

January 15, 2013

# ENGR110/210

## Perspectives in Assistive Technology



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Professor Drew Nelson

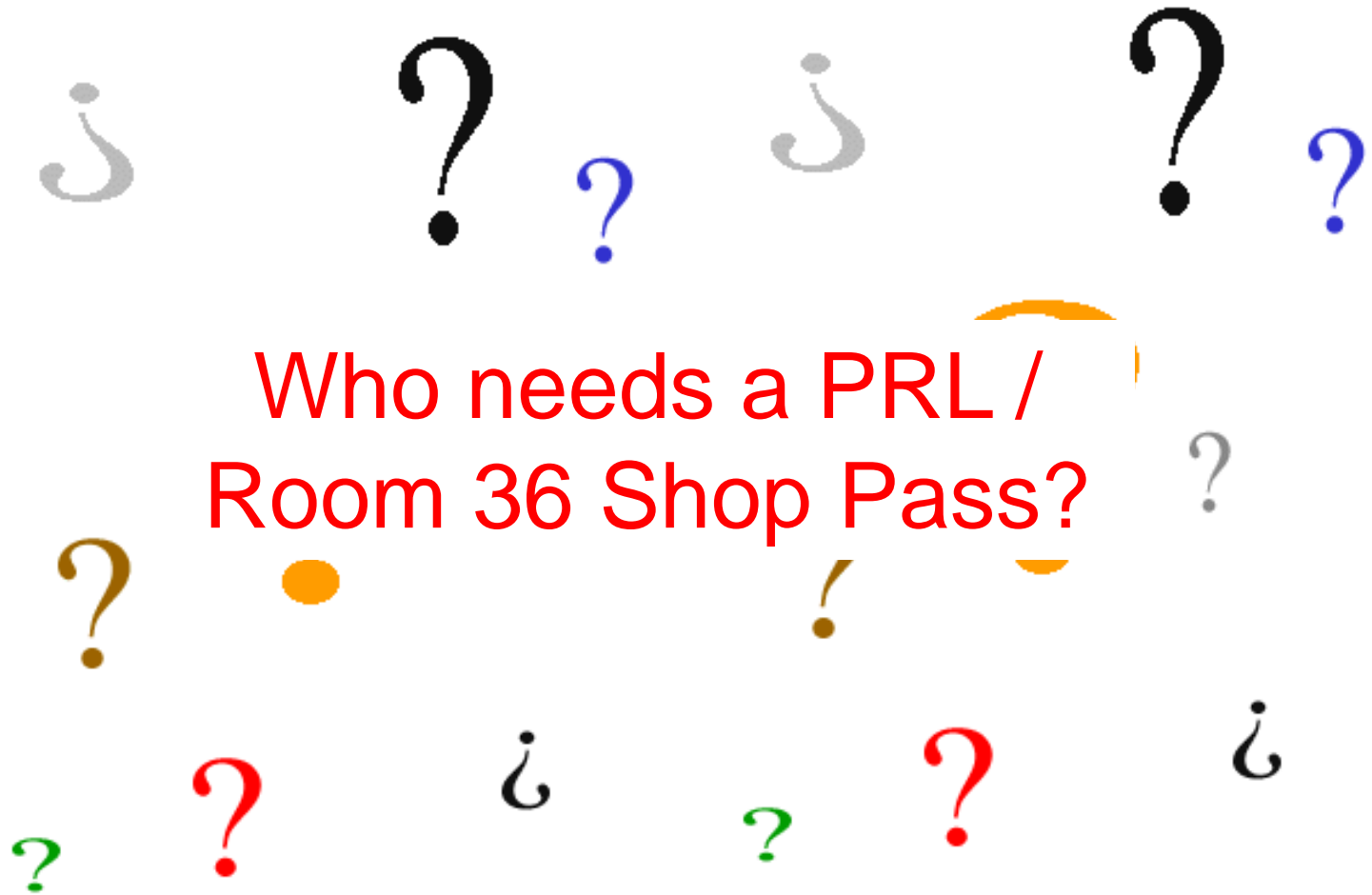


Krystal Le

# Questions?



# Questions?



Who needs a PRL /  
Room 36 Shop Pass?

# 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 SURJ (rising juniors and seniors)

# RAFT Projects

- Ok for several student teams to work on RAFT projects
- Explore designs:
  - for new accessible activities
  - to make existing activities accessible
  - that generally address the needs of learners with disabilities
- Ok for teams to share background tasks
  - Driving to RAFT
  - Interviewing students and teachers

# People Projects

In your quest to "Save the World", how many people do you have to "save"?

Hint - the answer is between 0 and 7 billion



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All people are responsible for one another -  
to save one person is to save the world.

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Hint - the answer is between 0 and 7 billion

Seek out projects that involve  
interacting with an individual with a disability



# Team Project Selection

- Consider project offerings
- Contact suggestor for more info
- Email top project preferences to Dave **immediately**
- Check website for student's project preferences
  - <http://engr110.stanford.edu/preferences.html>

# 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

# Project Selection & Team Formation

- For those working on **team** projects:
  - Send me your top 3 project interests **immediately**
  - Form teams **by end of the day this Friday**
  - Inform me of team members (no more than teams of 3)
    - Freshmen & Sophomores must work in teams of 2 or 3
  - Name of your team
  - Name of your project
  - Name of your device (after it develops a “character”)

# Engineering Design Process

- Understand the problem  
(and person experiencing the problem)
- Determine the need
- Research what has already been done
- Brainstorm design concepts
- Select a concept
- Fabricate, test, evaluate, **quickly** repeat
- Report / 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
  - Person who suggested project
  - Course resource people
- Make and justify your decisions

# 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

# Project Documentation

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

# Work with Diligence

- 7 weeks of class left
- Mid-term in 4 weeks for team projects



# Student Design Competitions

- Next Generation: Design Competition  
“Empower with Inclusive Design”

Entries due 02/18/2013

<http://www.metropolismag.com/nextgen/>

- RESNA Student Design Competition

Entries due 04/19/2013

<http://aac-rerc.psu.edu/wordpressmu/RESNA-SDC/>

- Other design competitions listed at:

<http://enr110.stanford.edu/competitions.html>

Thursday, Jan 17th



Deborah E. Kenney, MS, OTR/L

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

# Today



Gayle Curtis – UX Design Consultant

John C. Tang, PhD – Microsoft Research

**Need Finding for Assistive Technologies**



# Short Break

