Bachelor of Computer and Information Sciences

COMP719   Applied Human Computer Interaction

1. TEACHING TEAM

Leader	Teaching assistants
Dr Robert Wellington robert.wellington@aut.ac.nz Lecturer Dr Shahper Richter shahper.richter@aut.ac.nz Guest Lecturer Dr Boris Bačić boris.bacic@aut.ac.nz	Soheila Mohammadyari soheila.mohammadyari@aut.ac.nz Boshra Talebi Haghighi boshra.talebihaghighi@aut.ac.nz

(Communication and appointments preferably by email)

2. LENGTH

12 weeks teaching.
150 hours of student study time is expected:
- 48 hours class contact time
- 102 hours (approximately 7hrs a week) independent study

3. AIM

This module furthers understanding of the factors (psychological, ergonomic, organisational, social etc) that determine how people operate and make use of computer technology effectively.

4. LEARNING OUTCOMES

By the end of this unit the student will be able to:
- Describe the issues and limitations of computer interface design and construction.
- Design and build appropriate interfaces within ICT projects.
- Incorporate multiple modes of interaction within interfaces for a variety of users.
- Compare and evaluate the effectiveness of different interface designs.

5. TEACHING APPROACHES AND CAPABILITIES

The course is structured to give students a conceptual framework for the design and implementation of appropriate interface design. Students will be exposed to theory and practice from a variety of disciplines outside of computer science.

To enable the students to become familiar with the concepts of this course of study they will be required to apply them in practical exercises. Students will be expected to undertake self-directed study into HCI phenomena or the usability of a proprietary system using an appropriate study / research methodology.

Participatory teaching methods will be emphasised. Many concepts will be developed through problem-based learning, discussion and analysis. There will also be teacher directed lectures.

6. WEEKLY PROGRAMME

Students are timetabled for 4 hours of class contact that includes a 2 hour Lecture for 12 weeks, and a 2 hour practical tutorial session for the first 7 weeks, then 2 hours per week laboratory time in preparation for the second assignment.

7. PAPER SCHEDULE

The schedule below describes the topics for each week. The timetable as presented may be subject to change. Notification will be given when this occurs.

WEEK BEGIN	Lecture	Practical	ASSESSMENT
1 RW	Introduction to HCI	Introductions and exercise	**Ass 1: Handed out Ass 2: Handed out**
2 SR	Human Cognition, Psychology, and Sociology Overview	Form teams and team building exercise	
3 SR	HCI and Design Process and Development	Essay writing workshop	A1: HcInteraction
4 RW	Interaction Frameworks and HCI key concepts	Affordance and mapping	A1: HcInteraction
5 SR	Usability Testing: Heuristic Evaluation, Expert Reviews and Surveys	Lo-fi prototyping	A1: HcInteraction **A1: Essay due Friday 4pm**
6 SR	Ethnographic vs Experimental Studies	Evaluating an Artefact: Cognitive walkthrough, or Heuristic review	A1: HcInteraction
7 RW	Human I/O channels - summary	Learning, learnability	A1: HcInteraction
	Mid-semester break		
8 RW	Distributed Data and Information Visualisation	*Teams book lab for working on Assignment 2	**Final day for assignment 2 topic negotiated (Friday)**
9 RW	Data Analysis Qualitative and Quantitative	*Teams book lab for working on Assignment 2	
10 RW	Sociology and Social Media, Interaction and Technology Trends	*Teams book lab for working on Assignment 2	
11 BB	Guest Lecture	*Teams book lab for working on Assignment 2	
12 BB	Guest Lecture	*Teams book lab for working on Assignment 2	Assignment 2 due Friday 4pm. Interactive report.
13			

8. ASSESSMENT

The items of assessment are:

Item	Weight %	Date Given	Date Due
A1: hcInteractive	60	Week 1	**Essay:** Week 5 **hcInteractive:** weeks 3-7
A2:Usability Test	40	Week 1	**Interactive and Reflective report:** Week 12

Paper pass mark: Achieve at least 50% overall, and 35% minimum in each assignment.

All submitted work **must** have a **reference section** and complete **in-line citations** as it is not appropriate at this level to undertake any of the prescribed activities without some element of research. If a student fails to provide appropriate references then the work will not be considered of an appropriate academic standard and **will not be marked**.

This paper handbook provides students with an outline of the paper aims, content, delivery methods and assessment requirements. Students should use this handbook to organise their workload, prepare for timetabled sessions and plan their directed and self directed study time.

9. ACADEMIC STANDARDS

Refer to the Undergraduate Handbook and the University Regulations concerning academic conduct for this paper.

10.   TEXT BOOK & REFERENCES

Recommended Reading:

Preece, J., Y. Rogers and H. Sharp (2011), *Interaction Design 3rd edition,* John Wiley.

References:

Refer AUT Library catalogue under keywords: *HCI, computer interface, interaction. You can also use the databases available online through AUT library.*