

cisc3650
human-computer interaction
spring 2012
lecture # 1.1
introduction

topics:

- introduction to the course
- introduction to human-computer interaction
- to do

instructor:

- Prof Elizabeth Sklar, sklar@sci.brooklyn.cuny.edu, AIM screen name: *agentprof*

course web page:

- <http://www.sci.brooklyn.cuny.edu/~sklar/cisc3650>

references:

- Some slides courtesy of Prof Jeremy Cooperstock, McGill University, Québec, Canada

course content

• course description:

- introduction to human-computer interaction (HCI)
- classical and state-of-the-art approaches to HCI
- design principles and theories behind HCI and HRI (human-robot interaction)
- methods for evaluating interfaces
- understanding users; social computing
- interfaces for a range of devices (e.g., mobile devices, robots, virtual reality)

• prerequisite:

- (CISC 3120) or (CISC 3150) or (CISC 3110 and knowledge of Java)

• requirements:

- readings (provided in class — no textbook!)
- USB Flash drive (for labs)
- attendance
- assignments
- exams

course structure

• 6 units

- I. Design Principles
- II. Evaluating Interfaces
- III. Understanding Users
- IV. Devices
- V. Social Computing
- VI. Human-Robot Interaction

- each unit has lectures and labs
- the lectures will be held in 5122 N
- the labs will be hands-on sessions using computers in 5301 N
- the assignments will be:
 - written assignments
 - design documents
 - software prototypes

- your grade =
 - assignments 30%
 - labs 25%
 - midterm exam 15%
 - final exam 30%

• late policy:

the following PENALTY applies to assignments that are submitted after the due date:

submitted late by more than	but less than or equal to	penalty
6 hours	1 day (24 hours)	10%
1 day	3 days	25%
3 days	5 days	50%
5 days	7 days**	75%

*After 7 days late, I won't accept it any more.

sources

- *Human-Computer Interaction, 3rd edition.* by Alan Dix, Janet Finlay, Gregory D. Abowd and Russell Beale. Pearson/Prentice Hall (c) 2004.
- *JavaScript: The Definitive Guide, 6th ed..* by David Flanagan. O'Reilly Media (c) 2011.
- *Learning Android.* by Marko Gargenta. O'Reilly Media (c) 2011.
- *Web Usability: A user-centered design approach.* by Jonathan Lazar. Pearson Education / Addison Wesley (c) 2006.
- *Designing Interactions.* by Bill Moggridge. MIT Press (c) 2007.
- *The Design of Everyday Things.* by Donald A. Norman. Basic Books (c) 2002.
- *HTML5: Up and Running.* By Mark Pilgrim. O'Reilly Media (c) 2010.
- *Designing the User Interface: Strategies for Effective Human-Computer Interaction, 5th edition.* by Ben Shneiderman and Catherine Plaisant. Pearson/Addison Wesley (c) 2010.
- *Leonardo's Laptop: Human needs and the new computing technologies.* by Ben Shneiderman. MIT Press (c) 2003.
- *Designing Interfaces, 2nd edition.* by Jenifer Tidwell. O'Reilly (c) 2011.

about me

- undergrad: Barnard, CS major/English minor, BA 1985
- grad school: Brandeis University, MA 1997, PhD 2000
- prior industry and teaching experience:
 - MIT Lincoln Laboratory
 - Monash University and University of Melbourne, Melbourne, Australia
 - Boston College, Massachusetts (not far from Fenway Park)
 - Columbia University (uptown somewhere...)
 - CUNY Brooklyn College, since Fall 2005
- research areas: *artificial intelligence and multi-agent systems*
 - human/multi-robot teams
 - agent-based modeling of human behavior (e.g., in games)
 - data mining and visualization
- more on my home page: <http://www.sci.brooklyn.cuny.edu/~sklar>

a good interface should make life easy

- technology should not be hard to use
- "In order to humanize a world that uses technology as an infrastructure for education, healthcare, transportation, communication, work and other areas, we must develop these technologies in a way that serves people first." (Cooperstock)
- a cell phone should be as easy to use as a doorknob!
- a washing machine should be easy to wash clothes in!
- example: LG WM2277HW front-load stackable washing machine (from *The Design of Everyday Things*, by Donald Norman)



the (r)evolution of computers... and interfaces!



computers 40 years ago

computers today

the first part of this course is about design

- take 5 minutes and draw a design for a baby stroller

- now swap drawings with the person sitting next to you
- do you know how to use their stroller?
- do you know what the parts do?

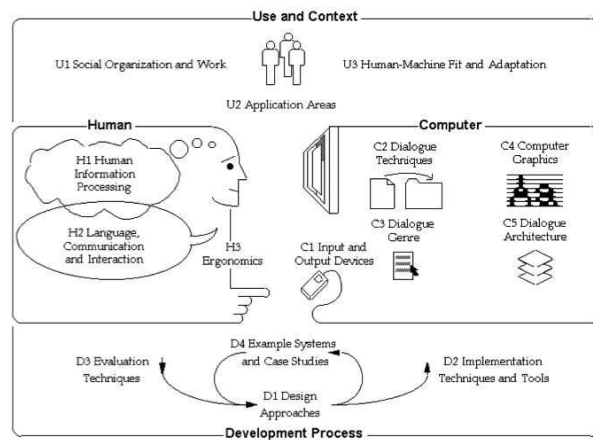


- did your stroller (or your neighbor's) look like one of these?

human-machine interaction is about:

- humans and machines working together to perform tasks
- humans and machines "communicating" with one another:
affordance
feedback
- machines taking advantage of humans' capabilities
- humans taking advantage of machines' capabilities
- *interfaces* that facilitate interaction
- achieving *usability*

ACM SIGCHI Curricula for Human-Computer Interaction



videos

- xerox star
- apple lisa
- the human interface

to do

- in class:
 - fill out pre-semester survey and give it to me before you leave today
- at home:
 - check out the class web page:
<http://www.sci.brooklyn.cuny.edu/~sklar/cisc3650>
 - read the handout: Norman *The Psychopathology of Everyday Things*
 - get a USB flash drive if you don't already have one
- next class:
 - meet in room 5310 N