Liverpool John Moores University

Title:	HUMAN COMPUTER INTERACTION
Status:	Definitive
Code:	**7009COMP** (103268)
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:	FHEQ7	**Credit Value:**	15.00	**Total Delivered Hours:**	24.00
Total Learning Hours:	150	**Private Study:**	126		

Delivery Options
Course typically offered: Semester 2

Component	Contact Hours
Lecture	12.000
Practical	12.000

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	Group Coursework - a student-led case study involving analysis, design, prototyping and evaluation of a sample interactive software application	100.0	

Aims

To develop an understanding of Human Computer Interaction as a multi-disciplinary subject, with a special focus on interactivity and usability in computer systems and software development.
To develop a user-centred approach to computer systems design.
To develop an in-depth understanding of usability and evaluation, and their impact on software development.

To introduce students to the latest research in HCI, and its application to new technologies.

Learning Outcomes

After completing the module the student should be able to:

1 Explain in depth the nature of HCI and the support from its constituent disciplines
2 Critically relate human physical and cognitive abilities to system design
3 Apply interactive development methods to a significant case study
4 Demonstrate a systematic and critical approach to the design, development and evaluation of interactive systems

Learning Outcomes of Assessments

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

Case study	1	2	3	4

Outline Syllabus

What is HCI?
The Human Performance Model of HCI
Usability Principles and Patterns
Task Analysis
Dialogue models
Software Development Methods and tools for HCI
Evaluation methods.
Accessibility and Special Needs in Interaction
Advances in Interaction Research

Learning Activities

Self-directed study and use of appropriate tool(s). Research into HCI and interrelated disciplines.

References

Course Material	Book
Author	Dix, A., Finlay, J., Abowd, G. & Beale, R.
Publishing Year	2004
Title	Human Computer Interaction
Subtitle	
Edition	3rd Edition
Publisher	Prentice-Hall

ISBN	0130-461091

Course Material	Book
Author	Tidwell, J.
Publishing Year	2005
Title	Designing Interfaces
Subtitle	
Edition	
Publisher	O'Reilly
ISBN	0-596-00803-1

Course Material	Book
Author	Diaper, D., Stanton, N. A.
Publishing Year	2004
Title	The handbook of task analysis for human-computer interaction
Subtitle	
Edition	
Publisher	Lawrence Erlbaum
ISBN	0805844333

Course Material	Book
Author	Preece, Rogers & Sharp
Publishing Year	2007
Title	Interaction Design: Beyond Human-Computer Interaction
Subtitle	
Edition	
Publisher	John Wiley & Sons
ISBN	0471 492787

Course Material	Book
Author	Shneiderman, B.
Publishing Year	2004
Title	Designing the User Interface: Strategies for Effective Human Computer Interaction
Subtitle	
Edition	3rd Edition
Publisher	Addison Wesley
ISBN	0201694972

Course Material	Book
Author	Carroll, J.
Publishing Year	2002
Title	HCI Models, Theories and Frameworks: Towards a Multidisciplinary Science
Subtitle	
Edition	

Publisher	Morgan Kaufman
ISBN	155860887

Course Material	Book
Author	Mirel, B.
Publishing Year	2003
Title	Interaction Design for Complex Problem Solving: Developing Useful and Useable Software
Subtitle	
Edition	
Publisher	Morgan Kaufman
ISBN	1558608311

Course Material	Journal / Article
Author	
Publishing Year	
Title	Journals 'Communication of the ACM; ACM Transactions on HCI; Interacting with Computers' Conference proceedings from ACM SIGCHI, BCS HCI
Subtitle	
Edition	
Publisher	
ISBN	

Notes

Human Computer Interaction is the key to successful interactive systems development. It involves the bringing together of understandings of human abilities, and technical understanding of hardware and software technologies. This module aims to bring these different strands together to give the student a set of tools for the building of better interfaces. The group coursework is assessed by peer assessment.

Humanâ€“computer interaction (commonly referred to as HCI) researches the design and use of computer technology, focused on the interfaces between people (users) and computers. Researchers in the field of HCI both observe the ways in which humans interact with computers and design technologies that let humans interact with computers in novel ways. Human-computer interaction is a multidisciplinary study that focuses on the interaction between people and computers as well as the design of the computer interface. Factors to take into account include the user capabilities and cognitive processes, personality, experience, motivation, and emotions. Human computer interaction examples include: Interaction with a mobile app. Browsing a website from your desktop computer. Using internet of things (IoT) devices. Humanâ€“computer interaction or HCI is the study of interaction between people (users) and computers. It is often regarded as the intersection of computer science, behavioral sciences, design and several other fields of study. Interaction between users and computers occurs at the user interface (or simply "interface"), which includes both software and hardware, for example, general-purpose computer peripherals and large-scale mechanical systems, such as aircraft and power plants.