

Introduction to Programming with R

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Software

Students should come with the latest versions of R and RStudio loaded on their laptops. They can be obtained at:

R: <https://www.r-project.org>

RStudio: <https://www.rstudio.com>

Also, install the **tidyverse** set of packages. From the command line, type:

```
install.packages("tidyverse", dependencies = TRUE)
```

Syllabus

June 8

- R console
- RStudio
- scripts
- data structures (vectors, factors, matrices and arrays, lists, data.frames)
- reading and writing data

June 15

- data summary
- character and string manipulation
- **apply** family of functions
- function writing
- flow control

June 22

- **base** graphics
- **ggplot**
- **dplyr**
- RMarkdown

Texts

- Davies, T. 2016. The Book of R: A First Course in Programming and Statistics. No Starch Press. 832pp ISBN 978-1593276515
- Matloff, N. 2011. The Art of R Programming: A Tour of Statistical Software Design. No Starch Press. 400pp ISBN 978-1593273842
- R Bloggers: <https://www.r-bloggers.com>
- Other Documentation: <http://cran.stat.ucla.edu/other-docs.html>