

# Matlab SPM

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## Crash course in functional MRI

To be as efficient as one can in 2 days, the course is split in 3 sections

- lecture on fMRI data preprocessing + hands on using SPM8
- lecture on mass-univariate statistical analysis + hands on using SPM8 and different toolboxes to visualize data, extract signals, etc ..
- lecture on connectivity

The lectures focus on principles without getting into details. The hands on section will use the data sets available on the SPM website.

### Pre-requisite

- know about the basics involved in fMRI
- know about the basics about the BOLD signal
- understanding of fMRI designs

for these see e.g. [www.sbirc.ed.ac.uk/cyril/fmri.html](http://www.sbirc.ed.ac.uk/cyril/fmri.html)

[imaging.mrc-cbu.cam.ac.uk/imaging/DesignEfficiency](http://imaging.mrc-cbu.cam.ac.uk/imaging/DesignEfficiency)

- basics of statistical analyses (t-tests, ANOVA, etc)

### To get a head start on fMRI analyses principles

[imaging.mrc-cbu.cam.ac.uk/imaging/AnalysisPrinciples](http://imaging.mrc-cbu.cam.ac.uk/imaging/AnalysisPrinciples)

### Recommended reading on Mendeley @

[www.mendeley.com/groups/3002981/neuroimaging-and-stats-teaching/papers/](http://www.mendeley.com/groups/3002981/neuroimaging-and-stats-teaching/papers/)

Lectures are available @ [www.sbirc.ed.ac.uk/cyril/teaching.html](http://www.sbirc.ed.ac.uk/cyril/teaching.html)