



PhD "Systems Neuroscience"



Medizinische Hochschule
Hannover



The PhD program

- Is conducted by the virtual cooperative [Center for Systems Neuroscience \(Zentrum für Systemische Neurowissenschaften Hannover, ZSN\)](#) with four participating universities in Hannover: University of Veterinary Medicine Hannover (TiHo), the Hannover Medical School (MHH), the Leibniz University Hannover, and the Hannover University of Music, Drama and Media (HMTMH).
- Offers project-oriented postgraduate training in neuroscientific research
- Will train students for specialized, independent scientific studies and provides advanced qualifications for research and related fields
- Is designed to contribute substantially to the training of young scientists in the fields of systems neuroscience and to provide skills students will need for successful research career
- **Is a cooperative program with international research groups in order to enhance the opportunities for mobility of doctoral candidates and to complete part of the doctoral work at a foreign university.**



Applicants must have successfully **completed a university degree in veterinary medicine, medicine, dental medicine, biology, biochemistry, chemistry or in another field of the natural sciences**

A maximum of 20 students will be accepted each year for the winter term.

Eligibility criteria

- You have completed your university studies with a Master's or Diploma degree (or equivalent) in human medicine, veterinary medicine, dental medicine, biology, biochemistry, chemistry or other fields of natural sciences by the time of the (intended) start date.
- In special cases Master or Diploma degrees of Universities of Applied Sciences can be accepted.
- The positions are open to all nationalities. Students should be fluent in English. Non-domestic applicants should be willing to acquire basic knowledge in German.

Application

see also [Application](#)

In order to apply for the program the following documents must be submitted (only applications in English or German will be accepted):

- A cover letter clarifying your research interest (max. 1 page)
- Your CV (europass form)
- Copies of certificates and transcripts (if necessary include English translations)
- Non-native speakers of English should demonstrate an adequate competence of the English language by acceptable results in an internationally recognized test (e.g. TOEFL, IELTS, APIEL, CPE). Participation in such a test is recommended but not obligatory - language skills can also be evaluated during personal interviews with selected candidates. Proven higher education in English or a reasonably long stay in an English speaking country are acceptable
- Applicants from China must prove their certificates by APS (www.aps.org.cn/web/)

Course of Study

Designed as a three-year PhD program, beginning in the winter semester leading to a Doctor of Philosophy (PhD) or a *Doctor rerum naturalium* (Dr. rer. nat.).

Each student is advised by a supervision group consisting of three scientists from different ZSN research groups, during the entire doctoral course.

During the the PhD program, which normally covers six semesters, students must complete 300 hours of coursework, half of which are obligatory and half electives.

The topic of the thesis is essentially derived from the research focus of the ZSN groups with special consideration of the [ZSN main research fields](#).

Students have to give a presentation of their thesis after the first and second year and pass an oral intermediate and a final exam (defence of the thesis).

Abstract of the course program

Interdisciplinary tutorials to the various fields in Systems Neuroscience such as

- Basics of cellular and molecular neuroscience
- Sensory systems (auditory, olfactory and visual)
- Cognitive and behavioural systems

- Limbic systems
- Motor systems
- Systems neuroscience: clinical applications

Laboratory classes in the fields:

- Cellular Biology
- Molecular Techniques
- The Senses, Emotions and Motor Functions

Biweekly seminar open to the public in which invited speakers and members of the ZSN present their neuroscientific research.

Gain of knowledge and skill as biometry and statistics, establishment of a reference database, scientific presentation (oral and posters), scientific writing ect.

External courses (workshops, summer schools, e.g.) as well as active participation in national and international congresses will be supported.

Within the elective program, students can develop their own specific interests and deepen their specialized knowledge.

The training course is designed to allow students to set up an individualized course of study.

Download the up to date [course catalogue](#) and the complete [course of study](#)

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