



# SOS Workshop Series — Guide No. 5

## Microsoft Office Excel



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# Why use Microsoft Office Excel or MS Project?

## ∞ Microsoft Office Excel:

- Project management tool
- Use to store data
- Run statistics on numerical data (e.g., mean, median)
- Convert numerical data to percentages
- Create charts, tables, & figures representing data or text

## ∞ Microsoft Project Office

- Automatically or manually schedule tasks
- Assign tasks to others and self
- Estimate time span for completing tasks and projects
- Generate timelines, Gantt\* charts, task lists, and reports
- Import from Microsoft Office Excel

# Microsoft Office Excel



Formatting

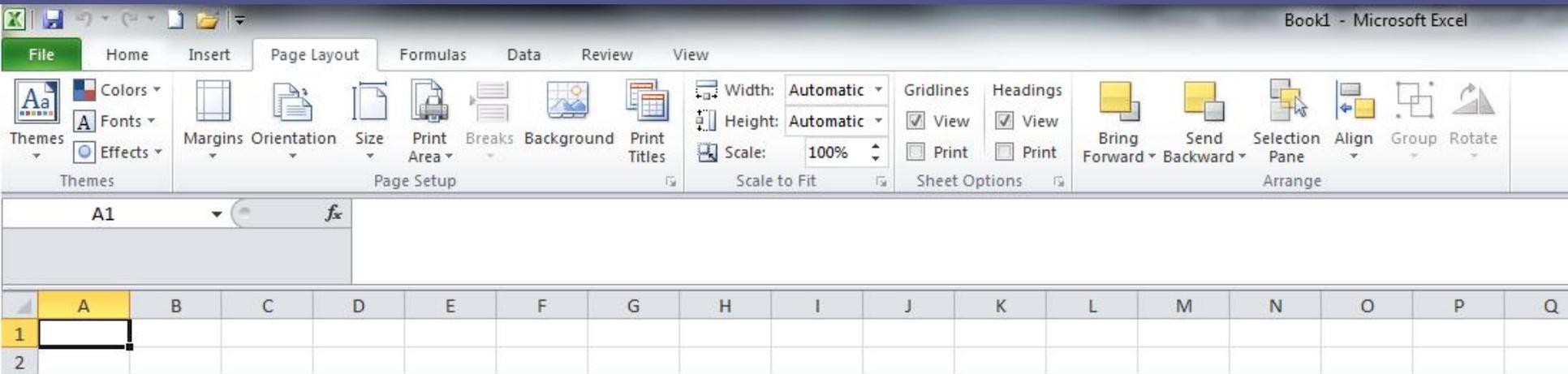
# Microsoft Excel - Key Features

- ☞ Document Options (views, set-up...)
- ☞ Table & Cell Formatting
- ☞ Charts & data graphic displays
- ☞ Data organization & analysis (Sorting, Trace precedents, trace dependents; descriptive statistics)
- ☞ Formulas (descriptive statistics; error checking; formula evaluation)
- ☞ When to save as: xls, .xlsx, .csv or .txt
- ☞ Print Options & Generate reports
- ☞ Interface with other office software (Data-based software - Microsoft® Office Access and Project)

A dark blue rectangular button with a white play icon on the left and the text "Video Tutorial Playlist" on the right.

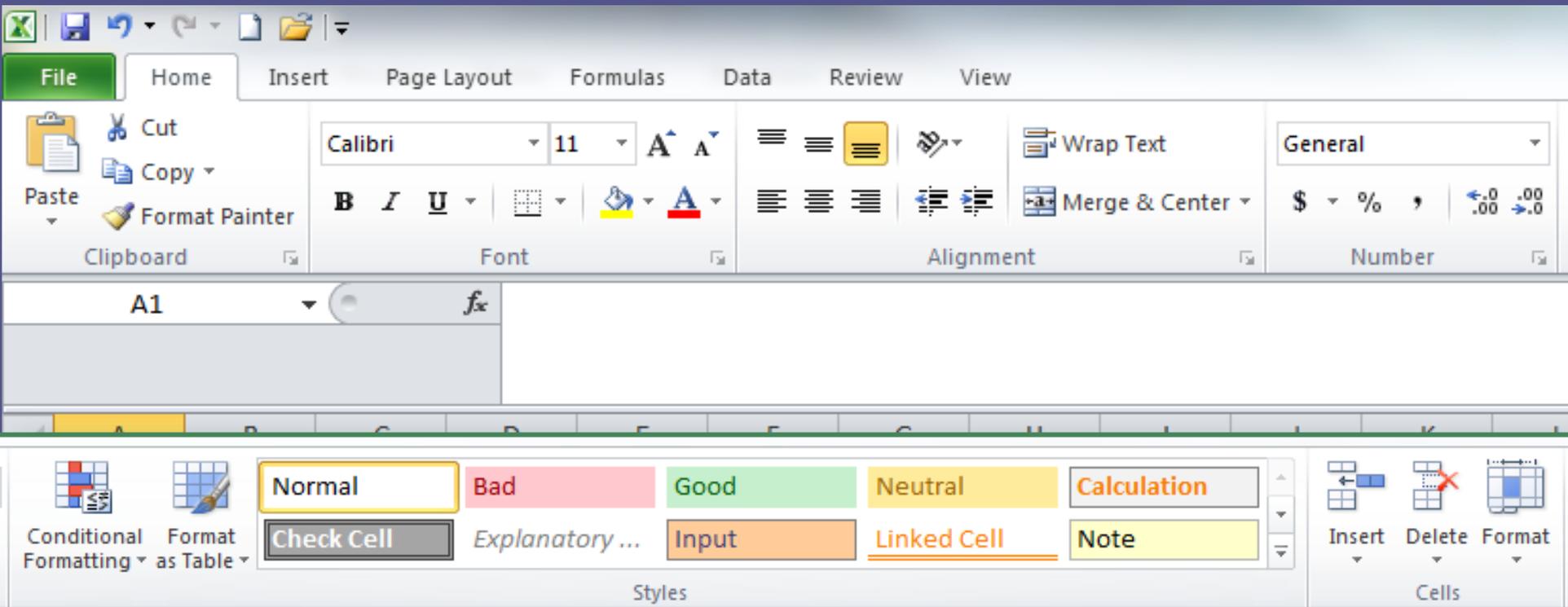
Video Tutorial  
Playlist

# Document Options (Page Layout)



- Use the **PAGE LAYOUT** menu to set the print area, set document properties such as margins, size and orientation.
- Set document themes & colors, including fonts and “effects” just as we did with Microsoft Office Word and Publisher.
- Choose to show or print gridlines or headings.

# HOME menu – Formatting Cells & Text



1. Format text and cells (Apply existing format options or create new ones)
2. Add or delete rows or columns
3. Copy and paste and Format Painter
4. Apply table formatting options
5. Apply conditional formatting options

# Use Cell Format Options or Create New Styles

Book1 - Microsoft Excel

Conditional Formatting as Table

Good, Bad and Neutral

Normal Bad Good Neutral

Data and Model

Calculation Check Cell Explanatory ... Input Linked Cell Note

Output Warning Text

Titles and Headings

Heading 1 Heading 2 Heading 3 Heading 4 Title To

Themed Cell Styles

20% - Accent1	20% - Accent2	20% - Accent3	20% - Accent4	20% - Accent5	20%
40% - Accent1	40% - Accent2	40% - Accent3	40% - Accent4	40% - Accent5	40%
60% - Accent1	60% - Accent2	60% - Accent3	60% - Accent4	60% - Accent5	60%
Accent1	Accent2	Accent3	Accent4	Accent5	

Number Format

Comma Comma [0] Currency Currency [0] Percent

New Cell Style... Merge Styles...

Style

Style name: Type style name

Format...

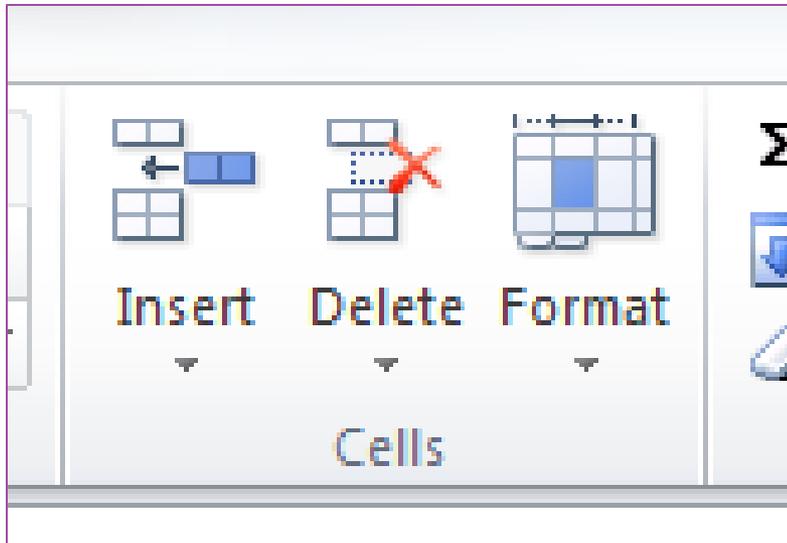
Style Includes (By Example)

- Number General
- Alignment General, Bottom Aligned
- Font Calibri (Body) 11, Text 1
- Border No Borders
- Fill No Shading
- Protection Locked

OK Cancel

Click to see video of cell formatting  
(open file with web browser)

# Add or Delete Rows or Columns



- ∞ When you **ADD** a row, the new row appears above your cursor.
- ∞ When you **ADD** a new column, the new column appears to the left of your cursor.
- ∞ When you **DELETE** a row or column be sure your cursor is highlighting the row or column. If your cursor is “sitting” inside of a cell, Excel might delete only that cell – which, in many cases, may upset the organization of your data.

# Copy and paste and Format Painter

- ☞ The copy and paste functions are the same as they are in other Microsoft Office applications.
- ☞ But as with all MS applications, there is always something a bit different about each one.
- ☞ If your intention is to copy text from one cell to **ADD** it to another cell, set your cursor **INSIDE** the cell and select the text by moving the mouse to highlight the text.
- ☞ If you want to **REPLACE** the text in the receiving cell, then simply double click to select all the text and PASTE or use **CNTL + V** to replace the text in the receiving cell.

# Apply table & conditional formatting options

⌂ Play short tutorial on  
table format options

⌂ Play short tutorial on  
conditional formatting  
options

## ∞ Originated by Karol Adamiecki

- An engineer who managed steelworks in southern Poland in the 1890s

## ∞ Revised/Improved by Henry Gantt

- Engineer and manager in America in the early 1900's (about 15 years after Adamiecki)
- Gantt's version of Adamiecki's chart "became widely known and popular in western countries".
- His name, then, became associated with these charts

Source: Gantt.com, <http://www.gantt.com/>

# Excel Functionality

## ☞ Formatting

- Cells
- Tables
- Row & Column distribution
- Expression of numbers as percentages, decimal places

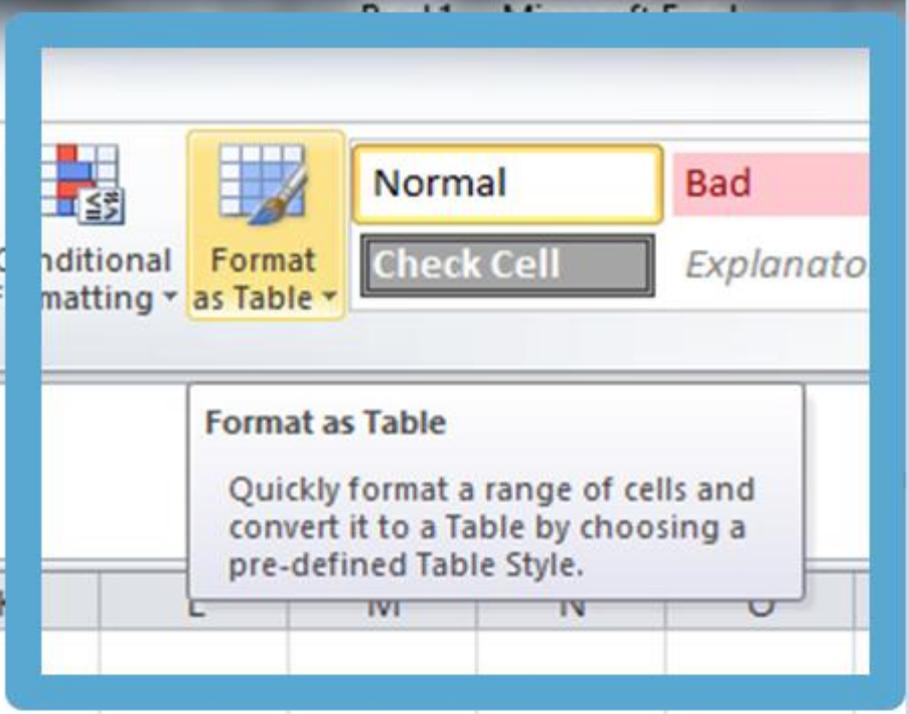
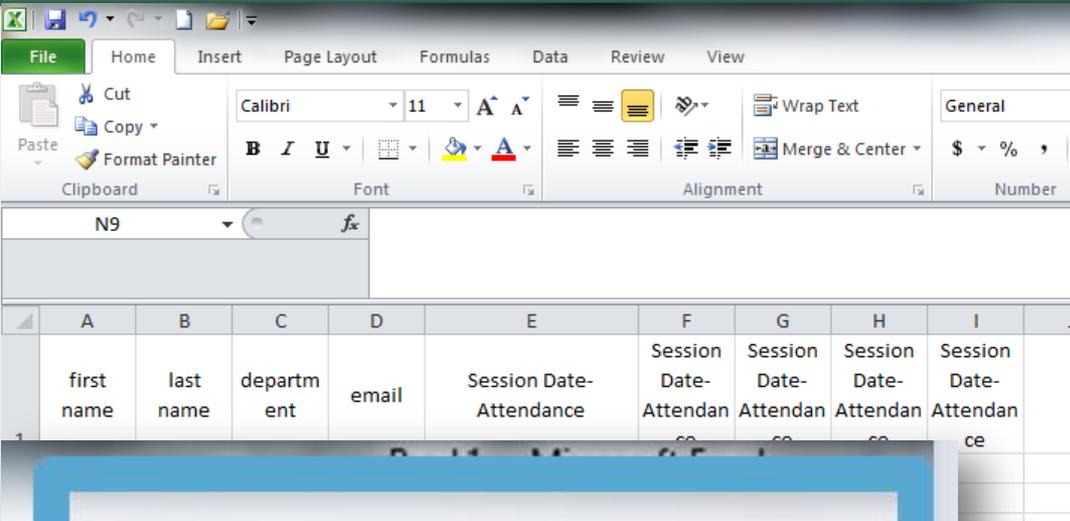
## ☞ Formulas

- Implications of Copy & Paste (formula or final result)
- Commonly used formulas
  - Sum above, left
  - Average (Mean)
  - Median
  - Standard Deviation (population, sample)

A dark green rectangular button with a white play button icon in the center. The text "Video Tutorial Playlist" is written in white, centered over the icon.

Video Tutorial  
Playlist

# Raw data entry vs. Formatting data



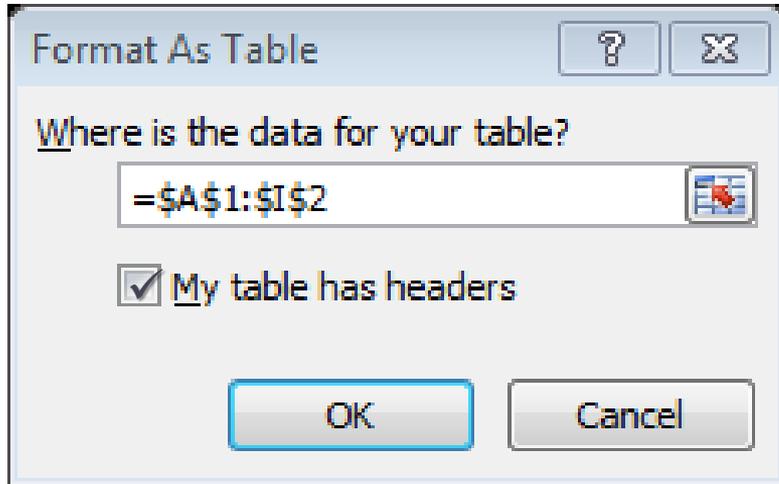
## Minimal Formatting

- SELECT cell(s)
- Go to HOME menu
- Select formatting options:
  - Horizontal: left, right or justified margins
  - Vertical: Top, bottom, center
  - Text style, size, color, direction, wrap text
  - NORMAL & other cell styles.

## Create a TABLE with consistent formatting:

- SELECT cells;
- HOME menu → FORMAT AS TABLE

# Table Creation



- ∞ If you've typed the text for what will become your header row, then check the box that indicates "My table has headers".
- ∞ The table will be automatically formatted to emphasize the header row.

Video Tutorial  
Playlist

Video Tutorial  
Playlist

# Formulas



in Microsoft Office Excel

# Descriptive Statistics

## ☞ Frequencies

- Categorical totals
- All Total

## ☞ Formulas to compute the:

- Mean (Average)
- Standard deviation
- Median
- Mode
- Percentage of numerical figures

## ☞ Create multiple worksheets in the same document

- Naming worksheets
- Re-ordering worksheets
- Custom Color tabs

## ☞ Insert computed figures into other worksheets in the same document

## ☞ Copying & Pasting a table of data as:

- Formulas
- Numbers

# Practice

- ∞ From the data in the practice document, create formulas for:
  - Totaling rows and/or columns
  - Averaging rows and/or columns
  - Calculating the standard deviation of means (averages)
  - Calculating the median and mode

- ∞ What is...
  - Mean
  - Median
  - Mode
- ∞ How do we calculate each of these?
- ∞ Why do we care?
- ∞ How could these statistics be useful? To whom?

# Create Graphic Representations of Data



# Practice

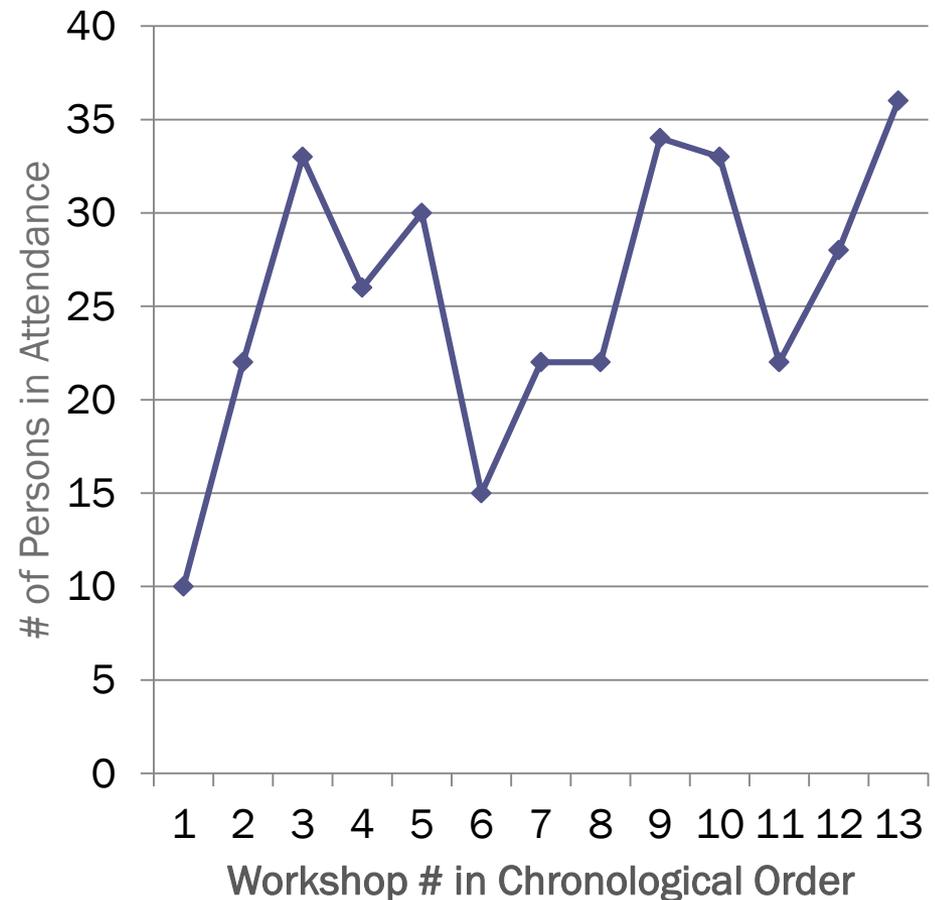
## ☞ Create

- Line charts, bar graphs, pie charts
- When to use which?

## ☞ Format charts

## ☞ Move charts

Attendance at each Workshop in Academic Year 2013-14



# Practice



∞ From the data in the practice document, create a...

- PIE CHART
- Bar graph (horizontal)
- Bar graph (vertical)
- Spark line \*
- Another representation

∞ Once you create any type of chart, practice:

- Formatting the chart
  - Legend
  - Axis Titles
  - Font Type, Size and Color
  - Axis range
- Changing the chart type
- Moving the chart to its own worksheet



# Comparison: Microsoft Project



Key Features

# Interface with...



Mobile Devices

Microsoft Office  
& Visio

Adobe

# Interface with Microsoft Office

- ☞ Word
- ☞ PowerPoint
- ☞ Publisher
- ☞ Project
- ☞ MS Visio

# Microsoft Project — View

The screenshot displays the Microsoft Project interface. The ribbon at the top shows the 'Gantt Chart Tools' section with the 'Format' tab selected. A callout box highlights the 'Highlight: Completed Task' dropdown menu. Another callout box highlights the 'Timeline' and 'Details' options in the ribbon. The main area is split into two views: a task list table on the left and a Gantt chart on the right. The task list table has the following data:

Acti	Task Mode	Task Name	Duration	Start	Finish	% Complete
0	Yes	SOS Series - Planning & Implementation 2013-14	75 days?	Tue 4/15/14	Mon 7/28/14	
1	Yes	1 SOS Workshop No. 4 - VISIO	7 days	Tue 4/15/14	Wed 4/23/14	
2	Yes	1.1 Create SOS Guide No. 4 - Visio	7 days	Mon 4/28/14	Tue 5/6/14	
3	Yes	1.2 SOS Workshop No. 4	2 hrs	Thu 4/24/14	Thu 4/24/14	
4	Yes	2 SOS Workshop No. 5	3 wks	Tue 4/29/14	Mon 5/19/14	
5	Yes	2.1 SOS Workshop No. 5	2 hrs	Wed 5/7/14	Wed 5/7/14	
6	Yes	2.2 Create SOS Guide No. 5 - Excel	7 days?	Thu 5/8/14	Fri 5/16/14	
7	Yes	3 SOS Workshop No. 6	4 wks	Mon 5/19/14	Fri 6/13/14	
8	Yes	3.1 Create SOS Guide No. 6 -	7 days	Fri 6/6/14	Mon 6/16/14	
9	Yes	3.2 SOS Workshop No. 6	2 hrs	Thu 6/5/14	Thu 6/5/14	
10	Yes	4 SOS Workshop No. 7	3 wks	Thu 6/19/14	Wed 7/9/14	
11	Yes	4.1 SOS Workshop No. 7	2 hrs	Thu 6/19/14	Thu 6/19/14	
12	Yes	4.2 Create SOS Guide No. 7	7 days	Thu 6/19/14	Fri 6/27/14	
13	Yes	5 Planning for SOS Series 2014-15	4 wks?	Tue 7/1/14	Mon 7/28/14	

Gantt Chart alongside data entry panel. Events placed automatically on Timeline above and Gantt Chart.

File Task Resource Project View Add-Ins Format

Network Diagram Calendar Other Views Task Views

Resource Usage Resource Sheet Other Views Resource Views

Team Planner Other Views

Sort Outline Tables

Highlight: Completed Task Filter: [No Filter] Group by: [No Group] Data



	Activ	Task Mode	Task Name	Duration	Start	Finish	% Complete
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Gantt Chart

Project tasks

Zoom Split View Window

14 May 25, '14 Jun 1, '14 Jun 8, '14 Jun 15, '14 Jun

S T

Mar 30, '14				Apr 13, '14			Apr 27, '14			May 11, '14			May 25, '14			Jun 8, '14			
F	T	S	W	S	T	M	F	T	S	W	S	T	M	F	T	S	W	S	T
				[Task Bar]			[Task Bar]												
				[Task Bar]			[Task Bar]												
				[Task Bar]			[Task Bar]												

Shows TODAY

# Interface with Adobe

- ☞ Save as
- ☞ Print to
- ☞ Charts as separate worksheets, saved as jpg's or pdf's

# Working with the iPad

Free and \$\$ Apps



\$\$\$

To edit Excel documents



Numbers for iOS

FREE

To view Excel documents:

- Box net
- Dropbox

Back

# Numbers



Numbers for iOS

\$9.99

