UBISS16 - Data Analysis and DoE in R (advanced)

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

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1.1. Summary

Full course program (url)[1]

- English
- 1 week / 20 hours
- 11th -14th July 2016
- 09:00h-13:30h
- Barcelona - Faculty of Medicine - Casanova Campus - UB[2]
- Classroom available soon

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

The course will combine theory classes with the discussion of real examples and group exercises. This course forms part of a group of two complementary courses, together with Evaluation of Public Programmes and Policies.

1.3. Course Program (tentative)

To be confirmed.

1. Introduction

2. Transversal skills with R
    1. Reproducible Research
        - seeds, mran repository, timestamp-packages, packrat, ...
    2. Reports in html
        - custom via markdown
        - custom via pacakges (e.g. DT tables)
        - pre-made via packages: snozr
        - html widgets
        - shiny widgets
    3. Web Apps with R
        - shiny apps
        - opencpu
        - Tiki + R, MediaWiki + R, Concerto + R, ...
    4. Team collaboration with git & github.

3. Profiling + Optimization
    1. Profiling
    2. Optimization tips
    3. Parallelization tips

4. 4rth session (4h)

5. 5th session (3h). Exam (1h)

Alias names for this page:
SummeRSchoolUB2016advanced | SummeRSchool16advanced | SummeRSchool2016advanced |
SummeRSchoolUB16advanced | SummeRSchoolAdvanced | SummeRSchoolUBadvanced

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[1] http://www.afc.ub.edu/internationalsummerschool/programacurs_complet.php?menu=titol&CodiCurs=344

[2] https://goo.gl/maps/BTsfM