

1 R demonstration

- Download the R Users Guide from vUWS.
- The lab demonstrator will demonstrate the use of R based on the section “Using R in Chapter 7” of the R Users Guide. During this time, observe how the instructor is interacting with R and try out some of the code on your own computer.

2 Lab exercise

- Download the documentation of the `Lock5Data` package from the subject’s vUWS site or from the CRAN archive at <http://cran.r-project.org/web/packages/Lock5Data/Lock5Data.pdf>.
- Read the description of the data set `StudentSurvey` in the documentation of the `Lock5Data` package.
- Write an R script that performs the following tasks:
 1. Load the data `StudentSurvey` from the `Lock5Data` package.
 2. Perform a goodness-of-fit test, using the function `chisq.test`, to test at a significance level of 5% the statement that the true proportions of award preference are 0.2 for Academy, 0.3 for Nobel and 0.5 for Olympic.
 3. Perform the previous test using a randomisation distribution and compare the results.
 4. Use the function `chisq.test` to test at a significance level of 5% for an association between sex and preferred award.
 5. We are not able to use the function `chisq.test` to test for an association between smoking status and preferred award. (Why not?) – Instead, use a randomisation distribution to test at a significance level of 5% for an association between smoking status and preferred award.

The whole script should run without errors. Make sure to save the script in your directory. Remember to add comments to your script as you go, so that you can still understand it later.

Workshop Exercise 9

- Download the Workshop Exercise task sheet and the R Markdown template from the unit’s vUWS site.
- Answer all questions, editing the R Markdown file as required.
- Use R Studio to produce (“knit”) a MS Word document from your R Markdown file. You may have to use the package manager in R Studio to install the packages `knitr` and `rmarkdown`.
- Use MS Word to convert the Word document to PDF.
- Submit your solution in PDF format on vUWS by clicking on the link “Workshop Exercise 9”.

Do NOT use the link “Practice Workshop Exercise” to submit your solution!

If you cannot knit your R Markdown file, start a text submission in vUWS and paste the content of your R Markdown file into the text entry field. Do not upload the R Markdown file.

Submission closes at exactly 5 minutes to the hour, just before the end of your workshop.

Do you feel that you could do with some extra help understanding statistics? – If so, please make use of the free help offered by MESH and the PASS programme. Check out the *MESH* and *PASS* tabs on the unit's vUWS site for more information.