

January 14, 2014

ENGR110/210

Perspectives in Assistive Technology



David L. Jaffe, MS



Margaret Mongare



Professor Drew Nelson



Proadpran P. Punyabukkana, PhD

Questions?



Don't have time to work on a project this quarter?

- Take ENGR110/210 for 1-unit now
- Work on an assistive technology project as independent study later or next Winter Quarter in ENGR110/210 (with approval of your faculty advisor)
- Work on an assistive technology project in CS194 or ME113
- Work on an assistive technology project this summer with SURI (rising ME juniors and seniors)

Individual Projects

- Consider the these options:
 - Assistive technology topic
 - Paper design of an assistive technology device
 - Work of art
 - Aftermarket aesthetic, functionality, usability design
- Interview an individual with a disability. This could include: a family member, a friend, a classmate, a community member attending class, or others that I can suggest
- Report on their lives, challenges they have faced, successes they have achieved, desires for their future, assistive technology they use, and problems they have experienced with them.
- Meet with Dave to agree on project

Team Projects

- Ok for more than one student team to work on some of the popular project suggestions
- Ok for teams to share background tasks
 - Driving to the facility
 - Interviewing project suggestors
- Each team must address a separate problem

Team Project Selection

- Consider project offerings or suggest a student-defined project
 - Freshmen & Sophomores must work in teams of 2 or 3
- Contact project suggestor for more information & access to users
- Check website for students' project preferences
 - <http://engr110.stanford.edu/preferences.html>
- Inform me of team members (no more than teams of 3) - Friday
 - Project name
 - Team members
 - Name of your team
 - Name of your project
 - Name of your device (after it develops a “character”)
 - Catch phrase
 - Logo

Team Project Selection

Since there is no guarantee that other students will have the same project interests, you should be prepared to do one of the following:

- convince others to work with you on one of your selected projects
- consider working with another student on a project he/she has chosen
- work on a project you selected as a team of one

Team Member Solicitation

- Teams looking for an additional member
- Student looking for a team

Engineering Design Process

- Understand the problem (empathy & ethnography) and how it affects the person experiencing it
- Determine the need (a judgment)
- Research what has already been done and why it hasn't fully solved the problem
- Brainstorm many design concepts
- Select a concept
- Fabricate, test, evaluate, **quickly** repeat
- Report and present results
- Reflect on your experience

Engineering Design Process

- Does not include:
 - Building to another's vision
 - Making incremental improvements
- Utilize project resources and team skills
 - PRL and Room 36 (equipment and TAs)
 - Person who suggested project
 - Course resource people
 - Dave
- Make and justify your project decisions

Project Documentation

- Lab notebooks not required
- Diary for your Individual Reflection
- Photos and short videos strongly suggested
 - Working with a person with a disability
 - Illustrating your design process
 - Prototypes

Work with Diligence

- What is the most precious resource?
- 7 weeks of class left to work on your projects
- Mid-term in 4 weeks for team projects

Miscellany



1. Weblinks and photos added to lecture webpages
2. Student Expectations - Suggestion Box
 - <http://enr110.stanford.edu/suggestion.html>
3. PRL Safety Orientation & Shop passes
4. Last bits:
 - Remembering names
 - On your team
 - On your side
 - Good grades
 - Ammunition
 - Test questions

Thursday, Jan 16th



Deborah E. Kenney, MS, OTR/L

**The Transdisciplinary Team: Bridging
the Gap between Consumers and
Products in Rehabilitation Medicine**

Tuesday, Jan 14th



Gayle Curtis - UX Design Consultant



John C. Tang, PhD - Microsoft Research

Need Finding for Assistive Technologies

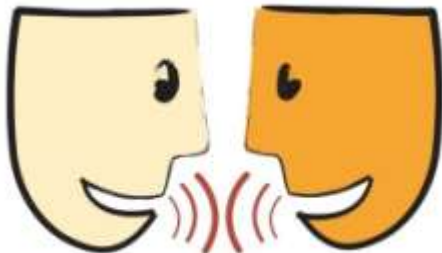
Short Break



Break Activities



- Stand up and stretch
- Take a bio-break
- Text message
- Web-surf
- Respond to email
- Talk with classmates
- Reflect on what was presented in class



Short Break



Laptops Galore

