	Project Start Date 9/27/2023 (Wednesday) Project Lead Caleb Flaim		Display Week		1		Week 1         Week 2         Week 3         Week 4         Week 5         Week 6         Week 7         Week 8           25 Sep 2023         2 Oct 2023         9 Oct 2023         16 Oct 2023         23 Oct 2023         30 Oct 2023         6 Nov 2023         13 Nov 2023           25 [26] [27] [28] [29] [30] [1] [2] [3] [4] [5] [6] [7] [8] [9] [10] [11] [12] [13] [14] [15] [16] [17] [18] [19] [19] [19]         25 [26] [27] [28] [29] [29] [29] [30] [1] [2] [3] [4] [5] [6] [7] [8] [9] [10] [11] [12] [13] [14] [15] [16] [17] [18] [19]
WBS	TASK LEAD	START	END	DAYS		WORK DAYS	M T W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T F S S
1	Float Building Stage		-		DONE	-	
1.1	Concept development [Name]	Mon 9/25/23	Tue 9/26/23	2	100%	2	
1.1.1	Propose Ideas						
1.1.2	Develop general science questions	Mon 9/25/23	Fri 9/29/23	5	100%	5	
1.1.3	Settle on idea	Thu 9/28/23	Fri 9/29/23	2	100%	2	
1.1.4	Brainstorm general design of project	Thu 9/28/23	Wed 10/04/23	7	100%	5	
1.2	Find and order parts						
1.2.1	Figure out variables to measure	Mon 9/25/23	Fri 10/06/23	12	100%	10	
1.2.2	Determine sensors for measuring above variables	Sat 9/30/23	Fri 10/06/23	7	100%	5	
1.2.3	Order parts	Tue 10/10/23	Tue 10/10/23	1	100%	1	
1.3	Background Research						
1.3.1	General literature/youtube review for project tech components	Mon 10/02/23	Sun 10/15/23	14	100%	10	
1.3.2	How do floats work?	Thu 10/05/23	Mon 10/09/23	5	100%	3	
1.3.3	Learn about ways to change a floats volume	Wed 2/14/18	Fri 2/16/18	3	100%	3	
1.3.4	Determine best float coding structure	Mon 10/09/23	Sun 10/15/23	7	70%	5	
1.3.5	Learn about state machines and how to code one	Mon 10/16/23	Sun 10/29/23	14	30%	10	
1.4	Electronics design						
1.4.1	Determine preliminary wiring	Mon 10/09/23	Sun 10/22/23	14	100%	10	
1.4.2	Read sensor/controler datasheets	Wed 10/11/23	Tue 10/17/23	7	100%	5	
1.4.3	Write/find test code for sensors	Sun 10/15/23	Sat 10/21/23	7	80%	5	
1.5	Electronics build						
1.5.1	Build electronics prototype	Fri 10/20/23	Sun 10/29/23	10	30%	6	
1.5.2	Test sensor functionality	Fri 10/27/23	Tue 10/31/23	5	0%	3	
1.5.3	Test data telemetry and range	Fri 10/27/23	Tue 10/31/23	5	0%	3	
1.5.4	Sanity check coding to verify functionality	Mon 10/30/23	Wed 11/01/23	3	0%	3	
1.6	General programming						
1.6.1	Read sensor values and write to SD card	Mon 10/30/23	Wed 11/01/23	3	0%	3	
1.6.2	Send data files over Radio to "basestation" controller	Wed 11/01/23	Sun 11/05/23	5	0%	3	
1.6.3	Simulate float profile sequence (If time)	Sun 11/05/23	Wed 11/08/23	4	0%	3	
1.7	Float testing and deployment without profiling cabability						
1.7.1	Test drifter in test tank	Mon 11/06/23	Wed 11/08/23	3	0%	3	

	Project Start Date 9/2 Project Lead		(Wednesday) b Flaim	Display	Week .	1		Week 1         Week 2         Week 3         Week 4         Week 5         Week 6         Week 7         Week 8           25 Sep 2023         2 Oct 2023         9 Oct 2023         16 Oct 2023         23 Oct 2023         30 Oct 2023         6 Nov 2023         13 Nov 2023           25   26   27   28   29   30   1   2   3   4   5   6   7   8   9   10   11   12   13   14   15   16   17   18   19   20   21   22   23   24   25   26   27   28   29   30   31   1   2   3   4   5   6   7   8   9   10   11   12   13   14   15   16   17   18   19
WBS	TASK LI	.EAD	START	END	DAYS	% DONE	WORK DAYS	M T W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T F S S
1.7.2	Overnight test in water		Tue 11/07/23	Wed 11/08/23	2	0%	2	
1.7.3	Deply drifter with SSC		Fri 11/10/23	Fri 11/10/23	1	0%	1	
1.8	Buoyancy engine design							
1.8.1	Brainstorm designs to talk to Trevor about		Mon 10/23/23	Sun 11/05/23	14	0%	10	
1.8.2	Research moving gaskets and seals		Fri 10/27/23	Tue 10/31/23	5	0%	3	
1.8.3	Meet with Trevor to finalize design		Mon 10/30/23	Fri 11/03/23	5	0%	5	
1.9	Buoyancy engine build							
1.9.1	Begin building VBD system		Sat 11/04/23	Fri 11/17/23	14	0%	10	
1.9.2	Hit snaggs		Wed 11/08/23	Sat 11/11/23	4	0%	3	
1.9.3	Figure out snaggs		Thu 11/09/23	Wed 11/15/23	7	0%	5	
1.9.4	Finish VBD		Sat 11/18/23	Mon 11/20/23	3	0%	1	
1.10	Float assembly							
1.10.1	Attach VBD to float		Mon 11/20/23	Wed 11/22/23	3	0%	3	
1.10.2	Program VBD to integrate with existing drifter code		Tue 11/21/23	Thu 11/23/23	3	0%	3	
1.10.3	Verify sensing and buoyancy control systems work together		Fri 11/24/23	Sun 11/26/23	3	0%	1	
1.11	Final float testing and deployment							
1.12	Overnight tests in test tank		Mon 11/27/23	Sun 12/03/23	7	0%	5	
1.12.1	Ensure float can, at a minimum, broadcast GPS position over radio		Mon 11/27/23	Sun 12/03/23	7	0%	5	
1.13	Deployment		Tue 12/05/23	Tue 12/05/23	1	0%	1	
2	Winter break			-			-	
2.1	finals and break		Wed 12/13/23	Wed 1/03/24	22	0%	16	
3	Data analysis stage			-			-	
3.1	Make basic profile plots from float data		Wed 1/03/24	Sun 1/07/24	5	0%	3	
3.2	Make basic profile plots from seaglider data		Wed 1/03/24	Sun 1/07/24	5	0%	3	
3.3	Numerically compared difference in values between float and glider data		Fri 1/05/24	Thu 1/11/24	7	0%	5	
3.4	Come up with a metric for determing how good the float data re relative to the glider data		Sun 1/07/24	Thu 1/11/24	5	0%	4	
3.4.1	Learn needed statistics		Sun 1/07/24	Thu 1/11/24	5	0%	4	
3.5	Make comparison plots for float and glider data		Tue 1/09/24	Sat 1/13/24	5	0%	4	
3.6	Make transect plots from float and glider data		Thu 1/11/24	Mon 1/15/24	5	0%	3	
3.7	Make engineering plots of float performance		Sat 1/13/24	Wed 1/17/24	5	0%	3	

	Project Start Date	9/27/2023	3 (Wednesday)	Display	y Week	1		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
	Project Lead	Cal	eb Flaim					25 Sep 2023	2 Oct 2023	9 Oct 2023	16 Oct 2023	23 Oct 2023	30 Oct 2023	6 Nov 2023	13 Nov 2023
	-							25 26 27 28 29 30 1	2 3 4 5 6 7 8	9 10 11 12 13 14 15	16 17 18 19 20 21 22	23 24 25 26 27 28 29	30 31 1 2 3 4 5	6 7 8 9 10 11 12	13 14 15 16 17 18 19
WBS	TASK	LEAD	START	END	DAYS	% DONE	WORK DAYS	M T W T F S S	M T W T F S S	M T W T F S S	M T W T F S S	M T W T F S S	M T W T F S S	M T W T F S S	M T W T F S S
4	Paper writing stage			-			-								
4.1	Follow ocean 444 assignment deadlines		Wed 1/03/24	Tue 3/12/24	70	0%	50								

# **Gantt Chart Template Pro**





**Gantt Chart Template Pro** is similar to this free version, but it is more feature-packed. It also comes with other bonus content.

## Learn About Gantt Chart Template Pro

https://www.vertex42.com/ExcelTemplates/excel-gantt-chart.html

The following link is a blog post that talks specifically about the Pro version for Excel Online.

Gantt Chart Template Pro for Excel Online

### **Benefits and Features of Gantt Chart Template Pro**

#### Simple Color-Coding

The Pro version includes a column for specifying the color of bars in the chart. For example, you could change the color based on urgency or task lead.

#### Daily, Weekly, or Monthly View

The Pro version includes a drop-down next to the Display Week that lets you choose to display the columns in the chart area as days, weeks, or months.

#### **Use Work Days as an Input**

By default, the Pro version is set up to have you enter Work Days instead of Calendar Days. The expanded set of template rows provides more options for defining the Start date, End date, and Duration of tasks. Define a task based on ...

- Start date and End date
- Start date and Work days
- Start date and Calendar days

#### **Easily Create Task Dependencies**

Though you can still use your own formulas for creating task dependencies, the Pro version includes template rows that calculate the Start date based on the WBS number that you enter in the Predecessor column.

#### **Exclude Holidays from Work Days**

List holidays and other specific non-working days that you want to exclude from work days.

#### **Customize Your Work Week**

The versions designed for Excel 2010+ use the WORKDAY.INTL() and NETWORKDAYS.INTL() functions that allow you define the work week as something other than Monday-Friday.

## Learn More About Gantt Chart Template Pro

# Help

## https://www.vertex42.com/ExcelTemplates/excel-gantt-chart.html



## **About This Template**

This Gantt Chart Template provides an easy way to create a simple project schedule. You only need to know some basic spreadsheet operations, such as how to insert, delete, copy and paste rows and cells. For more advanced uses, such as defining task dependencies, you will need to know how to enter formulas.

Be sure to read the Getting Started Tips below. Watching the video demos for Gantt Chart Template Pro may also help you see how to use the spreadsheet.

#### Watch Demo Videos of the Pro Version on Vertex42.com

Please read the license agreement in the TermsOfUse worksheet to learn how you may or may not use and share this spreadsheet.

## **Getting Started Tips**

- [Bracketed Text] is meant to be edited, like the project title and task descriptions.
- Some of the labels include cell comments to provide extra information.
- To adjust the range of dates shown in the Gantt chart, change the Display Week number.
- The Project Start Date is used to define the first week shown in the gantt chart.
- Insert new tasks using one of the methods listed below.
- Define the task start date and duration (days) by editing the light green cells.
- If you see "#####" in a cell, widen the column to display the cell contents.
- Backup your file regularly to avoid losing data! Excel files get corrupted occasionally.

# Inserting New Tasks (Rows)

When inserting and deleting tasks, you need to insert and delete **entire rows**. Some columns contain formulas (such as the End Date and the Work Days columns), so these formulas need to copied to the newly inserted rows.

### **METHOD 1 (recommended)**

- Insert a new blank row by right-clicking on the row number and selecting Insert.
- With the new blank row selected, press Ctrl+d to copy the formulas and formatting down from the row above OR use the row drag handle to copy the formulas and formatting down.

#### **METHOD 2**

- Copy a row from the set of template rows at the bottom of the worksheet.
- Right-click on the row where you want to insert the new task and select Insert Copied Cells.

Method 2 will work, but Excel will split/fracture/duplicate conditional formatting rules rather than merging the rules. This can cause inefficiencies in very large and heavily modified files. Help improve Excel by voting on a suggestion to fix this problem.

The set of template rows at the bottom of the Gantt Chart worksheet provide examples of different ways to format and define tasks for different WBS levels.

Each different WBS level uses a different formula in the WBS column.

You can either copy/paste/insert these template rows via Method 2 as explained above, OR you can just copy/paste the desired WBS cell when you want to change the WBS level.

If you leave a blank cell above a WBS number, the numbering will reset to 1.x.x. The formulas are meant for convenience, but you can manually enter the WBS numbers if you want to.

You can indent the task description for sub-tasks by entering leading spaces or using the Indent feature in Excel.

## **Creating Task Dependencies**

You can enter the Start date manually, or define task dependencies using a formula. Below are some common options for defining the Start date:

- A. Enter the date manually (e.g. 1/3/2015)
- B. Reference the Project Start Date (e.g. =\$E\$4)
- C. Set the Start date to the next Work Day after another task's End date.
  - Use the formula =WORKDAY(enddate,1) where enddate is the reference to the End date of a predecessor task.
  - For multiple predecessors, the formula would be
  - =MAX(WORKDAY(enddate1,1),WORKDAY(enddate2,1))
- D. Set the Start date to the next Calendar Day after another task's End date.
  - This formula is very simple: = enddate+1
  - For multiple predecessors, the formula would be =MAX(enddate1,enddate2,enddate3)+1
- E. Set the Start date to a number of days before or after another date.
  - This formula is just like the one in C or D, except that in place of the "1" you enter the number of days, such as =WORKDAY(enddate,5) or =WORKDAY(startdate,-5)
- F. Use a lookup formula and the Predecessor column to define the start date. [The formulas for using this method are built into Gantt Chart Template Pro]

# Changing the Color of the Bars in the Gantt Chart

[Advanced] The Gantt Chart is created using conditional formatting, so you can modify the conditional formatting rules to change the format to a different color. The Pro version includes a column where you can change the color by entering a color code ("b"=blue, "g"=green, etc.)

## **FAQs**

## Q: How do I enter the Work Days instead of Calendar Days?

Entering work days instead of calendar days is a feature of the Pro version. There is nothing in the free version preventing you from entering your own formulas, though.

#### Q: How do I calculate Calendar Days after entering the Start and End Dates?

You can calculate the duration in calendar days (including both start and end dates) using the formula = enddate - startdate +1

#### Q: How do I change the **Print Settings**? (Excel 2010, 2013)

Select the entire range of cells you want to print and go to File > Print Area > Set Print Area. Then go to File > Page Setup or File > Print Preview and adjust the Scaling, Margins, and Page Orientation as desired.

#### Q: How do I increase the range of dates displayed in the Gantt chart?

You will need to add columns to the right of the Gantt Chart via copy/paste. Copy and paste the columns in groups of 7. Afterwards, you will also probably need to update the print area.

## Q: How do I create a summary row that shows the MIN and MAX dates for all sub-tasks?

In the Start column, use the formula =MIN(range\_of\_start\_dates)
In the End column, use the formula =MAX(range\_of\_end\_dates)
In the Days column, use the formula =end\_date-start\_date+1

### Q: How do I calculate the **%Complete** for an entire category of tasks?

The %Complete for a group of tasks can be calculated from its sub tasks using the formula below, where "workdays" is a reference to the range of work day values and "complete" is a reference to the %complete for each of the subtasks.

=SUMPRODUCT(workdays,complete)/SUM(workdays)

Example: Let's say you have 3 sub tasks that are 10 days, 12 days, and 14 days long, respectively. If the first subtask is 50% complete and the others are 25% complete, you could calculate the overall percent complete for the group as: =(10\*50%+12\*25%+14\*25%)/(10+12+14).

### Q: I've messed up the chart area somehow. How do I fix it?

Find a row that works, then copy the cells that make up the gantt chart area from that row into the row that is messed up.

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Label

Input Cell

# Terms of Use



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