# psy270 - Functional MRI Data Analysis

<table>
<thead>
<tr>
<th>Module label</th>
<th>Functional MRI Data Analysis</th>
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<tbody>
<tr>
<td>Module code</td>
<td>psy270</td>
</tr>
<tr>
<td>Credit points</td>
<td>9.0 KP</td>
</tr>
<tr>
<td>Workload</td>
<td>270 h</td>
</tr>
<tr>
<td>Used in course of study</td>
<td>• Master's Programme Neurocognitive Psychology &gt; Master module</td>
</tr>
<tr>
<td>Contact person</td>
<td>Module responsibility</td>
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<td></td>
<td>† Carsten Gießing</td>
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## Entry requirements
Enrolment in Master's programme Neurocognitive Psychology.

## Skills to be acquired in this module
**Goals of module:**
Students will learn the basics about planning and performing a neuroimaging study. They will focus on the statistical and methodological background of functional neuroimaging data analysis and analyse a sample functional MRI data set.

**Competencies:**
++ experimental methods  
++ statistics & scientific programming  
+ data presentation & discussion  
++ group work

## Module contents
**Part 1:** Functional MRI data analysis (lecture)

**Part 2:** Planning, performance and analysis of functional neuroimaging studies using MATLAB-based software (seminar)

**Part 3:** Hands-on fMRI data analysis with SPM (practical course)

## Reader's advisory

## Links
**Language of instruction**
English

**Duration (semesters)**
1 Semester

**Module frequency**
The module will be offered every summer term.

**Module capacity**
15 (The remaining places are reserved for Biology and Neuroscience students.)

**Reference text**
Since the module is primarily offered for the Master's programme Biology it has to be offered as a blocked course. Please contact us if you are interested in the module but have problems with interfering other courses.

## PLEASE NOTE:
We strongly recommend to take either psy170, psy270, psy275, psy280, or psy220 to gain methodological competencies (EEG, fMRI, TBS, HCI) that are needed for most practical projects and Master's theses!

## Modullevel
MM (Mastermodul / Master module)

## Modulart
Wahlpflicht / Elective

## Lern-/Lehrform / Type of program
Part 1: lecture; Part 2: seminar; Part 3: practical course

## Vorkenntnisse / Previous knowledge

## Examination
**Final exam of module**
Time of examination: end of summer term

## Type of examination
Oral or written examination Bonus for active participation (e.g. presentations, creating study material for other participants, tandem learning or oral contributions)

## Course type
**Lecture**
Comment: 2.00

**Frequency**
SuSe

**Workload attendance**
28 h
<table>
<thead>
<tr>
<th>Course type</th>
<th>Comment</th>
<th>SWS</th>
<th>Frequency</th>
<th>Workload attendance</th>
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<tbody>
<tr>
<td>Practical</td>
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<td>4.00</td>
<td>SuSe</td>
<td>56 h</td>
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<tr>
<td>Seminar</td>
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<td>1.00</td>
<td>SuSe</td>
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**Total time of attendance for the module**

98 h