

**Module description**

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| <b>Module title</b>            | PSY-BA-WPM-09: Functional Magnetic Resonance Tomography   |
| <b>Subject</b>                 | Methodology   |
| <b>Associated degree</b>       | Bachelor of Science (B.Sc.)   |
| <b>Module coordinator</b>      | Prof. Dr. Rudolf Stark<br>Rudolf.Stark@psychol.uni-giessen.de   |
| <b>Frequency and duration</b>  | Winter and summer<br>(2 semester course, 1.5h per week)   |
| <b>Language of instruction</b> | German  |
| <b>Examination</b>             | Presentation or essay   |
| <b>ECTS</b>                    | 10 (for full 2 semester module; partial module = 5)   |
| <b>Prerequisites</b>           | no  |
| <b>Learning outcomes</b>       | <p>Students will</p> <ul style="list-style-type: none"> <li>• gain knowledge of the fundamentals of functional magnetic resonance imaging (fMRI)</li> <li>• learn methods of evaluating fMRI data</li> <li>• receive an introduction to the practical execution of fMRI experiments</li> <li>• gain knowledge in the interpretation and evaluation of fMRI results</li> </ul>   |
| <b>Module content</b>          | <p>Theory</p> <ul style="list-style-type: none"> <li>• basic physical principles of magnetic resonance imaging</li> <li>• safety and important terms in magnetic resonance imaging</li> <li>• servicing scanner software</li> <li>• designing fMRI experiments and the fundamentals of evaluating fMRI data</li> </ul> <p>Practice</p> <ul style="list-style-type: none"> <li>• practical execution of an fMRI experiment</li> <li>• introduction to evaluating fMRI data using SPM (statistical parametric mapping)</li> </ul> |