

Instructions for Crash R Course on Graphics

Prior to attending this course, you are invited to install the open-source statistical software R on your laptops, as well as several add-on R packages. This requires that you have an active connection to the Internet on your laptop.

R works on all major computing platforms, including Windows and Mac.

To install R on your Windows laptop, please follow these instructions:

1. Go to the website <http://cran.stat.ucla.edu/> ;
2. In the window titled “The Comprehensive R Archive Network”, click on the link Download R for Windows;
3. In the window titled “R for Windows”, click on the link base;
4. In the window titled “R-2.15.2 for Windows (32/64 bit)”, click on the link Download R 2.15.2 for Windows;
5. Save the executable file R-2.15.2-win.exe in a dedicated folder on your computer (e.g., Program Files).
6. Run the executable file R-2.15.2-win.exe by double clicking on it – this will enable you to install R on your laptop. Select English as the installation language and then click Next throughout the installation process to choose default installation settings. Click the Finish button when the installation is complete.

To install R on your Mac laptop, please follow these instructions:

1. Go to the website <http://cran.stat.ucla.edu/> ;
2. In the window titled “The Comprehensive R Archive Network”, click on the link Download R for MacOS X;
3. In the window titled “R for Mac OS X”, click on the link R-2.15.2.pkg, which is listed under the Files heading. (Depending on your browser, you may need to press the control key and click on this link to download the file R-2.15.2.pkg.)
4. Save the installer file R-2.15.2.pkg in a dedicated folder on your computer.
5. Run the installer file R-2.15.2.pkg by double clicking on it. Follow the installation instructions and choose all of the default installation settings in order to install R.

After installing R on your laptop, you will also need to use your active Internet connection to install several add-on R packages. An R package is a collection of R functions, data sets and help files meant to extend R's basic functionality.

The list of required R packages for this course is given below:

- `ggplot2`
- `graphics`
- `grid`
- `lattice`
- `latticeExtra`
- `lubridate`
- `plyr`

The `graphics` and `grid` packages come with the basic installation of R. To install the remaining packages on your laptop, you first need to launch R by double clicking on the R icon available on your laptop desktop. Once R is launched, you need to type (or copy and paste) the command below in the R Console window and then press the Enter key to execute this command:

```
install.packages(c("ggplot2", "lattice", "latticeExtra", "lubridate", "plyr"))
```

R will prompt you to select a CRAN mirror for use during the R package installation process, so you can proceed to choose any of the available USA mirrors, such as USA (CA 1). A CRAN mirror is simply a website hosting add-on R packages that can be installed in R.

If the installation of the recommended R packages on your laptop was completed successfully, you should see the following messages posted in your R Console window:

```
package 'ggplot2' successfully unpacked and MD5 sums checked
```

```
package 'lattice' successfully unpacked and MD5 sums checked
```

```
package 'latticeExtra' successfully unpacked and MD5 sums checked
```

```
package 'lubridate' successfully unpacked and MD5 sums checked
```

```
package 'plyr' successfully unpacked and MD5 sums checked
```

To quit R after installing these packages, just type the command below in the R Console window and press the Enter key to execute it:

```
quit()
```

R will ask you whether you wish to save the workspace image before quitting R. Click the No button to enable R to shut down.

Please note that Internet will not be available to the course participants during the actual course, so it is essential that you install R and the recommended R packages on your laptop prior to attending the course.

During the course itself, you will need to be able to work with PDF, PowerPoint and Excel documents on your laptop. Furthermore, you will need to bring along a Laptop AC adapter or charger for plugging your laptop to the power supply as laptop batteries usually have a short life time. It is also recommended that you bring along a regular or wireless computer mouse for your laptop, which will make it easier for you to select, copy and paste R commands during the course.

At the beginning of the course, you will receive a hard copy of the course notes from the conference organizers. In preparation for attending the course, please also save on your laptop all of the electronic course materials made available to you by the course instructor (please see the attachments to this e-mail). For ease of reference during the course, it is best if you save these materials in a desktop folder titled Crash R Course. The electronic course material include the following items: (1) course notes in Power Point format, (2) course data sets. Note that you may find it beneficial to read the course notes prior to attending the course.

If you have any questions regarding these instructions, please e-mail the course instructor, Dr. Isabella Ghement , at isabella@ghement.ca or call her at 1-604-767-1250.