

## Lecture #13

### Reading Assignment:

Chapter 4 in Engineering Fundamentals – An Introduction to Engineering, 3<sup>rd</sup> Edition, by Saeed Moaveni.

### Communication Skills and Presentation of Engineering Work

As an engineering student it is important to develop your skills in written and oral communication. You will likely be part of many groups or teams and will often be required to submit reports and give presentations. These are important skills because most working engineers will similarly be tasked with writing reports and technical documents, developing proposals, and giving presentations. You may easily find yourself at a preliminary design review giving a presentation on the status of a project. Microsoft PowerPoint is the dominant presentation software today and a working knowledge of this software will be a useful asset to most engineers.

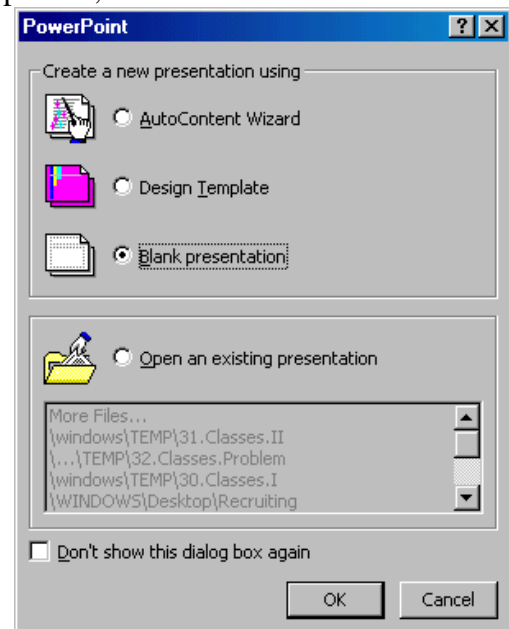
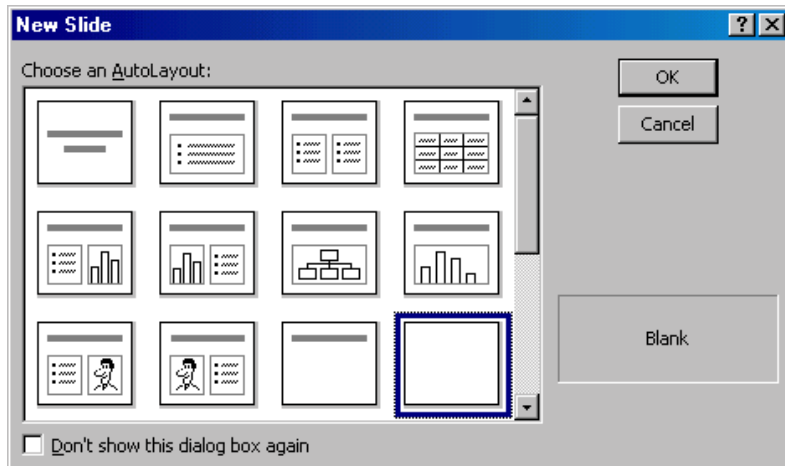
### Microsoft PowerPoint

PowerPoint is a software package that allows you to present materials in a slide show type format that is ideal for oral presentations. A wide variety of objects, such as text, pictures, equations, tables, graphs, sound bytes, video clips, and more, can be inserted into PowerPoint slides which can then be presented using a computer projector. Many special effects for enhancing the presentation are available with PowerPoint. Engineering students will find PowerPoint to be very useful for presentations on class projects and design competitions. Working engineers will find PowerPoint to be very useful for meetings, demonstrations, presentations, sales pitches, and more.

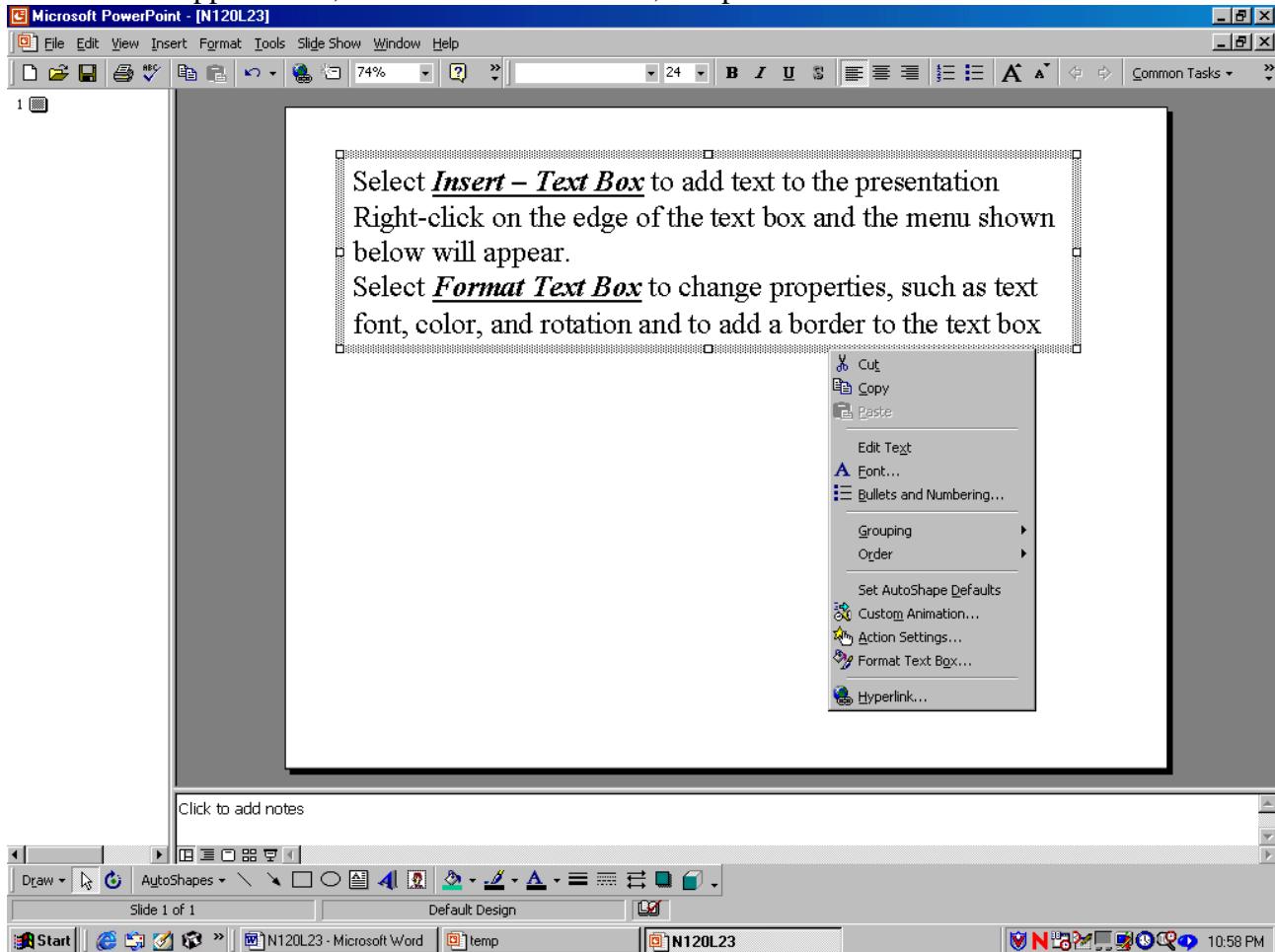
### Getting Started with PowerPoint

When PowerPoint is first started, the box to the right will appear giving the user three choices in how to start building a presentation. Although the AutoContent Wizard and the Design Template selections offer many built in designs for your use, this document will focus on beginning with a Blank presentation.

After selecting Blank presentation, the New Slide box will appear (shown below). Many formats are available which include text boxes, pictures, charts, etc. At this time the blank layout in the lower right corner will be selected.



The screen below shows how text boxes can be easily added to a presentation. Text can also be copied from another applications, such as Microsoft Word, and pasted into a text box.



## **Adding Slides**

Select **Insert – New Slide** - blank slide

Note that the slide organizer on the left side of the screen show the slides by number.

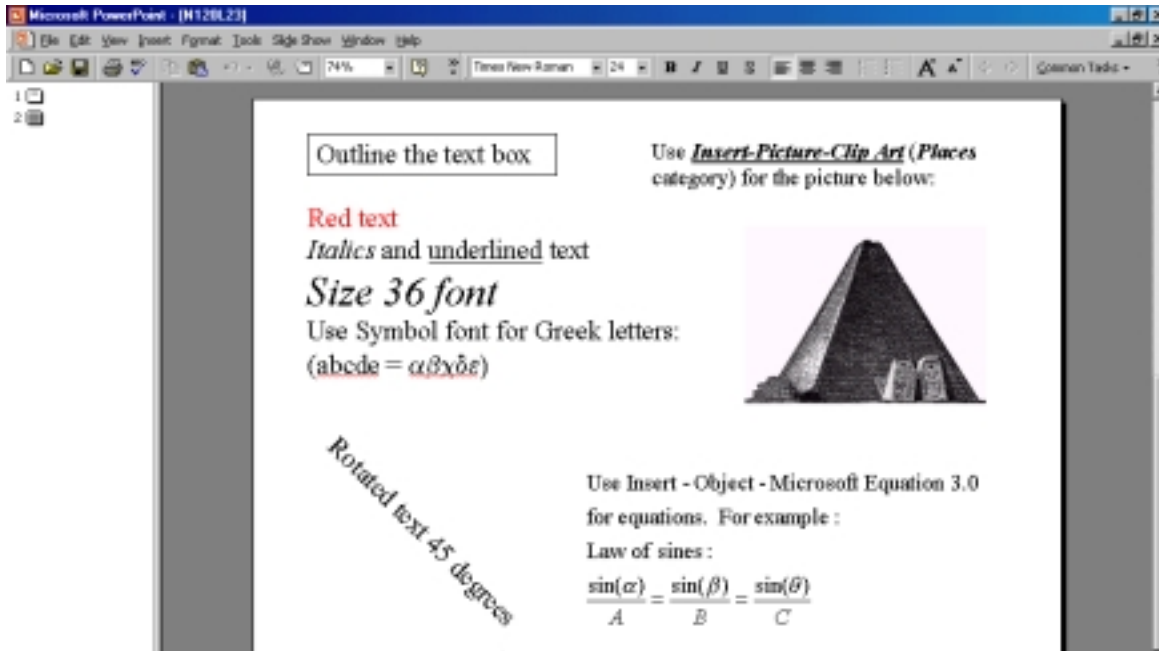
Click on any slide that you wish to view.

## **Inserting Pictures and Objects**

Select **Insert – Picture** – (Find File... or Clip Art...) to add pictures.

Select **Insert – Object** – (pick any application like MicroSoft Equation 3.0, Paint, MathCAD 2000, etc)

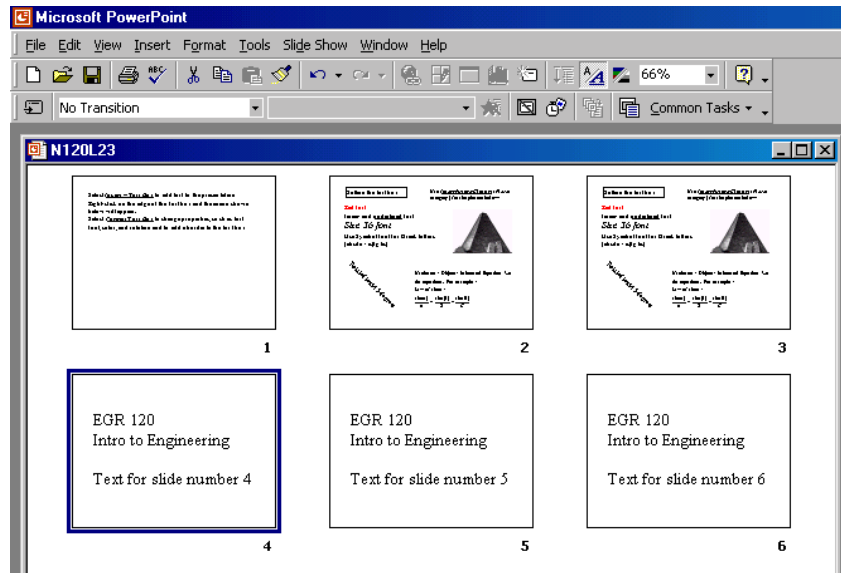
**Example:** The example on the following page shows various modifications to text and text box formats. A picture and a Microsoft Equations 3.0 object have also been inserted.



**Duplicate Slides** - Use ***Insert - Duplicate Slide*** to create a duplicate of the current slide. This is convenient if the next slide will be very similar in format to the current slide.

**Example:** Make slide 3 a duplicate of slide 2. Use **Insert - Blank Slide** to insert 3 more slides. Add some text to each slide.

**Slide Sorter** – Use ***View - Slide Sorter*** to see the arrangement of the slides (see below). If you wish to change the order of the slides, simply drag them to the new locations. If you wish to delete a slide, select it with the mouse and press the Delete key on the keyboard. Select ***View - Normal*** to return to working on individual slides.

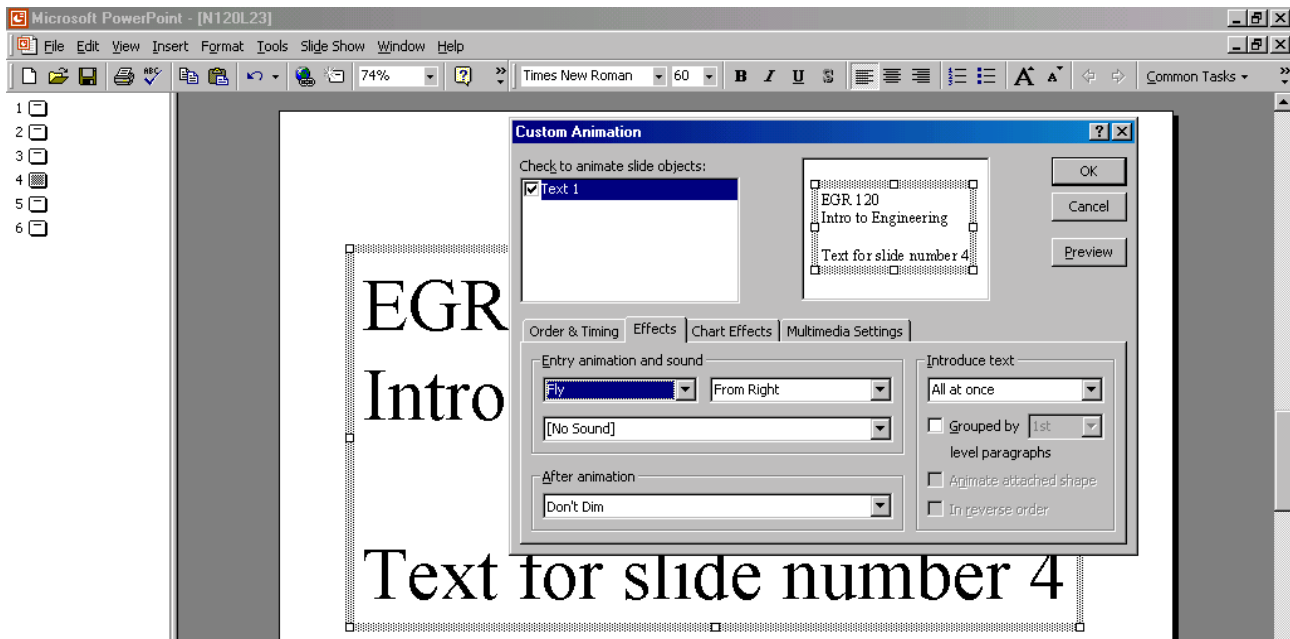


**Numbering Slides** – To automatically number slides in a presentation, select ***View - Header and Footer*** and then check the box next to ***Number Slide*** and click on ***Apply to All***.

## Presentation Effects (Custom Animation) in PowerPoint

PowerPoint slides can be presented in a slideshow format. New slides can appear at once with all details present or effects can be used to dramatically introduce entire slides, individual items on slides, or grouped items on slides. Right-clicking on an object (such as a text box) on a slide and selecting Custom Animation will show the box below. Note that many effects can be added to the text box, such as:

- Fly in from the right
- Dissolve
- Checkerboard across
- Etc.



## Grouping Items

Items (such as pictures, text boxes, etc) can be grouped so that they will appear at the same time when custom animations are used. To group items, use the white selection arrow at the bottom of the screen on the Draw toolbar (if no Draw toolbar appears on your screen, select **Tools – Customize – Toolbars – Drawing**).

**Example:** The first image on the following page shows three textboxes and a picture being grouped together to form Group 2.

Similarly, the rotated textbox and MathCAD object were grouped to form Group 1.


The second image on the following page shows that when a group is right-clicked and Custom Animation is selected, all items have been grouped into Group 1 and Group 2. Separate effects can be used on each group. Select **Preview** on the Custom Animation box to see how the animation works.

- 2
- 3
- 4
- 5
- 6

Outline the text box

Use Insert-Picture-Clip Art (Places category) for the picture below:

Red text  
Italics and underlined text  
Size 36 font  
Use Symbol font for Greek letters:  
(abcde =  $\alpha\beta\chi\delta\epsilon$ )



Rotated text-45 degrees

Use Insert - Object - Microsoft Equation 3.0 for equations. For example :  
Law of sines :  
$$\frac{\sin(\alpha)}{A} = \frac{\sin(\beta)}{B} = \frac{\sin(\theta)}{C}$$

Group

- Order
- Rotate or Flip
- Change AutoShapes
- Set AutoShape Defaults

- 2
- 3
- 4
- 5
- 6

Outline the te

Red text  
Italics and un

Size 36 fo

Use Symbol fo

(abcde =  $\alpha\beta\chi\delta\epsilon$ )

Rotated text-45 degrees

for equations. For example :  
Law of sines :  
$$\frac{\sin(\alpha)}{A} = \frac{\sin(\beta)}{B} = \frac{\sin(\theta)}{C}$$

Custom Animation

Check to animate slide objects:

- Group 1
- Group 2

Order & Timing

Entry animation and sound

Checkerboard Across

[No Sound]

After animation

Don't Dim

Introduce text

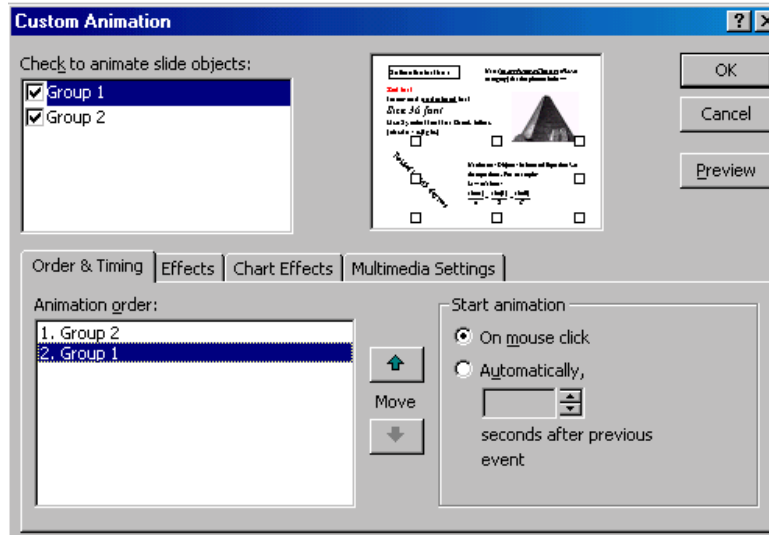
Grouped by level paragraphs

Animate attached shape

In reverse order

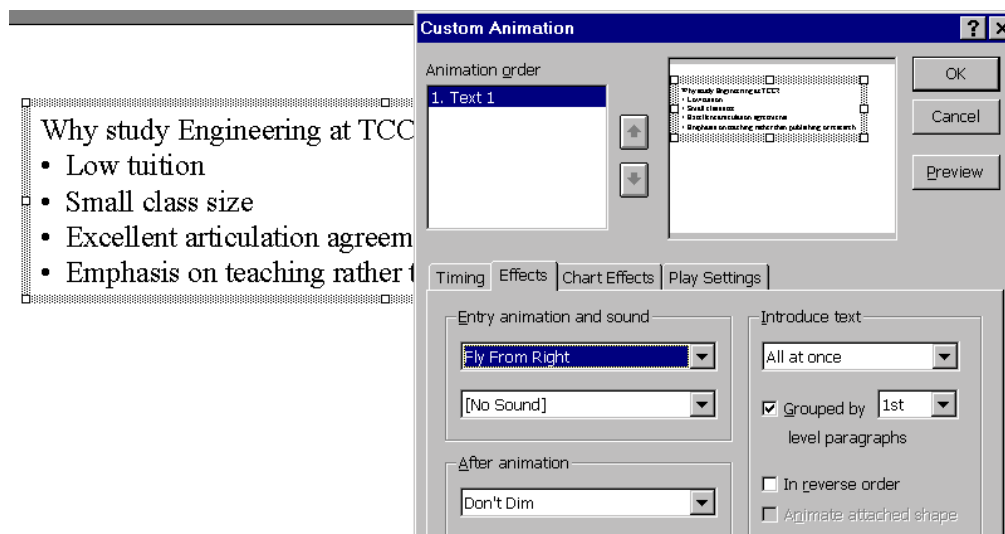
## Custom Animation Order

The order of the items can be changed during custom animations and each effect can be advanced with the mouse (or with PageUp/PageDown) or automatically advance after a certain number of seconds. Selecting the **Order & Timing** tab on the Custom Animation screen (found by right-clicking on an object to be animated) reveals the screen shown below. Note that any item can be selected under **Animation order** and the arrows can be used to move it up or down in the sequence. Animations can be advanced using the mouse (or the PageUp/Page keys) or a specific number of seconds can be set for advancing the next custom animation. Note: Setting a time here will not automatically advance new slides. It only advances the animations effects.



## Presenting Bulleted Items

Often it is useful to be able to present several bulleted items in a list. If the items are in a single text box they can be advanced one item at a time by selecting from the Custom Animation screen: **Introduce text - All at once - Grouped by 1<sup>st</sup> level paragraphs**. In the example below, each bulleted item will appear with a separate mouse click.



## **Viewing a Slideshow**

Select **View – Slideshow** or **SlideShow – View Show** to view the slideshow.

The slideshow will use the entire computer screen.

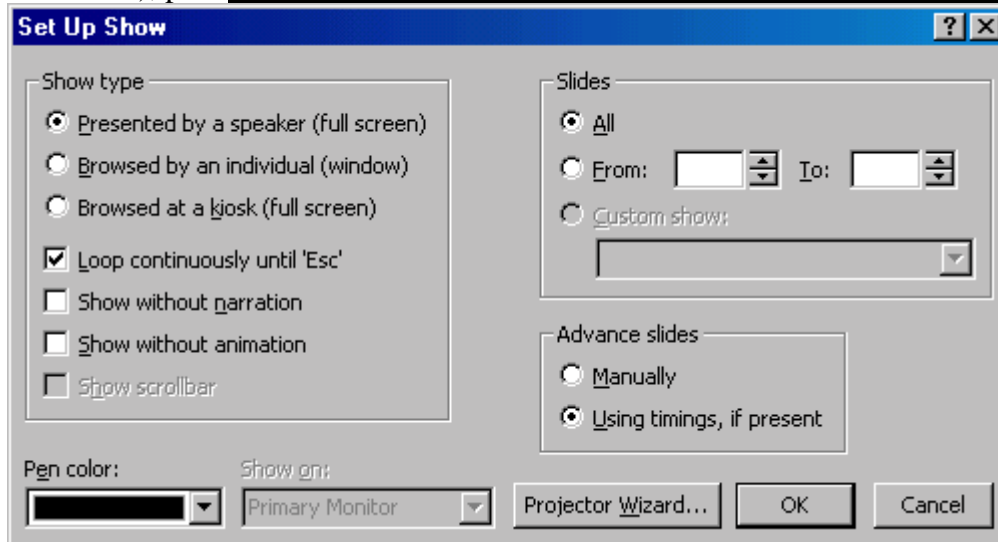
Press Esc (escape) to end the show.

Use the mouse button to advance slides or effects.

Use PageUp or PageDown to go forwards or backwards through the slides.

## **Continuous-Running Slideshows**

If you wish the show to run by itself (such as to display a series of pictures in the background during a tradeshow), pick **Slide Show – Set Up Show - Loop Continuously until “Esc”** as shown below.



The amount of time between slides is set using **Slide Show – Slide Transition** as shown below. The example below has set a time of 10 seconds between slides or effects.

