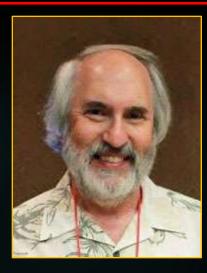
February 12, 2019 The Design and Control of Exoskeletons for Rehabilitation

ENGR110/210 Perspectives in Assistive Technology



David L. Jaffe, MS Instructor



Questions?

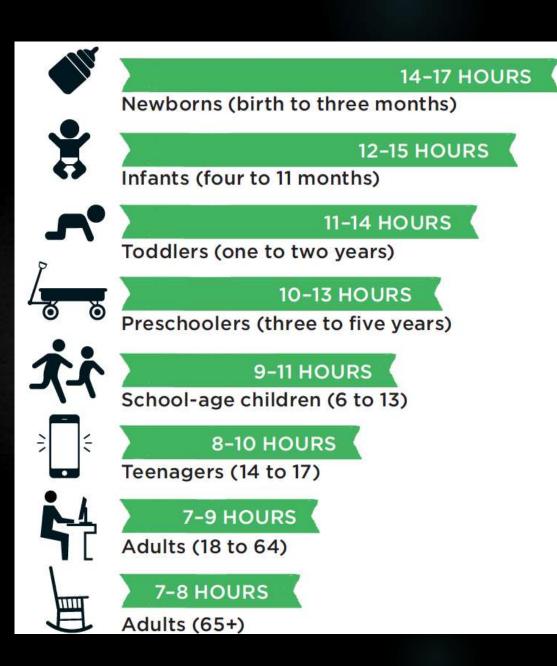






Hours of sleep

Average = 6.63 hours
STDEV = 1.05



Field Trip to the VAPA







Human-Computer Interaction Seminar



Seminar on People, Computers, and Design

Addressing Situationally-Induced Impairments and Disabilities in Mobile HCI Jacob O. Wobbrock, University of Washington

Friday, February 15th 11:30am - 12:30pm Gates B01

Attendance Sheet, Evaluation Form, and Meet with Dave Signup

For all students:

- Attendance Sheet
- Meet with Dave signup

For everyone:

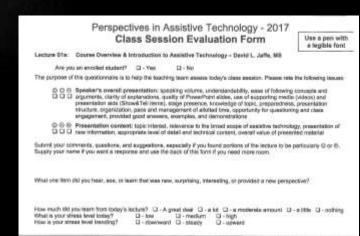
Class Session Evaluation Form

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Sign Up to Mer	et with Dave
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Before class outside Thornton 110 After class in Thornton 120 Other times in Peterson Building, Room 113

Date & Tate	Enter Tearn Rame: & Specify 12 colours Sets 1
Wednesday - January 38 th	
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Thursday - Jensery 19 ⁴⁴	
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Team Project Presentations

- Mid-term Team Project Presentations this Thu, Feb 14th
 - Send me PowerPoint slides or online public link by noon
 - Do not embed videos in slides, add YouTube link on slide
 - 7 minute presentations:
 - ► Tell the entire story
 - Be concise, but avoid every last detail
 - Employ descriptive photos and a short video
 - Show your prototypes as slide images
 - Practice for timing, where to stand, etc
 - Use slide presenter to advance slides
- Mid-term Team Project Reports due Thu, Feb 21st



Mid-term Project Presentation Order

Mid-term Student Team Projects Presentation Order Signup

Thursday, February 14th

Presentations start about 4:40pm

Time slot	Team Name	
1		
2		
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9		

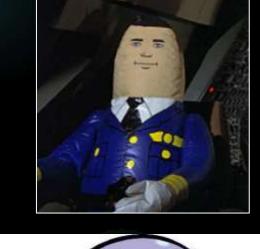
"And the first one now will later be last" - Bob Dylan, "The Times They Are A-Changin'"



Note that the order will be inverted for the final presentation.

Upcoming class sessions

- Mid-term Project Presentations Thu Feb 14th
- Designing Beyond the Norm to Meet the Needs of All People - Peter W. Axelson -Tue Feb 19th
- Field Trip to the Magical Bridge Playground -Thu Feb 21st
- Designing Exoskeletons and Prosthetic Limbs that Enhance Human Performance -Steven H. Collins, PhD - Tues Feb 26th
- Assistive Technology Faire Thu, Feb 28th





Work with Diligence

- ▶ Time is your team's most precious resource
- ► 4 weeks of class left to work on your projects
- Mid-term team presentations on Thursday
- Outline and practice presentation





Mid-term presentations -Thursday, February 14th

Pre-Lecture Discussion Topics

- 22 Ethical / Moral Dilemmas Related to Disability
- 22 In the News New Assistive Technology products and research
- 20 Assistive Robotics Robotic technology benefitting people with disabilities and older adults
- 15 Overview of Accessibility How this design feature relates to products, with many examples
- 15 Ten Commandments of Making Adam Savage's Maker Faire video
- 15 Video Theatre Watch and discuss videos of new products and prototypes
- 12 Vintage Assistive Technology Products and devices from the past
- 12 The Upside of Failure Learning from prototypes that didn't work
- 12 Who is Disabled? Making a determination with limited information
- 12 Innovative Marketing Metrics How we use words to measure and advertise
- 9 Famous people with disabilities Focus on TV characters

10 Commandments of Making

Adam Savage took a few minutes on Sunday, May 18th at the 2014 Maker Faire Bay Area to share what he feels are the "10 Commandments of Making". Braving the somewhat precarious elevated stage of the crowd favorite Life-Sized Mousetrap, Adam addressed the audience with bits of wisdom and jewels of experience. It was obvious from the laughter that many of these insights and observations struck close to home.



10 Commandments of Making

Here is the short version of the commandments according to Adam:

- 1. Make something
- 2. Make something useful
- 3. Start right now
- 4. Find a project
- 5. Ask for help, advice, and feedback
- 6. Share
- 7. Recognize that discouragement and failure is part of the project
- 8. Measure carefully
- 9. Make things for other people
- 10. Use more cooling fluid!

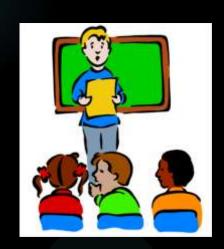




Thursday, February 14th

Mid-term Student Team Project Presentations

- Mean Machine WHILL Recharging Project
- Magical Bridge Team Magical Bridge Playground Project
- Abby's Assistants WHILL Grocery Shopping Shopping Project
- Tray-Iblazers Lap Extender Project
- Kitty Kat Meow Hide-Away Lap Tray Project
- Big Three Pick-up Project
- Travola Lap Tray Project
- Buckle Up Harness Project
- Elevator Pitch Elevator Button Pusher Project



Today





The Design and Control of Exoskeletons for Rehabilitation Katherine Strausser, PhD Ekso Bionics - Principal Controls Engineer

Short Break

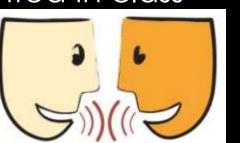


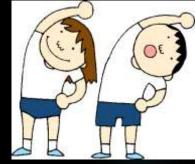


Break Activities



- Sign attendance sheet
- Grab a cookie
- Stand up and stretch
- Take a bio-break
- Text message, web-surf, email
- Talk with classmates
- Reflect on what was presented in class











Adjourn



¿lass dismissed

Laptops Galore





Time for Questions?





End the class



