Columbia University
Seminar in Human Factors Design Spring 2015

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Textbook:
- How to Think Straight About Psychology Keith Stanovich - Harper Colins
- Interaction Design (2011) 3rd addition Preece, Rogers and Sharp – John Wiley

Course Goal
- To explore methodologies and tools that facilitate the integration of psychological and human factor research in the design of new products and processes

Course Requirements
- Conduct class room discussions on assigned readings
- Outline Interaction Design
- Select and critique human factor research articles
- Design and conduct a usability test of two competing products. Based upon these results identify, design and evaluate alternative design enhancements.
- Propose an “after graduation” human factor design/research project

Readings
- Introduction to Logic Copi (1978) Informal Fallacies, Macmillan and Collier
- Conversations with Socrates (126 – 130) Xenophon, Barnes and Nobles
- Other articles will also be assigned
- Human-centered design processes for interactive systems ISO 13407
- Common Industry Format for Usability Test Reports ANSI NCITS 354-2001

Journals for Review
- Journal of Applied Psychology
- Journal of Cognitive Engineering and Decision Making
- Ergonomics
- Human Factors – The Journal of the Human Factors & Ergonomics Society
- Proceedings of the Human Factors & Ergonomics Society
- Interactions - ACM
- Ergonomics in Design

Recommended:
- Human Factors and Ergonomics in Consumer Product Design – Uses and Applications
(2011) W. Karwowski, M. M Soares & N. A. Stanton, - Taylor & Francis


• Usability Testing Essentials (2011) C.M. Barnum - Elsevier

• Patient Safety – A Human Factor Approach (2011) S Dekker, Ashgate

• Handbook of Human Factors in Medical Device Design (2011) M.B Weinger, M.E. Wiklund & D.J. Gardner-Bonneau – Taylor & Francis


• Designing The User Interface (2010) B Shneiderman & C Plaisant, Addison Wesley


• Universal Usability designing computer interfaces for diverse users (2007) J. Lazar - Wiley

• About Face (2007) A. Cooper, A Reimann, D Cronin – Wiley

• Press On (principles of interaction programming) (2007), H Thimbleby – MIT press


• Just Culture (2007) S Dekker, Ashgate


• Usability and Internationalization of Information Technology (2005) N. Aykin – (LE)

• User Interface Design and Evaluation (2005) D. Stone, et. al. – Morgan Kaufmann


• The Handbook of Task Analysis for Human-Computer Interaction, 2004, S, Diaper & N Stanton. Lawrence Erlbaum (LE)

• Web Bloopers (2003) J. Johnson - Morgan Kaufmann


• Designing for Situational Awareness (2003) an approach to user centered design. Endsley et al.Taylor and Francis


• Handbook of Human Factors Testing and Evaluation (2002), S Charlton & T. O'Brien - Lawrence Erlbaum (LE)


• Designing Pleasurable Products (2000) P. Jordan – Taylor & Francis


• Don’t Make Me Think (2000) S Krug –New riders publishing

• Human Performance measures handbook (2000) V Gawron - - Lawrence Erlbaum

• Human Factors in Consumer Products (1998) Neville Stanton - Taylor & Francis


• **A Practical Guide to Usability Testing** (1994) J. Dumas Ablex
• **Human Error in Medicine** (1994) M.S. Bonger - Lawrence Erlbaum