Title	**BMAN71642** **Human Computer Interaction and Web User Interfaces**
Credit Rating	15
Level	MSc
Semester	2
Course Coordinator(s)	Dr Weigang Wang
Methods of Delivery	Lectures
Lecture Hours	33 (3 hours per week)
Seminar Hours	
Private Study Hours	117
Total Study Hours	150
Assessment Methods and Relative Weightings	2 hour examination (70%),Calculators not permitted Coursework (30%): Group work

Aims

The aim of this course unit is to give students a good working knowledge of HCI theories, principles, paradigms and guidelines and to be able to apply this knowledge in the design and evaluation of interactive systems for the purposes of their diverse users. It teaches students how to gather user requirements, create prototypes, and conduct evaluations; it also introduces students to web user interface technologies and development.

Learning Outcomes

Academic knowledge
- Demonstrate an understanding of the technical, cognitive and social factors that can make interactive systems usable for their users.
- Be critically aware of state of the art HCI technologies and the theories/paradigms they are based on.
- Analyse user, group and task characteristics in relation to HCI needs and anticipate and understand common usability problems.
- Select and exploit appropriate HCI paradigms, technologies and devices for particular user and task requirements, including the application of standardised interface styles in appropriate and insightful ways.

Intellectual skills
- Design and conduct detailed HCI design and evaluation following commonly used principles and guidelines, including consideration of interface support, and relate designs to available implementation methods and tools.

Subject practical skills
- Design and conduct a usability evaluation of an interactive system.

Transferable skills
- Demonstrate group working skills.

Syllabus

1. Human-computer interaction (information processing paradigm, cognitive models, memory, attention, visual perception, and their implications for design);

2. User-centred design (scenario, user requirements, conceptual design, prototyping and envisionment, evaluation);

3. Usability evaluation (usability and user experience, designing a usability study, formative and summative usability tests, usability evaluation techniques)

4. Hypertext (link, node, anchor, link following and navigation); the Web (Web architecture, HTTP, URL, HTML, Web 2.0 and its characteristics, a five-plane user experience framework, types of web site);

5. Information architecture design (Web as hypertext, organization structures, meta data, top-down and bottom-up approaches); user interaction design (Web as software interface, conceptual models, error handling);

6. Information design (convention, metaphor); navigation design (activities and goals of navigation, signage and labelling, site map, index, searching, social navigation); user interface (UI elements of Web pages, element selection and arrangement); wireframe;

7. Visual design (follow the eye, contrast and uniformity, consistency, colour palettes and typography, design comp and style guide)

8. State-of-the-arts interactive system technology (agent-based interaction, ubiquitous computing, distributed information space, CSCW and groupware)

9. Group work and hands on practice (Web design and analysis using Google Sites and Google Analytics; Usability evaluation of the PowerMeeting system).

Reading List

Core Text:

Benyon, D., Designing Interactive Systems, Addison and Wesley, 2004.

Stone, D., Jarret, C., Woodroffe, M. and Minocha S. User Interface Design and Evaluation. Morgan Kaufman. 2005

Additional Text:

Garrett, J. Jesse, The Elements of User Experience: User-Centered Design for the Web, Publisher: Peachpit Press; illustrated edition (October 21, 2002)

Preece, J., Rogers, Y., Sharp, H., Interaction Design: Beyond Human Computer Interaction, John Wiley and Sons, 2nd Edition, 2007.

Tullis, T. Measuring the User Experience: Collecting, Analyzing, and Presenting Usability Metrics. Morgan Kaufman. 2008