

Using Project Management Software

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Getting Microsoft Project

You are not required to use any *specific* project management software in CS 46*, but you are required to use *something*.

You can get Microsoft Project for free by accessing the OSU MSDN Academic Alliance. To do that, go to the College of Engineering *teach* system:

<http://enr.oregonstate.edu/teach>

Under **External Sites**, click **MSDNAA Site Login**.

This will allow you to download Project, and a bunch of other packages, for free

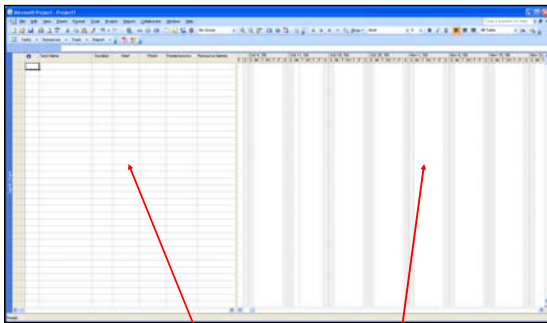
Note: this is not an advertisement for Microsoft Project. It just happens that Microsoft Project has the right functionality for CS 46*, is typical of all project management software packages, is easy to use, is already installed on most OSU engineering machines, and you can all get it for free for your own PCs.

The skills you develop by using it will transfer to *any* other project management software package.

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Overall Screen Layout



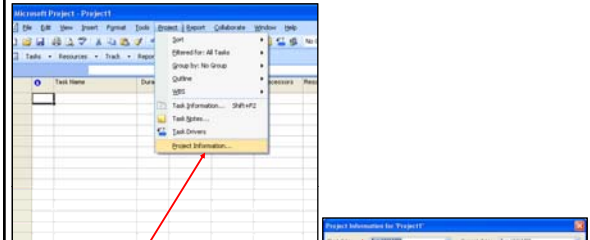
Task Area

Chart Area

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Step #1: Set the Start Date

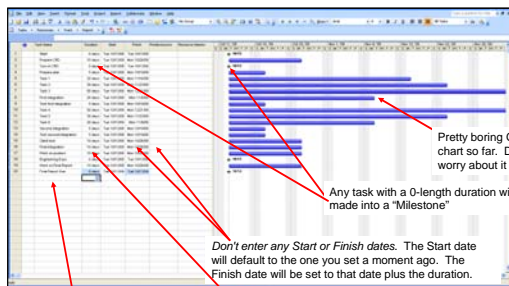


Project--Project Information lets you set the Start date. Task durations will be referenced from this date.

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Step #2: Enter the Tasks and Durations



Pretty boring Gantt chart so far. Don't worry about it ...

Any task with a 0-length duration will be made into a "Milestone"

Don't enter any Start or Finish dates. The Start date will default to the one you set a moment ago. The Finish date will be set to that date plus the duration.

List the tasks using unique descriptive task names. This is essentially your **Work Breakdown Schedule (WBS)**. (It should be more detailed than this!)

In the Duration column, enter the time required to complete each task, as a number of days.

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Once Entered, Tasks Can Be Edited

Task ID	Task Name	Duration	Start	Finish
1	Start	0 days	Tue 10/13/09	Tue 10/13/09
2	Prepare CRD	10 days	Tue 10/13/09	Mon 10/26/09
3	Turn-in CRD	0 days	Tue 10/13/09	Tue 10/13/09
4	Prepare plan	5 days	Tue 10/13/09	Mon 10/19/09
5	Task 1	25 days	Tue 10/13/09	Mon 11/16/09
6	Task 2	30 days	Tue 10/13/09	Mon 11/23/09
7	Task 3	50 days	Tue 10/13/09	Mon 12/01/09
8	First integration	20 days	Tue 10/13/09	Mon 11/16/09
9	Test first integration	5 days	Tue 10/13/09	Mon 10/19/09

If you click a Duration, you can edit it with up/down buttons, or you can then edit it just like an Excel cell.

A Task Name can be selected. You can then edit it just like an Excel cell.

Task ID	Task Name	Duration	Start	Finish	Predecessors
1	Start	0 days	Tue 10/13/09	Tue 10/13/09	
2	Prepare CRD	10 days	Tue 10/13/09	Mon 10/26/09	
3	Turn-in CRD	0 days	Tue 10/13/09	Tue 10/13/09	
4	Prepare plan	5 days	Tue 10/13/09	Mon 10/19/09	
5	Task 1	25 days	Tue 10/13/09	Mon 11/16/09	
6	Task 2	30 days	Tue 10/13/09	Mon 11/23/09	
7	Task 3	50 days	Tue 10/13/09	Mon 12/01/09	
8	First integration	20 days	Tue 10/13/09	Mon 11/16/09	
9	Test first integration	5 days	Tue 10/13/09	Mon 10/19/09	
10	Task 4	50 days	Tue 10/13/09	Mon 12/21/09	
11	Task 5	30 days	Tue 10/13/09	Mon 11/23/09	

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Once Entered, Tasks Can Be Edited

6	Task 2	30 days	Tue 10/13/09	Mon 11/23/09
7	Task 3	50 days	Tue 10/13/09	Mon 12/01/09
8	First integration	20 days	Tue 10/13/09	Mon 11/09/09
9	Test first integration	5 days	Tue 10/13/09	Mon 10/19/09
10	Task 4	50 days	Tue 10/13/09	Mon 12/01/09
11	Task 5	30 days	Tue 10/13/09	Mon 11/23/09
12	Task 6	20 days	Tue 10/13/09	Mon 10/19/09
13	Second integration	5 days	Tue 10/13/09	Mon 10/19/09
14	Test second integration	5 days	Tue 10/13/09	Mon 10/19/09
15	Client test	10 days	Tue 10/13/09	Mon 10/26/09
16	Final integration	10 days	Tue 10/13/09	Mon 10/26/09
17	Work on posters	10 days	Tue 10/13/09	Mon 10/26/09

You can click on an entire row. Select **Edit** → **Delete Task** to delete that task.

Click here and drag up or down to re-order the tasks. Note that the up-down order has nothing to do with the time order the tasks need to occur in, although it is a good idea to sort of keep it that way.

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Step #3: Get the Chart Area Time-Scaled Properly

Double-click on the date header

These are good settings

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Step #4: Create the Task Dependencies

Left-drag from one task's bar ...

... to its successor's bar

This will create (by default) a **Finish-to-Start** dependency link. It will also adjust the successor's Start and Finish dates, and the Predecessors column.

Task Name	Duration	Start	Finish	Predecessors	Predecessor Name	LAG
1 Start	0 days	Tue 10/13/09	Tue 10/13/09			
2 Prepare GND	10 days	Tue 10/13/09	Mon 10/26/09			
3 Turnout GND	5 days	Tue 10/13/09	Tue 10/13/09			
4 Prepare plan	5 days	Tue 10/27/09	Mon 11/02/09			
5 Task 1	20 days	Tue 10/13/09	Mon 11/02/09			
6 Task 2	30 days	Tue 10/13/09	Mon 11/23/09			
7 Task 3	50 days	Tue 10/13/09	Mon 12/01/09			
8 First integration	20 days	Tue 10/13/09	Mon 11/09/09			
9 Test first integration	5 days	Tue 10/13/09	Mon 10/19/09			
10 Task 4	50 days	Tue 10/13/09	Mon 12/01/09			
11 Task 5	30 days	Tue 10/13/09	Mon 11/23/09			
12 Task 6	20 days	Tue 10/13/09	Mon 10/19/09			
13 Second integration	5 days	Tue 10/13/09	Mon 10/19/09			
14 Test second integration	5 days	Tue 10/13/09	Mon 10/19/09			
15 Client test	10 days	Tue 10/13/09	Mon 10/26/09			
16 Final integration	10 days	Tue 10/13/09	Mon 10/26/09			
17 Work on posters	10 days	Tue 10/13/09	Mon 10/26/09			
18 Engineering Dept	0 days	Tue 10/13/09	Tue 10/13/09			
19 Work on Final Report	10 days	Tue 10/13/09	Mon 10/26/09			
20 Final Report Due	0 days	Tue 10/13/09	Tue 10/13/09			

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Reading the Gantt Chart

Thin lines indicate "slack"

A thick bar all the way to the end indicates no slack

You can link multiple tasks to the same successor task

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"Managing Slack"

Slack is like a good-news/bad-news joke – the good news is that it isn't crucial that this task finishes on time; the bad news is that you could be wasting resources

Slack is often an OK thing if a certain task has a high degree of risk

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You Can Change the Nature of the Task Dependencies

From: Test second integration
To: Client test
Type: **Finish-to-Start (FS)**
Lag: 0d

Double-click on a link (the lines) to change its dependency type, change its lag, or to delete it

Finish-to-Start dependency (the dependency used most often)

Start-to-Start dependencies look like this

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Step #5: Explicitly Set Fixed Milestones

Click here to explicitly set a Milestone's date

It looks like this

Examples could include presentation dates, version release target dates, the date of the Expo, etc.

Note: the 2011-2012 Engineering Expo is Friday, May 18, 2012

Also note: the quarter doesn't end at the Expo. The strategy is to go for "best showcase appearance" at the Expo and use the final 2-3 weeks to finish everything else up, including the Final Notebook.

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Step #6: Experiment with Different Charts

Click on View -> Tracking Gantt to see the critical path in red. The Critical Path is the sequence of tasks that have no slack in them. Pay close attention to these tasks!

Click on View -> Gantt Chart to get back to where you were

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Printing

Slide this bar left and right to expose or hide the data columns. What you see is what you'll print.

Click on File -> Page Setup. Be sure that Fit timescale to end of page is clicked.

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Turn your chart into an image suitable for pasting into a Word Document or PowerPoint Slide

3. Set the GIF filename

4. Tell it to just display the selected rows

5. Set the range of dates

1. Select the rows you want in your image.

2. Click on Report -> Copy Picture

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Turn your chart into an image suitable for pasting into a Word Document or PowerPoint Slide

Your GIF image will look like this. It can be inserted into Word or PowerPoint by choosing Insert -> Picture while running those programs. Once there, you can expand, shrink, or crop this image, depending on what you are trying to show.

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