

Getting Started with SAS

The Full Version of SAS 9.4

Installation

The full version of SAS 9.4 is available on PCs in SH003, HL230, KH202, KH203 and KH207. It is also available on the terminal server **windows.wpi.edu**.

You may also install the full version of SAS 9.4 SAS on your own Windows laptop (sorry, no Macs or Linux). To run this version of SAS from your own Windows laptop, you need to be connected to the WPI network wirelessly on campus or through the WPI Virtual Private Network (VPN) if off campus (see <https://www.wpi.edu/Academics/CCC/Netops/VPN/>). To obtain permission to put SAS on your laptop, you must fill out the form found at <http://www.wpi.edu/Academics/CCC/Help/Software/Installs/SASStudentUse.pdf> and bring it to me for my signature and then to the ITS Helpdesk in the Gordon Library for processing. After you receive permission, I would recommend installing SAS while on campus if possible due to the size of the install. It can take 20-30 minutes to install completely. Full instructions for installing SAS 9.4 and setting up the SAS environment are found at <http://it.wpi.edu/article/SAS-Request-and-Install>

The full install of SAS 9.4 has a number of components. The main SAS program runs stand-alone in its own set of windows. Another component I find myself using more and more frequently is SAS Studio, a developmental web application for SAS that you access through your web browser.

Documentation

SAS has extensive online documentation, which may be found at <http://support.sas.com/documentation/onlinedoc/> or through the help button on the program's main window.

SAS University Edition

An appealing new alternative to the full SAS program is the SAS University Edition, which is essentially a free version of SAS Studio. It runs on most popular operating systems (Windows, Macs, Linux). Although it does not have all features of the full version of SAS, it runs all the SAS code I am providing and that you will need for this course. While it does not require use of WPI's VPN, SAS University Edition does require use of a virtual machine, such as Oracle's Virtual Box (which is also free). For complete instructions on downloading and installing SAS University Edition, visit http://www.sas.com/en_us/software/university-edition.html.

Setting Up A SAS Data Library

A SAS data library is a location (folder or subdirectory) where SAS data files reside. All SAS data files have a two-part name of the form *libname.filename*, where *libname* is the name of the data library where the file resides and *filename* is the name of the file. The default data library is called *work*. So, for example, the SAS data file *joe* in the *ma2611* library has the name *ma2611.joe*.

The *work* library has two unique characteristics:

- The library name can be omitted when working with these files. So, for example, SAS assumes the file *joe* is *work.joe*.
- All files in the *work* data library are temporary: when you exit SAS, the files are erased.

The following instructions show you how to create a permanent SAS data library called MA2611 in which to store your SAS data files.

SAS University Edition

1. In the *Server Files and Folders* pane, right click on *My Folders* and select *New→Folder*.
2. In the *Name* box, type a folder name. In our examples, we use the name MA2611. Click *Save*.
3. In the *Libraries* pane, right click on *My Libraries* and select *New Library*.
4. In the *Name* box, type MA2611 and in the *Path* box type */folders/myfolders/MA2611*.
5. Check the *Re-create this library at start-up* box, then click *OK*.

You need only do steps 1-5 once.

SAS Studio

1. In Windows, create a folder to contain the library. If you want your data library to be accessible from any WPI lab machine running SAS and from the terminal servers, I suggest you do the following:
 - (a) Map your R: drive to `\\storage.wpi.edu\HOME\My_Documents` (instructions [here](#)).
 - (b) If there is not already one, create the folder SAS in the R: drive.
 - (c) Create your folder, MA2611, in the R:\SAS folder.
2. In the *Libraries* pane, right click on *My Libraries* and select *New Library*.
3. In the *Name* box, type MA2611 and in the *Path* box type the path to the folder you created in step 1.

4. Check the *Re-create this library at start-up* box, then click *OK*.

You need only do steps 1-4 once.

The full WPI version of SAS

You can define the MA2611 library by submitting a `libname` statement from the Editor window. The `libname` statement will assign the library name to the folder where you want to store the SAS data sets, and is of the form

```
libname MA2611 'path';
```

For example, if, as I recommend, you map the R: drive and create the folder MA2611 there (see the SAS Studio section above), the command would be

```
libname MA2611 'R:\SAS\MA2611';
```

You have to submit this `libname` statement before using the library. If you want SAS to do this automatically when booting, insert the above *libname* command in your `autoexec` file (a file SAS calls on startup), as follows:

1. Check to see if the file R:\SAS\autoexec.txt exists. If it does, put the libname command there. The resulting autoexec.txt file should contain the following:

```
libname MA2611 'R:\SAS\MA2611';
libname sasdata '\\rivet.wpi.edu\sas\sasdata8';
%macro putdate;
data _null_;
current=today();
call symput('today',left(put(current,date7.)));
run;
footnote "&sysuserid &today";
%mend putdate;
%putdate;
```

2. If the file R:\SAS\autoexec.txt does not exist, create it with the contents given in step 1.