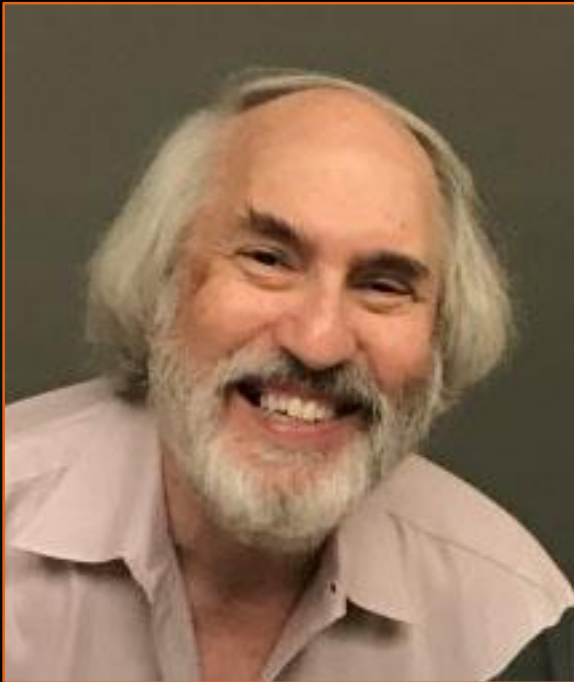


February 1, 2022  
*Issues of Human Interface Design*



# ENGR110/210

## Perspectives in Assistive Technology



David L. Jaffe, MS  
Instructor

16  
Years

# Questions?



Please notify me of your comments, suggestions, and concerns so I can explain / address / correct them.

# Many thanks!

Students working on projects:

- Meeting with me
- Providing updates

Community members:

- Co-designing projects
- Attending class sessions

Guest lecturers:

- Presenting interesting topics



# Upcoming Events



## ► RESNA Student Design Competition



# Upcoming class sessions



- ▶ **Accessible Making: Designing Makerspaces for Accessibility** - Thu, Feb 3<sup>rd</sup> by Zoom  
Katherine M. Steele, PhD, MS
- ▶ **Mid-term Student Project Presentations** -  
Tue, Feb 8<sup>th</sup>
- ▶ **Assistive Robotics** - Thu, Feb 10<sup>th</sup>  
Monroe Kennedy III, PhD
- ▶ **VA Palo Alto Health Care System** - Tue, Feb 15<sup>th</sup>  
B. Jenny Kiratli, PhD & Jeffrey P. Jaramillo, DPT





# Students working on Team Projects



- ▶ Connect with project partner
- ▶ “Understand the Problem”
- ▶ Brainstorming
- ▶ Select Design Concept(s)
- ▶ Sketches, low resolution prototypes
- ▶ Prepare for Mid-Term Presentation and Report
- ▶ Contact me if you have questions about your project direction
- ▶ Weekly - Meet with me or Bennett to discuss project progress, submit reports to both Bennett and me
- ▶ **Mid-Term Reports due Mon, Feb 14<sup>th</sup>**



# Students working on Team Projects

## Mid-term Presentations in 7 days!



- ▶ Mid-term presentations will be 7 minutes
- ▶ Project title, background, problem, aim, design criteria, “understanding the problem” & brainstorming activities, and selected solution, with **low resolution prototype**
- ▶ Send slides to me, **to be run from my laptop**
- ▶ **Don't embed videos - supply YouTube link on slide**
- ▶ Strive to be professional
- ▶ Include feeling & emotion
- ▶ Presentation tips on course website
- ▶ **Signup Sheet for presentation order**

# Students working on Team Projects

## Mid-term Report



- ▶ Mid-term report - 10 to 15 pages of narrative - text and images
- ▶ Suggested format different for fabrication vs non-fabrication projects
- ▶ Include sketches and photos
- ▶ Goal: short, concise, well-written, and highly readable report with few grammatical and spelling errors.
- ▶ Report Writing Tips documents **suggested** report features

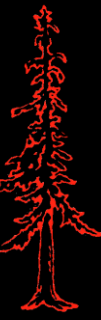


# Students working on Individual Projects



- ▶ **Meet with me to approve your project, get information**
- ▶ Submit project name
- ▶ Contact me if you have questions about your project direction
- ▶ Weekly - Meet with me or Bennett to discuss project progress
- ▶ Submit progress reports to both Bennett & me

# Reminder - Work with Diligence

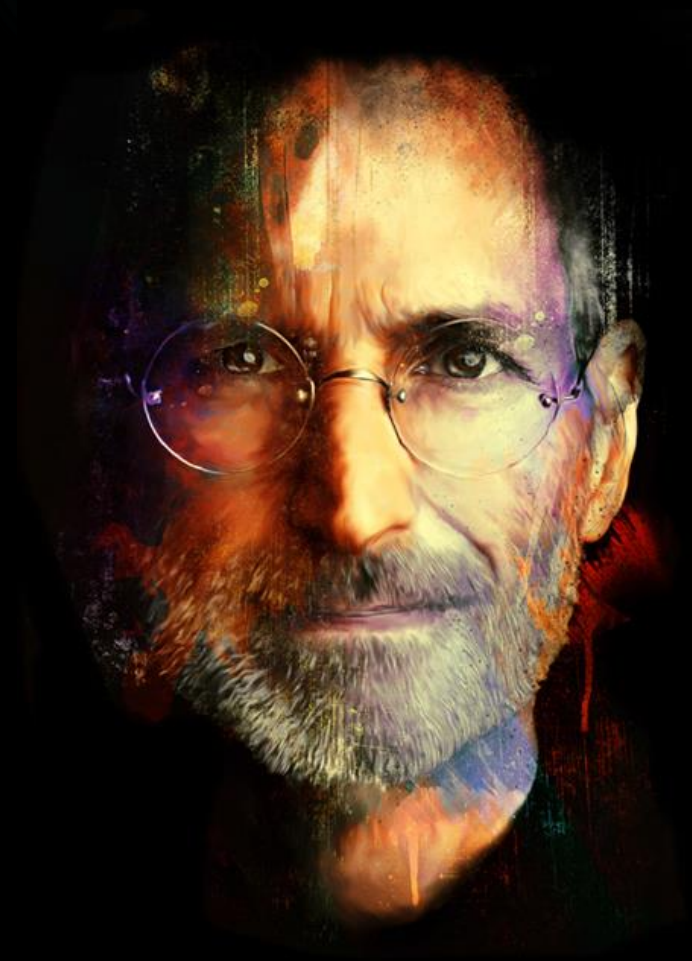


- ▶ Time is your most precious resource
- ▶ 7 days until Mid-term Presentations - Tue, Feb 8<sup>th</sup>
- ▶ Outline your presentation & report

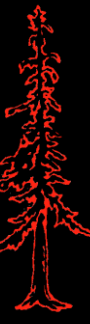


# Steve Job's Quote

- ▶ "You can't just ask customers what they want and then try to give that to them. By the time you get it built, they'll want something new."
- ▶ Most people don't even know what they want until they see it. So sometimes you must give people what they need, not what they're asking for.



# Ethical / Moral Dilemmas Related to Disability



Formally titled  
“Fun with Ethics”



# Making Decisions



1. Everyone evaluates situations and makes decisions everyday
2. As one gets older, these decisions more frequently involve and affect others
3. Tough decisions are often made using a complex combination of upbringing, economics, religion, law, individual notion of what is right, politics, and personal experience



# Situation 1



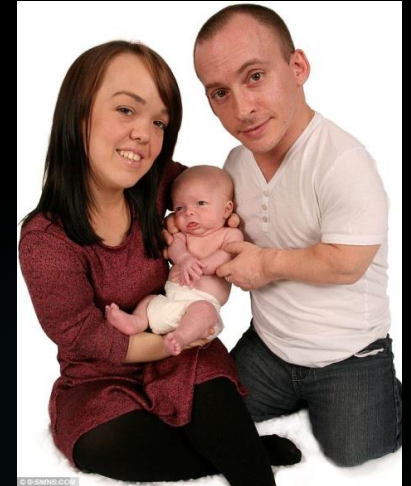
Would it be wrong for a “normal” couple to abort a fetus diagnosed with dwarfism or Down Syndrome?



# Situation 2

If two parents with Achondroplasia - an inherited form of dwarfism - wanted a child who looked like them, would it be wrong for them to terminate a normal-sized fetus?

Too Much Information - MIT Technology Review -  
Jan/Feb 2014 - page 72 - [Link](#)

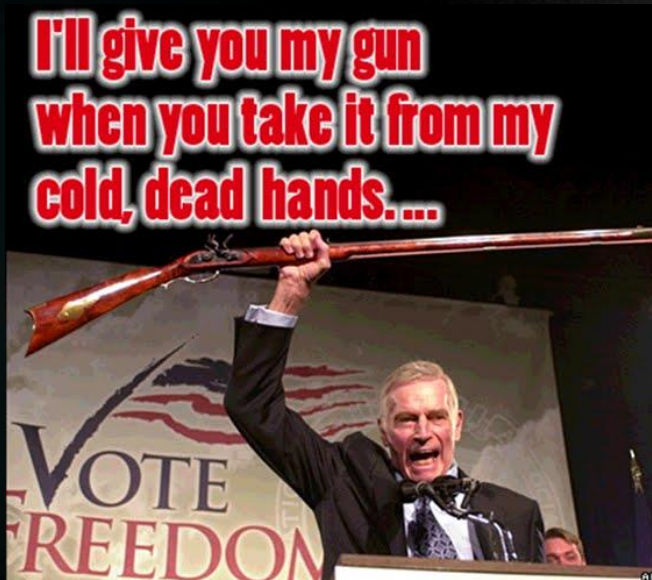




# Situation 3



Should everyone have a right to bear arms?

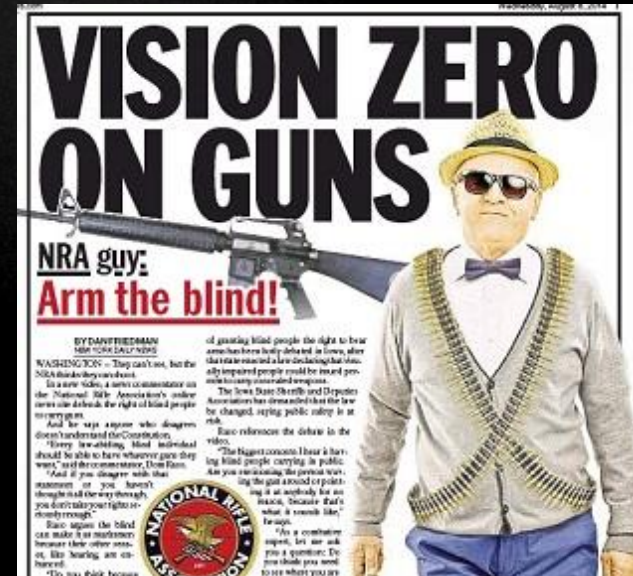




# Situation 3



Should someone **who is blind** have a right to bear arms?



# Situation 4



You are a biomedical engineer working in a spinal cord injury ward. An occupational therapist approaches you with a patient's request. The patient, an individual with quadriplegia, wants a device that would enable him to independently smoke a cigarette.

What do you do?





# Situation 5



You are a sign language interpreter for a deaf woman. Her communication includes a lot of obscenities which causes you much embarrassment and distress.

What do you do?



# Situation 6



As a surgeon, would you approve a heart transplant for someone with a disability?





# Situation 7



As a concerned citizen, would you condone the marriage and subsequent parenthood of a couple, one or both with developmental disabilities?



# Thursday, February 3<sup>rd</sup> - by Zoom



*Accessible Making: Designing Makerspaces for Accessibility*

Katherine M. Steele, PhD, MS

Assistant Professor, University of Washington

Department of Mechanical Engineering

# Today



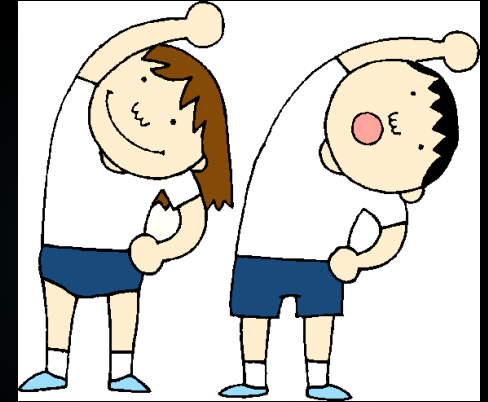
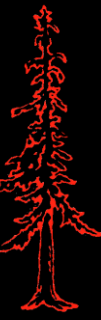
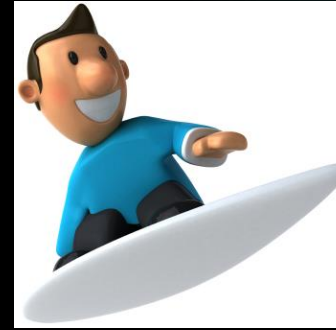
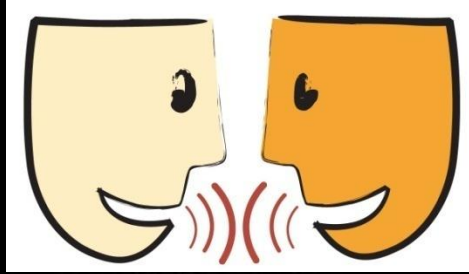
## *Issues of Human Interface Design*

Gary M. Berke, MS, CP, FAAOP

Stanford University School of Medicine

# Break Activities

- ▶ Attendance sheet
- ▶ Presentation Order
- ▶ 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

