London Interdisciplinary Social Science Doctoral Training Partnership
Advanced Research Methods in Social Sciences

Course Code & Title	**LISS256 Introduction to R for Social Sciences**				
Convenor(s)	Elisa Passoni				
Institution	QMUL		**Department**	LISS DTP	
Academic Year	2020-21		**Term**	2	
Number of sessions	4	**Research Platform**	Quantitative Research (QuT)	**Length of Session(s)**	2 hrs (session 1-3) 3 hrs (session 4)

	Day, Date	Start : End	Room Location
Course #1	3rd March 2021 8th March 2021 17th March 2021 24th March 2021	10:00 - 12:00 09:00-11:00 10:00 - 12:00 09:00 -12:00	Via Zoom
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Course #2	3rd March 2021 8th March 2021 17th March 2021 24th March 2021	14:00 - 16:00 12:00-14:00 14:00 - 16:00 14:00 -17:00	

Enrolment Links:	Click here to register for this course on Skillsforge Questions? Please view our Training FAQ or write to liss-dtp@kcl.ac.uk

Course Description:
This short course is aimed at PhD students of the social sciences who want to learn how to use the software R, a powerful and versatile statistical tool, widely used in academia and in the industry. In this course, you will be introduced to the R interface and the R language for statistical analysis.

After the basics, we will cover how to organize, modify and clean data frames (first session). Then we will learn how to perform descriptive statistics and create (pretty) data visualizations to showcase insights in the data (second session). Then, we will perform some basic statistical tests (third session) and conclude with mixed regressions models (final session).

Sessions 1 to 3 will last two hours, session 4 will last 3 hours. In all sessions, during the first half will cover the content and look at the code together, then you will have time to practice on some real data and ask questions.

By the end of this short course, you should be:

- more familiar with the R interface and language
- able to create, read and manipulate datasets into R
- able to summarise and graphically display data
- able to perform conventional statistical analysis tests
- able to perform mixed effect models analysis

Reading List:
No readings are needed. If you have never used R and, have time, I recommend trying to play around with it a bit before the course. You can use "swirl" for learning the basics of R, which you can find here: http://swirlstats.com/.

This is a list of some free online resources, from short tutorials to more comprehensive material:

https://education.rstudio.com/learn/beginner/
http://www.r-tutor.com/r-introduction
http://www.r-tutor.com/elementary-statistics
https://moderndive.netlify.app/1-getting-started.html
http://www.biostat.jhsph.edu/~ajaffe/docs/undergradguidetoR.pdf
https://ourcodingclub.github.io/tutorials/mixed-models/
https://m-clark.github.io/mixed-models-with-R/

Eligibility:
Everybody is welcome. However, knowledge of basics statistical concepts and tests are assumed. No knowledge of programming is required.

Pre-course preparation:
You will need to have R and Rstudio installed on your computer. We will use R Studio as it is more user-friendly than R, however, to use R Studio, you need R on your machine.

To install R, go to https://cran.r-project.org/ and under the heading, "Download and Install R", click on the appropriate platform for your system (i.e., Mac, Windows, or Linux). You will be given the choice of downloading from a list of mirror sites. The download may be faster if you choose one that is near to you. The rest of the steps are specific to the platform that you are using. Then, to install RStudio go to https://rstudio.com/products/rstudio/ and download RStudio Desktop, the free version.

Number of students:
max 20