I am a great believer in luck, and I find the harder I work, the more I have of it.
always remember that while it is **wrong** to use **too few** words, it is often far **worse** to use **too many**

Milo: I never knew words could be so confusing

Tock: only when you use a lot to say a little

Norton Juster
the phantom toll booth
final presentations!
December 6
MIT 2.009 Product Design Processes Presents

HELLO!

PRODUCT LAUNCH
Monday, December 6, 2021 • 7:30 PM Sharp

Notify me when RSVPs Open

Scroll down!
It'll be fun
Overall Logistics

The final presentation will be from 7:30-10:00 PM in Kresge Auditorium on the date indicated in the course schedule. You will need to be in your seats before 7:15 PM!

There are a number of activities that need to be coordinated, so please carefully review the information that follows. In the timeline, note that on Monday there are 16 minute run-through times scheduled between 1-3:35 PM in the auditorium. Guests start arriving by 6 PM so the rehearsal cannot run late! Everything must be ready to go at 6 PM, no exceptions.

GENERAL INFORMATION

There are 7 minutes for each presentation, followed by a 4 minute discussion period and a maximum of 4 minutes for transition between teams. It’s important that you stay within your allotted time to keep the overall presentation moving! The lobby will have displays and audio so that standby ticket holders can watch while they wait, and the Little Theater will also be setup as an overflow venue and waiting area for standby guests. A webcast will be linked on the course home page. Dinner will be provided during the reception after the presentations.

Guests will use a review form to provide feedback but your team’s grade for the final presentation will be determined by your team instructors. Your presentation design and execution is an important component of the review.

The presentation order is:

- Blue Team: flashing light blocking glasses
- Orange Team: curb-climbing wheelchair
- Purple Team: auto wire solderer
- Red Team: modular prosthetic hand attachments
- Green Team: heating/cooling bandage
- Silver Team: airplane aisle wheelchair
- Pink Team: conformational clamp
- Yellow Team: portable paint matcher/mixer
business consultation
costing workshop
logo tutorial
logo workshop
TUESDAY

presentation drop in
set updates
presenting technical info
THURSDAY

prepare for the unexpected
5:30 PM
35 minute practice sessions
(no surrogates)
sets move 4:00 PM, basement
class video at Kresge 6:30 PM
(hardhats!)
blue, green, red testing?
<table>
<thead>
<tr>
<th>Sunday</th>
</tr>
</thead>
<tbody>
<tr>
<td>presentation practice, 10 AM</td>
</tr>
<tr>
<td>slide upload 3:30 PM</td>
</tr>
<tr>
<td>rehearsal onstage 4-11 PM</td>
</tr>
<tr>
<td>(always enter backstage)</td>
</tr>
<tr>
<td>digital brochure 5 PM</td>
</tr>
<tr>
<td>(product sheet)</td>
</tr>
</tbody>
</table>
final slide upload 11 AM
(no changes)
final slide check 1-3:30 PM
name tag pickup 6:00 PM
seated before 7:15 PM
5:15-6:00 PM: final foyer cleanup, pickup name cards
(all coats, bags, supplies go in practice room, name cards will be in room)

6:00 PM: Pappalardo lab closes

6:00 PM: Guests arriving

6:15 PM: Standby tickets

6:45 PM: Doors open

7:00 PM: Discussion with blue, backstage

7:15 PM: You MUST all be seated in your team’s area
practice room
name tags
Students only
Route to backstage  Alyssa is guide
7:00 PM: Blue presenters meet me backstage to coordinate start.
7:15 PM: Blue presenters and Q&A participants backstage.
7:15 PM: Blue projectionist assistant sit with projectionist.
7:15 PM: Orange presenters report backstage.
7:20 PM: Orange projectionist assistants sit with projectionist.
When Q&A starts, team presenters, set setup crew leave for move backstage*; team Q&A participants leave for backstage.

<table>
<thead>
<tr>
<th>Color</th>
<th>Team toaster</th>
<th>Team Q&amp;A toaster</th>
<th>Team setup toaster</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue</td>
<td>Purple</td>
<td>Orange</td>
<td></td>
</tr>
<tr>
<td>Orange</td>
<td>Red</td>
<td>Purple</td>
<td></td>
</tr>
<tr>
<td>Purple</td>
<td>Green</td>
<td>Red</td>
<td></td>
</tr>
<tr>
<td>Red</td>
<td>Silver</td>
<td>Green</td>
<td></td>
</tr>
<tr>
<td>Green</td>
<td>Pink</td>
<td>Silver</td>
<td></td>
</tr>
<tr>
<td>Silver</td>
<td>Yellow</td>
<td>Pink</td>
<td></td>
</tr>
<tr>
<td>Pink</td>
<td>Yellow</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* at this time, the team projectionist’s assistant moves to sit near projectionist
see the back of your name card!
confidence monitor is at back of theatre

live video

slides (16:9)

live video or on-stage feed

reveal gate

reveal gate

entrance is behind set

stage exit
confidence monitor
is at back of theatre

live video

slides (16:9)

live video or on-stage feed

reveal gate

reveal gate

entrance is behind set

stage exit
Your set will have been moved onstage in darkness
You will enter behind the reveal gates
You hear your team introduction by color
Stage lights go on
Your slides and background set come on
Gates of HELLO open
You’re on!
don’t introduce your presentation by team color

team members participating in Q&A wait backstage during presentation

when presentation is finished, presenters should end with thank you

Q&A moderator will lead team members waiting backstage onstage

**do not ask** if there are any questions, no question slide.

finish with **a strong landing image**

Q&A moderator will moderate question session
**do not enter** or leave Kresge seating area **while** another team is **presenting**

watch on screen in lobby until team’s presentation is over, then return to your seats

**be very quiet** when backstage

backstage is separated from onstage only by a curtain

**be very quiet** in Kresge foyer during the presentations

doors to auditorium will be open

start moving backstage **on-time**! Communicate with staff member

no elevator use or moving onto backstage during presentations
10:20 - 11:05 PM: **eat, talk to guests at booth**

11:05 PM: Return materials to Pappalardo lab
a final mini quiz!

to help make a graphic/slide understandable, use a ________

and, keep in mind that

less is _____________________________________________________
develop an understanding of the engineering activities involved with designing a new product

develop an appreciation for the significance of societal contributions that can be made as a technological innovator

user centric/driven design
improve **creative-thinking** capability and ability to identify the most significant **opportunities**

improve expertise in constructing **models for reasoning** about design alternatives (estimation, sketch models, geometric models, mockups and prototypes)

improve **engineering expertise** and proficiency in building prototypes

learn about and **experience** methods for working in **large teams**

improve **presentation skills** using a wide variety of media
I learned it at…

- did not elsewhere
- job
- grad school
- MIT ungd
underlying sciences
underlying mathematics
mechanics of solids
mechanical behavior of materials
systems dynamics and control
dynamics
fluid mechanics
thermodynamics
heat transfer
engineering design process
manufacturing
engineering reasoning and problem solving
experimentation and knowledge discovery
system thinking
personal skills and attributes
professional skills and attitudes
independent thinking
teamwork
communications
testing

designing

developing an idea

market context

business context

societal context

how and why
I learned it at...

- did not
- elsewhere
- job
- grad school
- MIT ungd

ME core
professional skills
how and why
I use this knowledge…

proficiency that was expected of me…
learned at MIT how and why professional skills were used pervasively. Data consistent across gender and career paths (engineering, management, consulting, other). 2.009 goals aim at several of the gaps.
Which is clearer?

A
Which is clearer?
Which is clearer?
Which is clearer?
Which is clearer?

A
Which is clearer?
Which is clearer?
Which is clearer?

A

Hello
Which is clearer?

B

Hello
Which is clearer?

A

Hello

B

Hello
Color Wheel

Opposites sides are contrasting colors
Which is clearer?

A

hello
Which is clearer?
Which is clearer?

A

hello

B

hello
Readability

Fast Track Appetizers

Escargot
$7.50
Shrimp Cocktail
$8.00
Tempura
$6.00
Readability

Fast Track Entrees
Salmon Steak
$19.95
Stuffed Trout
$18.00
Filet Mignon
$21.95
Readability

A

**Fast Track Appetizers**

- Escargot $7.50
- Shrimp Cocktail $8.00
- Tempura $6.00

B

**Fast Track Entrees**

- Salmon Steak $19.95
- Stuffed Trout $18.00
- Filet Mignon $21.95
Traffic Deaths and Speeding
Traffic Deaths and Speeding

Before stricter enforcement

After stricter enforcement
Traffic Deaths and Speeding
Traffic Deaths, Speeding and Trends

A

Before stricter enforcement

After stricter enforcement

B

1951 1953 1955 1957 1959

1953 1955 1957 1959

275 300 325

325 300 275 250 225
Variable relationships
Variable relationships

Death Rate Plotted against Age,
Prospective Study of Mortality in U.S. Veterans

Death Rate per 10,000 Man-Years

Smokers
Non-Smokers

Age (in Years)
Variable relationships
Variable relationships

A

Death Rate Plotted against Age,
Prospective Study of Mortality in U.S. Veterans

Death Rate per 10,000 Man-Years

Age (in Years)

B

Death Rate (Log Scale) Plotted Against Age

Log Death Rate per 10,000 man-years

Age
Variable relationships

Death Rate Plotted against Age,
Prospective Study of Mortality in U.S. Veterans

Death Rate per 10,000 Man-Years

Age (in Years)

Smokers
Non-Smokers
Variable relationships

A

B

Smoking and Death Rates Shown By Age

Non-Smokers
Smokers

Age (Years)
0

Death Rate (per 100,000 Man Years)
Variable relationships

A

Death Rate Plotted against Age,
Prospective Study of Mortality in U.S. Veterans

B

Smoking and Death Rates Shown By Age

Non-Smokers
Smokers

Death Rate (per 100,000 Man Years)
Variable relationships

B

![Chart showing smoking and death rates by age](image)
Variable relationships

A

Surgeon General Reports
Aging is the Primary Cause of Death

B

Smoking and Death Rates Shown By Age

- Non-Smokers
- Smokers

Death Rate (per 100,000 Man Years)
Trends
Trends

SAT scores and funds for education rise together

- Per Pupil Expenditures
- SAT Score
Trends

SAT scores soar despite sluggish funding of education
Trends

A

SAT scores and funds for education rise together

B

SAT scores soar despite sluggish funding of education
Scale of effect
Scale of effect

The purchasing power of the dollar declined most sharply during the Nixon administration.
Scale of effect
Scale of effect

The purchasing power of the dollar declined most sharply during the Nixon administration.
Presenting data

Key questions

How to?

- Convert abstract information into a visual representation
- Preserve the underlying meaning
- Provide new/desired insight
- Make meaning easily accessible: direct representations

Tufte, envisioning information (details in of-interest section)