**PhD course: An introduction to statistics using R**

**Place:** The University of Agder, Kristiansand

**Dates:** 3rd to 6th September 2018

**Course instructor:** Dr. Lotte Meteyard. Associate Professor in the Neuropsychology of Language at the University of Reading in the U.K.

Dr. Meteyard has a background in Experimental Psycholinguistics and is a practising Speech and Language Therapist in the UK. She has been teaching research methods and statistics on undergraduate and postgraduate taught courses for 7 years. Dr, Meteyard has deliviered a number of workshops on R over the last few years, and believes passionately in its capacity to support better practice in statistics and open research. (More information about Dr. Meteyard can be found at [www.meteyard.com](http://www.meteyard.com/).

**Obligatory activities:** Reading the required literature and completing the required introductory online course prior to the course. Participating in all lectures and practical sessions. Completing the assessed course assignment.

**Aim of course**

This course will provide students with a hands-on introduction to the use of R for statistical analyses.

**Course Schedule**Students will work in pairs. Using responses to the questionnaire, each pair is made up of one more experienced person, and one less experienced person.

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| 1 | Ziyuan | Isabel Nadine Jensen |
| 2 | Sigridur Bjoernsdottir | José Luis Rojas Díaz |
| 3 | Verena Lechner | Yvonne van Baal |
| 4 | Bror-Magnus S. Strand | Kamil Malarski |
| 5 | Johan Bollaert | Ingeborg Sophie Ribu |
| 6 | Torill Ringsø | Malin Mangersnes |
| 7 | Elisabeth Holm | Riccardo Pulicani |
| 8 | Kimberly Skjelde | Tori Larsen |
|  | Lenka |  |

Responses to the questionnaire showed that, overall, everyone was looking for a grounding in statistics and R. For that reason, the whole group will work on the same material (rather than giving different material to different group members). Two individuals specifically mentioned mixed models – this may or may not get covered, as it is an advanced topic and will depend on how quickly the group progresses.

The schedule is deliberately open, to allow time for questions and changes, depending on what the group wants and how we progress.

Day 1: 12-2pm Introduction to statistics  
2.30-5pm Some basic statistics in R

Day 2: 9.30-17.00 Beginning analysis in R *(Getting your data into R Studio. Data exploration and tidying.*  
*Manipulating data, t-tests, chi-square, correlation)*

Day 3: 9.30-17.00  *Intermediate* *statistics & plotting in R Studio   
 (Manipulating data, focus on linear models/ANOVA)*

Day 4: 9.30-16.00 *Catch up time,* *Assignment & free time to practice (mixed models script available as a choice activity)*

**Required reading:**To be ready for the course, you will need to have R and R Studio installed on your personal computer. You will need to be familiar with the way R Studio works and how it looks. I have also provided a short background text for introduction to statistics. I will expect you to have read this.

* Book: Statistics without Tears: An Introduction for Non-Mathematicians, Derek Rowntree. (copies available on Amazon)
* Install R and R Studio, and complete this free online course (4 hours):

<https://www.datacamp.com/courses/free-introduction-to-r>

* Read through all pages listed under ‘Sections in Depth’ on   
  [www.statmethods.net/r-tutorial/index.html](http://www.statmethods.net/r-tutorial/index.html)