Liverpool John Moores University

Title:	HUMAN COMPUTER INTERACTION
Status:	Definitive
Code:	**3005BELCM** (101121)
Version Start Date:	01-08-2011
Owning School/Faculty:	Arts, Professional and Social Studies
Teaching School/Faculty:	Bellerby's College - Brighton

Team	Leader
Jarmila Hickman	Y

Academic Level:	FHEQ3	**Credit Value:**	12.00	**Total Delivered Hours:**	68.00
Total Learning Hours:	120	**Private Study:**	52		

Delivery Options
Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	66.000

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Technology	AS1	Assessed Practical Projects	50.0	
Exam	AS2	Closed Book Examinations	50.0	2.00

Aims

This module introduces the concepts of the way in which humans interact with computer systems. Students will learn the relevance and importance of interaction design by the study of behaviour, cognitive psychology and ergonomics.
Lifecycles of Interaction Design will be learnt from conception of a project, testing processes, design and final production. This will include concepts such as methods of evaluation, data collection instrumentation, usability and mental modelling.
In order to give the module a practical element, students will learn from historical bad and good design of systems in addition to developing their own interface or physical system and report on this from a human computer interaction point of view.

Learning Outcomes

After completing the module the student should be able to:

1 Understand the relevance and the often critical nature of interaction between humans and computerised systems - both in computer applications and computer aided physical systems and machinery.
2 Gain an overview of cognitive psychology.
3 Describe how mental models are of importance to effective design and to designers.
4 Understand why design principles need to be put into practice and how this may be achieved.
5 Understand the relevance of usability and how usability is assessed and evaluated.

Learning Outcomes of Assessments

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

CW	2	3	4	5	
EXAM	1	2	3	4	5

Outline Syllabus

1. Introduction to human computer interaction, its relevance and importance and also its relation to other disciplines.
2. Understanding the consequences of bad design and how human computer interaction fits into the development of systems.
3. Learning how human information processing, behaviour, cognition and ergonomics relate to system and interface design. Topics such as perception, memory, attention, the ability to learn and retain skills will be covered.
4. Theoretical models such as GOMS, activity theory, context and sequence modelling.
5. Taking these theoretical concepts and looking at how they translate to practical design in terms of interface design, hardware design, colour, navigability, icon design and so on.
6. Looking at the actual process of design via different types of low and high fidelity methods. How these are put into practice and how data gathered from them aids the design process and lifecycle.
7. Introducing concepts of socio-technical design, workflow considerations and inclusive design (ie seeing how systems should not exclude certain parts of the community for reasons of disability, language and so on)
8. Defining usability and looking at the principles of usability, how and why these principles were developed and how they are being adapted.
9. Describing evaluation processes including different methods of human testing and how these aid the final design including sections on the Hawthorne effect and ethical considerations of data collection.

Learning Activities

1. Carrying out initial practical cognition exercises.
2. Evaluating good and bad design.
3. Designing and developing a user interface or physical system and reporting on it from HCI aspects. Initially this will be a low fidelity system and after modification it will move to a high fidelity one.
4. Organising and carrying out an evaluation of the system.
5. Evaluating the design of other systems produced by fellow classmates.
6. Researching an existing or developmental system and reporting on it from a HCI aspect.

References

Course Material	Book
Author	Dix, A et al
Publishing Year	2003
Title	Human Computer Interaction
Subtitle	
Edition	3rd Edition
Publisher	Prentice Hall
ISBN	978013046194

Notes

This module covers the way in which humans react with computer systems and consider issues such as usability. They will also have the opportunity to develop their own interface or physical system and report upon its viability.