

# Quality concept Master Neurosciences

## Program objectives

The aim of the study program *Master of Neurosciences* is an intensive interdisciplinary education in the Neurosciences, which combines experimental and theoretical research and its transfer into applications. The Master program enables students who have a basic education in life sciences, physics, computer sciences or psychology, to perform independent scientific work in the Neurosciences. To cover the diverse disciplines of the subject, the Master program is organized as a joint program of the subjects Biology (Faculty 2), Physics (Faculty 1), Computer Science (Faculty 3) and Psychology (Faculty 11). The study program thus constitutes an important basis for the further development of the neurosciences and cognitive sciences as high-profile research areas of the University of Bremen and links these sciences to the high profile area of Mind, Media and Machines. It thus promotes the importance of Bremen as a center of science and industry. Most of the students graduating from the program move on to complete Ph.D. studies. It is planned to further improve these options by establishing a graduate school.

First-semester students attend compulsory modules on cellular, systemic and theoretical neurosciences as well as in clinical neurosciences. Besides acquiring fundamental competences in the area of experimental design and scientific communication, students choose practical training in either laboratory animal science or advanced programming to prepare for electives in either experimental or computational neurosciences. In the second semester, in-depth theory and methodical skills are acquired in the elective modules offered in the fields of neurophysiology, neurophysics, functional neuroanatomy, behavioral physiology and neuropharmacology, psychophysics, computational neurosciences, machine learning and functional imaging as well as neuropsychology.

Focusing on scientific research starts in the third semester in laboratory projects (or hands-on-training in clinics), during which students are actively integrated in research groups and work on their own scientific projects. The fourth semester is devoted to the Master's thesis and its defense.

## Evaluation concept

Since the study program was introduced, course questionnaires have been the standard instrument for controlling the quality of teaching. They are carried out electronically and in anonymized form via the course management system Stud.IP. An extensive standard questionnaire is used for the evaluation. The

results of course evaluations are made available to teaching faculty via the Stud.IP system.

While the course evaluations described above principally address the individual course leaders, the meeting between students and the coordinator and her\*his assistant held at the end of the second semester addresses any general problems that may have occurred in the first two semesters as well as any specific problems with individual modules. The personal talk offers both sides an opportunity to better explain individual processes and proposed solutions, thus avoiding misunderstandings. The minutes kept of this meeting are made available to all teaching faculty. Moreover, the results will be discussed in meetings of the examination board and possible consequences for the study program may be enacted. The procedure has proven to be highly constructive for both sides.

As in the following semester the students not only participate in the research groups led by their previous member of teaching faculty, but rather are partly spread all over Germany or undertaking stays abroad, further evaluations are dispensed with.

However, the coordinator and her\*his assistant remain in constant contact with graduates; on the one hand to provide assistance where needed, and on the other hand to receive feedback on what happens to graduates after completing their master's thesis. An accordant statistic can be seen on the program's homepage.

**Mentoring** was introduced at the beginning of winter semester 2015/2016. Every student is assigned to a faculty advisor, usually a member of the teaching staff. Regular meetings are arranged so that upcoming problems can be discussed and solved rather quickly. Assignment of a mentee to a mentor is for the total extent of the program, so that mentors can be contacted at any time.