## Installation guide for R and RStudio

#### Step 1 – Install R

1.	Download the R installer	from <u>https://cran.r-project.org/</u>									
		The Comprehensive R Archive Network									
		Download and Install R									
		Precompiled binary distributions of the base system and contributed packages, Windows and Mac users most likely want one of these versions of R:  Download R for Linux									
CRAN Mirrors What's new?		Download R for (Mac) OS X     Download R for Windows									
Task Views Search		R is part of many Linux distributions, you should check with your Linux package management system in addition to the link above.									
bearen		Source Code for all Platforms									
About R <u>R Homepage</u> <u>The R Journal</u>		Windows and Mac users most likely want to download the precompiled binaries listed in the upper box, not the source code. The sources have to be compiled before you can use them. If you do not know what this means, you probably do not want to do it!									
Software		• The latest release (2015-06-18, World-Famous Astronaut) R-3.2.1.tar.gz, read what's new in the latest version.									
R Sources R Binaries		• Sources of <u>R alpha and beta releases</u> (daily snapshots, created only in time periods before a planned release).									
Packages Other		<ul> <li>Daily snapshots of current patched and development versions are available here. Please read about new features and bug fixes before filing corresponding feature requests or bug reports.</li> </ul>									
Documentation		Source code of older versions of R is available here.									
FAQs Contributed		Contributed extension packages									
		Questions About R									
		• If you have questions about R like how to download and install the software, or what the license terms are, please read our answers to frequently asked questions before you send an email.									
		What are R and CRAN?									

- Figure 1. Screenshot of <a href="http://cran.csiro.au/">http://cran.csiro.au/</a>
  - 2. Run the installer. Default settings are fine. If you do not have admin rights on your laptop, then **ask you local IT support**. In that case, it is important that you also ask them to give you full permissions to the R directories. Without this, you will not be able to install additional packages later

#### Step 2 - Install RStudio

1. Download RStudio: https://www.rstudio.com/products/rstudio/download/

RStudio		Produc	ts Resources	Pricing About Us	Blog <b>Q</b>
Do you need support or a commercial license? Check out our commercial	offerings		<b>(</b> ►2U	01:29	HD X
RStudio Desktop 0.99.467 — Release Notes			1730		
RStudio requires R 2.11.1 (or higher). If you don't already have R, you can dow	R	on the web with Shiny Click here to learn more	e		
Installers for Supported Platforms					
Installers	Size	Date	MD5		
RStudio 0.99.467 - Windows Vista/7/8	73.9 MB	2015-07-15	5c0bf6987adcfb6dd	441326ecc67f6e8	
RStudio 0.99.467 - Mac OS X 10.6+ (64-bit)	56.2 MB	2015-07-15	3116a0f3b9b3779b9	531e9b08c394558	
RStudio 0.99.467 - Ubuntu 12.04+/Debian 8+ (32-bit)	77.4 MB	2015-07-15	0ca919255495cc871	12df12a1cff7e29	
RStudio 0.99.467 - Ubuntu 12.04+/Debian 8+ (64-bit)	83.9 MB	2015-07-15	dd64fc165de55a0be	229f2362cd776da	
RStudio 0.99.467 - Fedora 19+/RedHat 7+/openSUSE 13.1+ (32-bit)	76.8 MB	2015-07-15	1e152bafa8b6c5355	a2ec0f6822abdff	
RStudio 0.99.467 - Fedora 19+/RedHat 7+/openSUSE 13.1+ (64-bit)	77.6 MB	2015-07-15	a82a27b113184e179	0ec5bd3c36e2137	
Zip/Tarballs					
Zip/tar archives	Size	Date	MD5		
RStudio 0.99.467 - Windows Vista/7/8	105.5 MB	2015-07-15	b88bbbc042aaa04b	83a1786322981c5f	
RStudio 0.99.467 - Ubuntu 12.04+/Debian 8+ (32-bit)	78.1 MB	2015-07-15	171de4b2e08edd33	988ab1b75d571ae6	
RStudio 0.99.467 - Ubuntu 12.04+/Debian 8+ (64-bit)	84.8 MB	2015-07-15	85ca4bc15c2e5e53	5594bcf586604324	
RStudio 0.99.467 - Fedora 19+/RedHat 7+/openSUSE 13.1+ (32-bit)	77.4 MB	2015-07-15	6abc51b45cdd1fa0	c14a991b5336a8ad	
RStudio 0.99.467 - Fedora 19+/RedHat 7+/openSUSE 13.1+ (64-bit)	78.4 MB	2015-07-15	9d693e5e5ed1b200	3e1b18691f31574b	
Source Code					

A tarball containing source code for RStudio v0.99.467 can be downloaded from here

Figure 2. Download RStudio on https://www.rstudio.com/products/rstudio/download/

2. Once the installation of R has completed successfully (and not before), run the RStudio installer.

- 3. If you do not have administrative rights on your laptop, step 2 may fail. Ask your IT Support or download a pre-built zip archive of RStudio which doesn't need installing. The link for this is towards the bottom of the download page, highlighted in Image 2.
  - a. Download the appropriate archive for your system (Windows/Linux only the Mac version can be installed into your personal "Applications" folder without admin rights).
  - b. Double clicking on the zip archive should automatically unpack it on most Windows machines.

### Step 3 - Check that R and RStudio are working

- 1. Open RStudio. It should open a window that looks similar to image 3 below.
- 2. In the left hand window, by the '>'sign, type '4+5' (without the quotes) and hit enter. An output line reading '[1] 9' should appear. This means that R and RStudio are working.
- 3. If this is not successful, contact us or your local IT support for further advice

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Figure 3. Running R with RStudio

#### Step 4 - Install R packages required for the workshop

- 1. Click on the tab ' Packages' then 'Install' as shown in Image 4. Or Tools -> Install packages.
- 2. Install the following packages: mixOmics version 6.1.0, mvtnorm, RColorBrewer, corrplot, igraph (see Image 4). For apple mac users, if you are unable to install the mixOmics imported library rgl, you will need to install the XQuartz software first <u>https://www.xquartz.org/</u>

- 3. Check that the packages are installed by typing 'library(mixOmics)' (without the quotes) in the prompt and press enter (see Image 5).
- 4. Then type 'sessionInfo()' and check that mixOmics version 6.1.0 has been installed (image 6).

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#### Figure 4. Click on Install to install R packages.

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Figure 5. Specify the list of packages to be installed

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Figure 6. Check that the package mixOmics is installed and has the version 6.1.0.

# That's it, let's get started!