

UBISS16 - Data Analysis and DoE in R (basic)

Course Title: "Data Analysis and Experimental Design with R (basic level)"

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1.1. Summary

Full course program (url)^[1]

- English
- 1 week / 20 hours
- 04th -08th July 2016
- 09:00h-13:30h
- Barcelona - Faculty of Medicine - Casanova Campus - UB^[2]
- Location: Barcelona - Faculty of Medicine (Aula 4) - Casanova Campus - University of Barcelona
- Classroom: Informatics room, 4th floor.

1.2. Basic Information

This course is concerned primarily with data analysis in the field of public health, looking at how data can be harnessed to protect and improve the health of individual communities and entire populations. The populations considered can be as small as a local neighbourhood or as large as an entire country. The course covers data analysis and experimental design using the R Project free software environment, examining how it can be applied to public health.

The main topics are as follows:

- R package
- Design of Experiments (DOE)
- Data analysis
- Public health

- Statistics
- Descriptive statistics

1.3. Course Program

Day 1: Introduction + - Use of data and ddbb

Date and schedule: 4 th of July 2016

9-11h (Toni Monleón-Getino)

- Presentation of the course
- Introduction to R and RStudio
- Case studies

11.30-13.30 h (Toni Monleón-Getino)

- Use of data and databases
- Case studies

Day 2: Statistical Inference

Date and schedule: 5th of July 2015 at 09:00h.

9:00 h - 11:00 h (Jaume Canela)

- Basic Statistical Inference
- Case studies

11:30 h - 13:30 h (Pere López)

- Statistical inference
- Case studies

Day 3. Markdown + automation + Reports in html

Day 3: Date and schedule: 6 th of July 2015 at 09:00h.

9:00 h - 11:00 h (Xavier de Pedro)

- Markdown, automation of data and graphs
- Case studies

11:30 h - 13:30 h (Xavier de Pedro)

- Reports in html
- Case studies

Day 4: design of experiments (DOE) + ANOVA

Date and schedule: 7 th of July 2015 at 09:00h.

9:00 h - 11:00 h (Maria Teresa Pay)

- Introduction to design of experiments (DOE)

- Case studies

11:30 h - 13:30 h (Maria Teresa Pay)

- Statistical inference (ANOVA)
- Case studies

Day 5: Analysis of variance + Correlation and regression

Date and schedule: 8 th of July 2015 at 09:00h.

9:00 h - 11:00 h (Jordi Ocaña)

- Analysis of variance
- Case studies

11:30 - 13:30 h (Père López)

- Correlation and regression
- Exam

Alias names for this page:

SummeRSchoolUB2016 | SummeRSchool16 | SummeRSchool2016 | SummeRSchoolUB16 |
SummeRSchool | SummeRSchoolUB | summeR

^[1] http://www.afc.ub.edu/internationalsummerschool/programacurs_complet.php?menu=titol&CodiCurs=343

^[2] <https://goo.gl/maps/BTsfM>