

# Human Computer Interaction – EMTM 608

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Texts: Stone, D., Jarrett, C., Woodroffe, M. and Minocha, S., User Interface Design and Evaluation, Elsevier, 2005, ISBN: 0-12-088436-4; Maeda, J. The Laws of Simplicity, MIT Press, 2006, ISBN: 978-0-262-13472-9; Norman, D.A. The Design of Everyday Things, Basic Books, 2002, ISBN: 0-385-26774-6; Nardi, B.A. My Life as a Night Elf Priest: An Anthropological Account of World of Warcraft, University of Michigan Press, 2010.

This course targets how to create effective, efficient and enjoyable human computer interactions using both standard and emerging techniques. It explores psychological foundations, fundamental concepts, task analysis, requirements analysis and techniques for design and implementation. The course also will explore how anthropological and ethnographic techniques are emerging as important methodologies in computer system development.

This is truly an interactive course in all ways with demonstrations and examples drawn from real and virtual worlds. At the end of the course you should have a heightened appreciation of interfaces to the real and virtual worlds and an understanding of how to make them better for yourself and others.

- ◆ Session 1 – Saturday, December 3<sup>rd</sup>
  - Human Computer Interaction Perspectives and Issues
  - Cognitive Psychology and Human Computer Interaction
    - a. The Human Cognitive System
    - b. Attention and Effort
    - c. Human Perception
  - Web evaluation
  - Good, Bad and Ugly exercise
  - Readings: Norman Chapters 1 & 2; Stone, et.al., Chapters 1 & 17; Nardi, Chapters 1 & 2
- ◆ Session 2 – Saturday, December 17<sup>th</sup>
  - Simplicity
  - HCI requirements elicitation and task analysis
  - Personas
  - Project status 1
  - GBU Due
  - Readings: Norman Chapters 3 & 7; Maeda p1-100; Stone, et.al., Chapters 2-9; Nardi, Chapters 3-5.
- ◆ Session 3 – Saturday, January 7<sup>th</sup>
  - User Interface Design and Implementation
  - To Err is Human
  - Case Study Distributed
  - Readings: Norman Chapters 5 & 6; Stone, et.al., Chapters 8-16; Nardi, Chapters 6 & 7.
- ◆ Session 4 – Saturday, January 21<sup>st</sup>
  - Training
  - User Interface Evaluation

- Multimedia Interfaces
- Design Reviews by Teams
- Case Study Due
- Readings: Stone, et.al., Chapters 20-27; Nardi, Chapters 8 & 9.
- ◆ Session 5 – Saturday, February 4<sup>th</sup>
  - Intelligent User Interfaces
  - Making HCI work
  - Information Ecologies
  - Distributed Cognition
  - Ubiquitous Interfaces
  - Log Books due
  - Stone, et.al., Chapters 28-29.
- ◆ Session 6 – Saturday, February 18<sup>th</sup>
  - Topics in HCI
    - a. CSCW – Computer Supported Cooperative Work
    - b. Psychology of Software Development
    - c. Device Design and Anthropometry
    - d. Game Design
    - e. Information Search and Visualization
    - f. Special topics
  - Final Project Report
  - Readings: Norman Chapter 4.

### **Grading Policy**

- Each student will be required to keep a logbook that records on a weekly basis your thoughts on Human Computer Interaction and design for usability either from the lectures, readings and exercises or from your experience as a user of software, technology and things. This logbook will be worth 30% of your grade and should have at least 5 entries, with supplemental pictures or screen shots if appropriate. The logbooks are due at the fifth session.
- Thirty percent of your grade will be based on class and blog participation, the web site critique and the case study.
- A final 40% of your grade will be based on a group project (3 – 6 members in each group) on usability design that will be due at the last session. The first session will provide a selection of topics for this project and an outline of the format for the final report. During the second and fourth sessions the team will present interim reports on the progress of the project and during the sixth session the team will present the interface design during a poster session at lunch before the class. The projects will be voted on by class members and the winning project will be inscribed on a plaque in the EMTM office, receiving glory and fame forever.