

PHStat Version 4.1 Readme

PHStat provides a software assist to help you create Excel worksheet solutions to statistical problems. You make entries in dialog boxes and PHStat creates the solutions for you. You avoid the unnecessary clerical errors that can arise from creating worksheets from scratch or from manually modifying worksheet templates.

With PHStat, you can focus on learning statistics as you perform many types of statistical analyses using the familiar Excel interface and PHStat dialog boxes. PHStat solutions can be later examined to learn actual native Excel techniques, such as formulas, for a given solution and many solutions serve as what-if templates in which you explore how results change when you change the data.

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1 Excel Requirements

To use PHStat, you will need a properly licensed and up-to-date version of Microsoft Excel. As of January 2016, Excel versions that PHStat supports include:

- Microsoft Windows Excel 2007, Excel 2010, Excel 2013, and Excel 2016
- OS X Excel 2011 and OS X Excel 2016* (OS X Excel is also known as Excel for Mac)
- Excel installed as part of a current Office 365 subscription (excludes Office 365 Business Essentials)

PHStat is not compatible with Excel Online or mobile versions of Excel such as Office Mobile, Office for iPad® and iPhone®, and Office for Android™. However many PHStat worksheet solutions will be viewable and usable in these versions.

If you plan to use the Logistic Regression procedure, you will need to install the optional Microsoft Solver add-in (Solver.xlam). (This add-in may have already been installed at the time that Excel was installed on your computer system.)

* See special note about using OS X Excel 2016 in Section 6.

2 Other Requirements and Technical Notes

PHStat requires English language as the Office language setting and the period as the decimal point (as used in the United States) and uses (a modest) 3 MB of disk storage space for its files and you should store all files together in one directory.

To use PHStat with Microsoft Windows versions, you first must review and change, if necessary, the Microsoft Office Trust Center security settings. (There are no security settings for you to review if you use OS X Excel.) In the following instructions, the symbol ➔ means “on the next display, select.”

2a Excel 2010, Excel 2013, and Excel 2016 Security Settings In these Excel versions, select File ➔ Options and in the Excel Options dialog box:

1. Click **Trust Center** in the left pane and then click **Trust Center Settings** in the right pane. In the Trust Center dialog box:
2. Click **Add-ins** in the next left pane, and in the Add-ins right pane clear all of the check boxes.
3. Click **Macro Settings** in the left pane and in the Macro Settings right pane click **Disable all macros with notification**.
4. Click **OK** to close the Trust Center dialog box.

Back in the Excel Options dialog box:

5. Click **OK** to finish.

For systems with very stringent security settings, you may need to modify step 5. For such systems, in step 5, click **Trusted Locations** in the left pane and then, in the Trusted Locations right pane, click **Add new location**, click **Browse** and navigate to the folder into which you place the PHStat files. Then click **OK** in the open dialog boxes until all are closed.

2b Excel 2007 Security Settings In this version, click the **Office Button** and then click **Excel Options**, located at bottom of the Office Button menu window. Then continue with the five steps of the Excel 2010, Excel 2013, and Excel 2016 instructions.

3 Obtaining PHStat

You obtain PHStat by downloading a zip archive file that is distributed through the PHStat home page (pearsonhighered.com/phstat). Downloading PHStat requires an access code and registration. (If you do not have an access code, you can obtain one for a fee through the PHStat home page.)

You should save your registration information and access code for possible downloading of updated PHStat versions that are posted during the term in which your access code is valid.

Once you have downloaded the zip archive file, double-click the file and expand the archive and store the files in a single directory. This directory will contain the PHStat.xlam file, the actual add-in; a copy of this readme file; PHStatHelp.chm, a complete PHStat help system that provides context-sensitive help for Microsoft Windows Excel users; and the complete PHStat help system in PDF and EPUB formats (PHStatHelp.pdf and PHStatHelp.epub), suitable for viewing with a reader app on both Mac and Windows computers as well as many types of mobile devices.

4 Using PHStat

To use PHStat, first open Excel. Then use the Excel (File) Open dialog box to open the PHStat.xlam file. As PHStat begins to load, you will see a security warning message that discusses macros and you will need to click **Enable Macros** to allow PHStat to be opened. On some Windows systems, you may be able to open PHStat by double-clicking the icon, folder listing, or shortcut for the PHStat.xlam file. If you are using Microsoft Windows and “nothing” happens when you open the PHStat file, first review the Section 2 instructions to make sure your system contains the proper security settings.

When PHStat loads properly, it adds the set of PHStat choices to the Excel user interface. How these choices appear, depends on the Excel version you use:

- In Microsoft Windows Excels, PHStat adds a PHStat tab to the Office Ribbon and adds the “classic” PHStat pull-down menu to the Add-Ins tab.
- In OS X Excel 2011, PHStat adds to the Apple menu a PHStat menu that is similar to the “classic” menu.
- In OS X Excel 2016, PHStat adds a PHStat tab to the Office Ribbon (similar to the Windows Ribbon tab).

If you use Windows Excel, you can use either the Ribbon PHStat tab or the classic pull-down menu in the Add-Ins tab to select a PHStat procedure.

5 Check to See if the Solver Add-in Is Installed

If you plan to use the PHStat Logistic Regression procedure, your copy must have the Solver add-in (**Solver.xlam**) installed.

5a Check for Solver in Windows Excel 2007, Excel 2010, Excel 2013, or Excel 2016

Select **File → Options**. (In Excel 2007, click **Office Button → Options**.) In the Excel Options dialog box:

1. Click **Add-Ins** (**Add-ins** in Excel 2016) in the left pane.
2. In the Add-ins right pane, verify that **Solver Add-in** is listed under **Active Application Add-ins**.
3. Click **Cancel** if the add-in is listed. If the add-in is not listed in the “Active” list, but is listed under **Inactive Application Add-ins**, then select **Excel Add-ins** from the **Manage** drop-down list (at bottom of pane) and click **Go...** In the Add-Ins dialog box, click **Solver Add-in** in the **Add-Ins available** list and then click **OK**.

If you do not see the Solver add-in listed anywhere in the Add-ins pane of the Excel Options dialog box, you may have to rerun the Microsoft Office setup program to install this add-in.

5b Check for Solver in Excel for Mac 2011

Click **Tools → Add-ins**. In the Add-Ins dialog box, click **Solver.Xlam** in the **Add-Ins available** list and then click **OK**. Then close and reopen Excel 2011.

If you do not see the Solver add-in listed in the **Add-Ins available** list, then read the Microsoft support bulletin at support.microsoft.com/kb/2431349 to learn where you can find (and download, if necessary) Solver for Excel for Mac.

5c Check for Solver in Excel for Mac 2016

Click **Tools → Add-ins**. In the Add-Ins dialog box, click **Solver Add-In** in the **Add-Ins available** list and then click **OK**. Then close and reopen Excel 2016.

6 PHStat Visual Differences in Microsoft Windows and OS X Excels

You open the same PHStat add-in workbook file (**PHStat.xlam**) for either Microsoft Windows or OS X Excel. However, because of differences between these operating systems, the following visual differences exist:

- The set of PHStat choices is displayed either as a pull-down menu or Ribbon tab as Section 34 explains.
- Dialog boxes display onscreen much smaller in size in OS X Excel than in Windows Excel.
- Clicking **Help** in a procedure's dialog box displays a message to review the help system in OS X Excel and does not display a context-sensitive help screen seen in Windows Excel.
- Some worksheet solution cell entries may appear as all #s in OS X Excel. (Manually widen the column that contains cell entries that are all # to see the cell value.)
- In OS X Excel 2011, elements of PHStat dialog boxes may appear with a background color that is lighter than the background color of the dialog box itself.

Special Note: In OS X Excel 2016 as of January 2016 (version 15.18), PHStat cell range edit boxes appear as simple text boxes, incapable of accepting point-and-select cell ranges. (All cell ranges must be typed in the boxes). Microsoft has announced plans to update OS X Excel 2016 to make cell range edit boxes have the point-and-select capability. As of January 2016, this issue affects all add-ins that use a cell range edit box, including the Microsoft Solver add-in (Solver.xlam).

7 Commonly-Asked FAQs About PHStat

How do I update PHStat? Should an updated PHStat version become available during the term in which your PHStat access code is valid, visit the PHStat home page and repeat the Section 3 “Obtaining PHStat” steps. News about PHStat updates will appear on the PHStat home page and elsewhere in the Internet.

How should I prepare worksheet data for use by a PHStat procedure? Generally, data should be placed on its own worksheet, starting in column A and row 1, using row 1 for column heading. To learn more about this best practice, read the PHStat help topic "Preparing Data for Analysis."

Can I use PHStat worksheet solutions with Excel Online or mobile versions of Excel? Yes, either though you cannot use PHStat with these versions, in most cases, you will be able to open and view worksheet results that PHStat creates. In some cases, you may also be able to alter values or underlying functions in order to use the worksheet solution as a template.

Can I use PHStat if I am using virtualization software? If you use such software as Parallels® or VMware® to run Microsoft Excel inside a guest operating system, you may need to place the directory that contains the PHStat files in a special location and/or change settings in the virtualization software you use. Consult the product support for your virtualization software for more information.

Many answers to commonly occurring questions can be found by consulting the PHStat Help system. Additional help may be found at the website **SoftwareforBusStat.org**, which is not affiliated or administered by Pearson Education, and is expected to be active by late 2016.

8 Common Troubleshooting FAQs

I see a "Compile error in hidden module" message. If you get this or a similar error message when you start PHStat, first check to see if there are outstanding updates to your copy of Excel that you have not supplied. Especially if you are using OS X Excel, make sure that you are opening the PHStat add-in workbook (PHStat.xlam) using the method discussed in Section 4.

PHStat menu fails to open or fails to appear. If you are using Microsoft Windows Excel, first review the Section 2 Trust Center security settings. Also, turn off other Office or Excel add-ins, if present, to see if they conflict with PHStat.

I see an "Unexpected error" message when I attempt to use a PHStat procedure. Verify that the any data required for the procedure that generated this message has been organized according to best practices. (Generally, data should be placed on its own worksheet, starting in column A and row 1. See the help topic "Preparing Data for Analysis" for details.) Column headings that are excessively long in length or that were entered as numbers may also be a source of this message (edit column headings as necessary). When an "unexpected error" message appears, any worksheets created by PHStat should be ignored and deleted.

For further troubleshooting assistance, contact Pearson 24/7 Technical Support by visiting **247pearsoned.custhelp.com**. Pearson 24/7 Technical Support cannot answer statistical questions or questions about the proper statistical application of PHStat.

9 What's New in PHStat?

PHStat is continually being enhanced. This is PHStat version 4.1.

Changes in version 4.1 since version 4.05:

- Added OS X Excel 2016 (Excel 2016 for Mac) compatibility.

- New PHStat Ribbon tab to complement the classic PHStat pull-down menu (all supported Excel versions except OS X Excel 2011).

- Enhanced capabilities of Pooled-Variance t Test, Separate-Variance t Test, and F Test for Differences in Two Variances procedures to handle non-text column labels.

- Corrected issues that affected display of some dialog box labels in Excel for Mac.

Changes in version 4.05 since version 3.21:

- Procedures use newer Excel function names if PHStat is used with Excel 2010, 2011, or 2013.

- Corrected issues with the Paired t Test lower-tail option, the Stepwise Regression backwards elimination option, the One-way Tables & Chart Percentage column option, Simple Linear Regression ANOVA table, and Randomized Block Design procedure.

- Enhanced the formatting and display of results for selected procedures.

- Corrected issues associated with 2013 OS X Excel 2011 updates.

- Readme FAQs updated to reflect Microsoft developments.

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