

## Self-paced Online Course Getting started with R

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R is a powerful and versatile open source software that allows you to perform statistical analyses and visualisations through the use of the R programming language. This introductory [course](#) explains the basics of getting started with R and RStudio, working through various examples to build confidence and skill in using R.

Organised by	Wageningen Academy
Date	You can start any time – self-paced
Duration	20 hours in total
Price	€ 410

### Why follow this programme?

We have seen that R is being increasingly mentioned in job advertisements in the plant breeding sector. At the very least, some proficiency in R is therefore a valuable addition to your CV. Furthermore, because of the large community of other R users, you will also find that there is help and support online with any issues or difficulties you encounter (in fact, your question will probably already have been asked and answered on some online forum like StackExchange). Learning (and using) R is also great fun!

### Is this programme for you?

If you registered for one of the indicated courses of the Online Master's Courses Plant Breeding – check the list further on in this document – you have the option to register for this online self-paced course.

For anybody that regularly works with data, R is an indispensable tool to become familiar with. In the long run, using R for data analysis will save you time and allow more advanced or appropriate analyses of your data. However, for those without any previous programming experience, the use of R can seem daunting at the start, especially when other software like Excel can also perform the task. The principal aim of this introductory course is to de-mystify the use of R software and help you gain confidence in using R. Students of this course are strongly encouraged to apply what they learn immediately, for example by making their next bar chart or scatter plot in R (rather than in Excel!).

### Programme and topics

This course is an online self-study programme. This enables you to study the materials at your own pace and place. The course includes self-studying a tutorial, a discussion board and a single assignment. The assignment and discussion board on the online platform are monitored weekly by an online course moderator.

After successful completion of this programme you will be able to:

- be able to work with common R data structures like vectors, matrices, data frames and lists
- write basic R code, including the use of loops, if statements and the apply family
- develop and debug functions in R
- generate high-quality visualisations and export these in various formats like PNG or PDF
- perform basic statistical analyses in R including t-tests,  $X^2$  tests and calculation of correlation coefficients
- be able to perform string manipulations, including the use of the regular expression for pattern matching
- create a Rmarkdown document to combine code and text in a single HTML or Word file.

## Practical information

### Literature

There is a wealth of literature online regarding R introductions. The classic R manual 'An introduction to R' is a good place to start [[R-intro.pdf \(r-project.org\)](#)]

### Time investment

This course requires approximately 20 hours for the average participant.

### Prerequisite knowledge

As this is an introductory course there is no assumed prior knowledge. Access to a computer with internet is of course necessary.

## Coordinated by

Jan-Kees Goud – Course adviser

Peter Bourke – Online course moderator

Monique Tulp – Programme manager

## More information & registration

Registration for this course is open if you register for one of the online master's courses Plant Breeding indicated below.

- Advanced Statistics
- Experimental Design and Data Analysis of Plant Breeding Trials
- Markers in Quantitative Genetics and Plant Breeding
- Plant Pathology & Plant Epidemiology

To register for *Getting Started with R* you need to mention in the remarks field of the registration form this text:

**MY REGISTRATION INCLUDES THE COURSE GETTING STARTED WITH R**

The price of **Euro 410,-** will be added and included in the total course fee. After payment of the total course fee, you get information to start with this course.

**Questions?** Contact Wageningen Academy.