650 - Human Computer Interaction

Course Objectives: To build human-centered design skills, so that you have the principles and methods to create excellent interfaces with any technology.

Course Contents:

Introduction: Human-Computer Interaction, The Power of Prototyping, Evaluating Designs, The Birth of HCI

Needfinding: Participant Observation, Interviewing, Additional Needfinding

Rapid Prototyping: Paper Prototyping and Mockups, Video Prototyping, Creating and Comparing Alternatives

Heuristic Evaluation: Heuristic Evaluation — Why and How? Design Heuristics

Direct Manipulation and Representations: Direct Manipulation, Mental Models, Representations Matters, Distributing Cognition

Visual Design and Information Design: Visual Design, Typography, Grids and Alignment, Reading and Navigating

Designing experiments: Designing Studies That You Can Learn From, Assigning Participants To Conditions, In-Person Experiments, Running Web Experiments, Comparing Rates.

Main Reading:
1. Alan Dix, Janet Finlay, Gregory D. Abowd, and Russell Beale, Human-Computer Interaction (3rd Edition), Pearson, 2004.
2. Ben Shneiderman and Catherine Plaisant, Designing the User Interface: Strategies for Effective Human-Computer Interaction (5th Edition), 5th ed., Pearson Addison-Wesley, 2009
3. Donald A. Norman, The Design of Everyday Things, Basic Books, 2002