EE/CpE 423
Senior Design
Fall 2016
Class 6 – 10/4/16
Agenda

• Time line
• Web sites, other items
• Presentation schedule
• Presentation considerations
Senior Design Tasks – Fall ‘16

- Identify project
- Form group
- Select advisor
- Develop project proposal
- Publish project proposal
- Develop final design report
- Submit parts list, final design report
- Oral/slide presentations

Weekly status reports
Effectiveness surveys

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Senior Design Web Sites

• We will getting Senior Design group web sites set up. I will send out information on the logins on tiger.ece.stevens.edu when they are operational.

• In the meantime, you can find previous ECE web sites at tiger.ece.stevens-tech.edu/15-16/16grpN
  N is the group number, replace 15-16 and 16 with the appropriate class year

• Web sites will be graded on 11/15 and the 15th of every following month (obviously, no changes are expected from 12/15/15 to 1/15/16, but any that occur are a plus)
Senior Design Project Description

• Your project should be well underway and you should be able to describe it in enough detail to interest a potential sponsor.

• I am creating a book of high level project descriptions to circulate and need your input by Friday, October 7.
Fall Presentations

• This year we will have presentations on November 29, December 1 (Thursday), 6 and 8 (Thursday). There are 16 groups, so this means up to 5 presentations per day in a 100 minute time period, or about 20 minutes per presentation, including time to switch.

• Any group that has not selected a time slot by **Friday, October 28** will be randomly assigned a time slot.

• **WHEN YOU REQUEST A TIME SLOT, INDICATE AT LEAST THREE PREFERENCES (DAY AND TIME), IN CASE YOUR FIRST CHOICE IS ALREADY TAKEN. IF YOU DO NOT INDICATE ALTERNATE CHOICES, AND YOUR FIRST CHOICE IS TAKEN, YOU GO TO THE BACK OF THE LINE.**

• I will try to keep the list of presentations up to date on my web site as requests come in. Refer to that list first when making a request [http://personal.stevens.edu/~bmcnair/senior_design-16-17/index.htm](http://personal.stevens.edu/~bmcnair/senior_design-16-17/index.htm)

• You should coordinate your choice of a time slot with your advisor so they can be present during your presentation (if I am your advisor, there is no need to coordinate – I’ll be here).
Generic Guidelines For A Good Proposal or Presentation

• Consider addressing the following questions:

  – What are you trying to do?

  – How is it done now?

  – What are the limits of current approaches?

  – How will your efforts influence the current limits?

  – If you succeeded beyond your wildest dreams, what would the impact be?

  – How will you be measuring progress to your end goals? How will you know if you are moving ahead or are stuck?

  – What is this effort likely to cost? What is the schedule?
Presentation Suggestions - 1A

• Many psychological studies have shown that the right and left halves of the human brain process information differently
  – The Left Brain processes text, speech and symbolic communications
  – The Right Brain processes images, diagrams

• If your slide consists only of text, like this one, your slide and oral presentation are only engaging half of the audience member’s attention. Some people do not process written or spoken information well - you are missing them altogether

• Text-only slides are:
  – boring – especially if you read the entire slide
  – easy to forget
  – hard to skim through if you are pressed for time

• If you write everything, why are you needed for the presentation in the first place? Just send a memo
Presentation Suggestions - 1B

*Graphics slides are more:
- engaging
- memorable
- flexible

\[ \Phi(x) = \int_{-\infty}^{x} \frac{1}{\sqrt{2\pi}} e^{-\frac{t^2}{2}} dt \]

...turn left at the third street, then turn right onto ...

Text audio symbols

Images relationships

\[ \Phi(x) = \int_{-\infty}^{x} \frac{1}{\sqrt{2\pi}} e^{-\frac{t^2}{2}} dt \]
Presentation Suggestions - 2

• The standard instructions to a journalist:

<table>
<thead>
<tr>
<th>Who</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>What</td>
<td></td>
</tr>
<tr>
<td>Where</td>
<td></td>
</tr>
<tr>
<td>When</td>
<td></td>
</tr>
<tr>
<td>Why</td>
<td></td>
</tr>
<tr>
<td>How</td>
<td></td>
</tr>
</tbody>
</table>
Presentation Suggestions - 2

- The standard instructions to a journalist:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Who</td>
<td>List group members and advisor on Title Slide</td>
</tr>
<tr>
<td>What</td>
<td>Describe the problem you are trying to solve</td>
</tr>
<tr>
<td>Where</td>
<td>Indicate the course number on Title Slide</td>
</tr>
<tr>
<td>When</td>
<td>Indicate the date, semester on Title Slide</td>
</tr>
<tr>
<td>Why</td>
<td>Describe the background of the problem - why is it interesting?</td>
</tr>
<tr>
<td>How</td>
<td>Describe your approach</td>
</tr>
</tbody>
</table>
Presentation Suggestions - 3

- Structure of any good presentation:

| Tell them what you’re going to tell them |
| Tell them                                   |
| Tell them what you told them               |
Presentation Suggestions - 3

• Structure of any good presentation:

| Tell them what you’re going to tell them | The outline |
| Tell them | The body |
| Tell them what you told them | The summary |
Your Presentation

• Some items to consider in your presentation:
  • A top-down presentation is usually the easiest to follow
    – It is also the easiest to adapt to the time available and the level of understanding of the audience
    – Back-up material is good, but you don’t have to use it all.
  • Besides the Who, What, Where, When, Why, How, some specific questions to consider:
    – What is the problem you are trying solve?
    – Who is the customer?
    – How has the problem been approached in the past?
    – What are the current limits?
    – What are you proposing to do to remove the limits?
    – What impact will your solution have?
    – What challenges do you envision and how will you get around them?
Summary

- Schedule your presentation with the advisor’s calendar in mind. They need to grade your work, to avoid duplicating your presentation, find when they may be available and invite them.

- Structure the presentation to be effective

- Emphasize graphics to maximize impact

- Anticipate questions/issues and plan to address them

- Rehearse!
Summary

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• Rehearse!

This is 16 point Arial (~ Tahoma, Helvetica, Lucida Sans)

Avoid anything smaller (this is 14 point)

Serif fonts (this is 16 point Times Roman) are harder to read than sans-serif fonts
AVOID!

- Animations
  - They look silly in a professional presentation
- UNAA (or at least UNAAWPD)
- Disjointed transitions between sections
- Speling errers ("Fore yeers ago, I cudn’t evun spel injuneer, now I are one")
- Irrelevant clip art