Human Computer Interaction

CompSci 345

Agenda

- Scope
- Plan
- Resources
- Assessment
- Assignment 1
- Tutorials

People

- Lecturers
  - Dr Beryl Plimmer (coordinator)
    - Room 303.483
    - Email beryl@cs.auckland.ac.nz
  - Prof. Jim Warren
    - Room 730.448 (that's at Tamaki)
    - Email jim@cs.auckland.ac.nz
    - No formal office hours, but will usually be available just before or after lecture, by email and by appointment at Tamaki if needed

Meeting Times

- Lectures 1 – 2
  - Monday - HSB370
  - Wednesday and Thursdays - MLT1

- Tutorials – you attend one of these
  - Tuesday 10 – 12
  - Tuesday 12 – 2
  - Thursday 10 – 12
  - **Room**
    - BLT

Scope

- Introduction to HCI
  - Software Engineering Life Cycle
  - Design Basics
  - Designing for Human Capabilities
  - Evaluation – theory and practice
  - Modelling Interaction

Plan 1st ½

Week	Topic	Reference
1	Intro Design Basics	Chap 5
2	HCI in the design process & Design Rules	Chap 6 & 7
3	The Human	Chap 1
4	The Computer & Interaction	Chap 2 & 3
5	Paradigms & Web design	Chap 4 +
6	Implementation support & Bringing it all together	Chap 8

Plan 2nd ½

??JIM	Evaluation	More info from Jim Warren later
	User support & Universal design	
	Models & Theories	

Plan - continued

- A number of guest lectures
  - HCI practitioners
  - HCI researchers
- The information they present IS examinable
  - some provide handouts – others don’t

Resources

- Text book
  - Human Computer Interact (3rd Edition)
    Dix, Finlay, Abowd & Beale (approx $100)
  - We follow the textbook quite closely: BUY IT!
- Class Web Site
  http://www.cs.auckland.ac.nz/compsci345s2c/
- Library Web Site (assignment resources)
  - http://www.library.auckland.ac.nz/subjects/comp/course-pages/compsci345sc.htm

Assessment 1 of 2

Assignments	15%	See below
Test	15%	23rd August 1-2 (lecture time)
Exam	70%	TBA

- You must pass the practical (assignments)
- You must pass the theory (exam + test)
- You must pass the assignments + test + exam
- Grades held on Cecil https://cecil.auckland.ac.nz/

Assessment 2 of 2

- If you miss the test or exam you **must** apply for an aegrotat through the exam office
- Anything to do with assignments, talk to the lecturer who has set the assignment

Assignments	%	Due
Design & Build	4	6 August presentations (in lab sessions)
	4	12th September – hand in 13th September – demo
Usability Study	4	?? Jim
Modelling	3	?? Jim

Regulations & Guidelines

- There are many avenues to get extra help
  - Lecturers and tutors have office hours
  - Class Forum
  - General help look on http://www2.auckland.ac.nz/science/
- Reminder – copying work is cheating
  - University policy
    '*The University of Auckland will not tolerate cheating, or assisting others to cheat, and views cheating in coursework as a serious academic offence. The work that a student submits for grading must be the student's own work, reflecting his or her learning. Where work from other sources is used, it must be properly acknowledged and referenced. This requirement also applies to sources on the world-wide web. A student's assessed work may be reviewed against electronic source material using computerized detection mechanisms. Upon reasonable request, students may be required to provide an electronic version of their work for computerized review*.'

  - Department policy http://www.cs.auckland.ac.nz/CheatingPolicy.html

HCI Basics

- HCI is a multi-disciplinary subject, we draw on
  - Computer science
  - Psychology
  - Design

Assignment 1

- A challenging interaction scenario
- This is about
  - Finding user needs / constraints (psychology)
  - Design
  - Interaction
  - Programming

Assignment 1

- You can use any programming language that is available in the CS labs
- This is a group task – 4 per group
  - All members of the group will receive the same mark unless you make a written case for it to be otherwise
- You will do better if you have group members with skills/knowledge of
  - Psychology or educational psychology
  - Design /art (any senior school art subject would be helpful)
  - A clever programmer
  - History – as this year's project is about history
- Groups will be formed in week 2 (by you)
  - all group members should be in the same tutorial (you can change tutorials depending on space)

Previous Years Topics

- A drawing package for a disabled youngster
- A photo album for your grandparent
- A health support system for an elderly diabetic
- Demo ?

Tutorials

- Are informal this year (generally unsupervised and without a structured activity, almost always unsupervised)
- HOWEVER, it's a really, really good idea to make regular attendance a habit
  - It's time and space set aside for your group to do its thing
- On week 7 we meet formally for the demo

Fitts Law

- One of the very basic interaction ‘laws’ is Fitts Law (pg 441 – 443)
- It basically states that the further 2 things are apart the longer it takes to move from one to another
- It is often used to measure interaction efficiency
- We have written a little play program for you to experiment with in this week’s tutorial

Fitts Law (contd.)

- Fitts' Law describes the time taken to hit a screen target:

  $Mt = a + b \log_2(D/S + 1)$

- where:

  a and b are empirically determined constants (and they differ depending on the device – such as mouse v. trackback)

  Mt is movement time

  D is Distance

  S is Size of target

- Try the program and see if your times fit the curve
- Is YOUR a and b better than your classmate's?