title	Flash Builder 4 and Flex 4 Bible
Subtitle	
Edition	
Publisher	John Wiley & Sons
ISBN	0470488956

Course Material	Book
Author	Zemliansky, P. and Wilcox, D.
Publishing Year	2010

Title	Design and Implementation of Educational Games
Subtitle	Theoretical and Practical Perspectives
Edition	
Publisher	Information Science Reference
ISBN	1615207813

Course Material	Book
Author	Connolly, T., Stansfield, M. and Boyle, L.
Publishing Year	2009
Title	Games-Based Learning Advancements for Multi-Sensory Human Computer Interfaces
Subtitle	Techniques and Effective Practices
Edition	
Publisher	Information Science Reference
ISBN	1605663603

Notes

This module broadens the awareness of the design and development of interactive multimedia applications such as Rich Internet Applications and Serious Games with user experience design emphasis.