Human-Computer Interaction

Computer Science Tripos Part II
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Add a button to turn the screen yellow.
Why did you want the screen to be yellow?

I want it to look like gold.

Connotations relate not to a word's actual meaning, or denotation, but rather to the ideas or qualities that are implied by that word. A good example is the word "gold." The denotation of gold is a malleable, ductile, yellow element. The connotations, however, are the ideas associated with gold, such as greed, luxury, or avarice.
How to design buttons and screens?

• Human-Computer Interaction (HCI)
• Interaction Design
• User Experience Design (UX)
• Interactive Systems Design
• Cognitive Ergonomics
• Man-Machine Interface (MMI)
• User Interface Design (UI)
• Human Factors
• Cognitive Task Design
• Information Architecture (IA)
• Software Product Design
• Usability Engineering
• User-Centred Design (UCD)

2013/14 votes on course objectives

• Learn interesting stuff about humans 15
• Prepare for professional life 6
• See cool toys 11
• Find an alternative perspective on CS 10
• Take an opportunity to be more creative 6
• Get easy marks in final exam 3
Textbooks

• Sharp, Rogers & Preece
  – Practical design methods, at forefront of current practice

Textbooks

• Carroll (Ed.) *HCI Models, Theories and Frameworks: Toward a multidisciplinary science* 2003
  – Best introduction to research trends and advanced methods
  – (but out of print ☹️)
Textbooks

• Cairns and Cox (eds) *Research methods for human-computer interaction* 2008
  – Advanced techniques, academic context

Supervision exercises

• Preparation/evaluation for Part II projects
  – Selecting research and evaluation methods, within strict constraints (much as for a professional project).

• Experimental comparison of user interfaces
  – Study changes in learning, efficiency or accuracy that result from modifications to a user interface.

• Cognitive Dimensions in Comp Sci research
  – Identify what makes advanced programming languages useful to real programmers.
Final exam

• We will decide in the final lecture how the material we have covered should be assessed.
• This *may* resemble previous years
  – aimed to assess knowledge of range of models and techniques available, the ways in which they differ, and applicability to professional situations.
• But not if we decide not!
• Note: dissertation can also gain marks from HCI
  – preparation + evaluation sections > 20% exam question
  – for interactive systems, consider user research & testing