

INTERNATIONAL PROGRAMMES

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Doctorate



GGNB Theoretical and Computational Neuroscience (PhD)

University of Göttingen • Göttingen

Overview

Degree	PhD (Division of Mathematics and Natural Sciences) or, alternatively, Dr rer nat
In cooperation with	Max Planck Institute for Dynamics and Self-Organization (MPI-DS), Max Planck Institute for Multidisciplinary Sciences (MPI-NAT), German Primate Center (DPZ)
Teaching language	• English
Languages	English
Full-time / part-time	• full-time
Programme duration	6 semesters
Beginning	Only for doctoral programmes: any time
Application deadline	Application is possible independent of deadlines.
Tuition fees per semester in EUR	None
Combined Master's degree / PhD programme	No
Joint degree / double degree programme	No
Description/content	This cross disciplinary programme aims at understanding the computational capabilities of neural systems combining approaches from Physics, Biology, Computer Science, Psychology, Medicine, and related fields. Transformative technological progress is currently opening unprecedented research opportunities to analyse collective behaviour and to decipher the evolutionary design principles of neuronal networks, thus enabling a new generation of scientists to solve the big questions of basic research.
	Computational and theoretical neuroscience research at the Göttingen campus is extraordinarily broad, ranging from research into the molecular architecture and biophysics of living neuronal computing devices to the operation of complex brain networks and to emergent cognitive abilities of human and animal brains. Many research projects are jointly driven by collaborating experimental and computational research groups and offer students a comprehensive learning experience at the frontier of neurobiology and the computational and exact sciences.
	The computational neuroscience community in Göttingen is offering innovative courses in

Theoretical and Computational Neuroscience. These include lectures in neural networks and theoretical neuroscience, seminars and method courses on topics in theoretical neuroscience, and an annual advanced summer school in computational neuroscience. The Theoretical and Computational Neuroscience programme extends these offers and shapes them into a comprehensive and interdisciplinary curriculum.

Course Details

Course organisation

The doctoral programme in "Theoretical and Computational Neuroscience" is offered by the Göttingen Graduate Center for Neurosciences, Biophysics, and Molecular Biosciences (GGNB).

The research-oriented programme is taught in English and open to students who hold a Master's degree (or equivalent) in physics, biology, computer science, or related fields.

The GGNB offers an integrated training and qualification concept consisting of:

- Thesis advisory committees advising the doctoral student and monitoring the progress of the doctoral project
- Scientific methods courses, seminars and summer schools in all science areas covered by the graduate school
- Professional skills courses in the four categories of Scientific Communication; Good Scientific Practice, Ethics, and Intellectual Property; Self-Management and Organisational Skills; and Career Development as well as German language courses and courses on scientific English
- Industry excursions to biotechnological, pharmaceutical, optical or (bio)physical companies, guided by GGNB alumni
- Student-organised scientific symposia and career-related events
- Annual PhD retreats organised by the programmes

In total, 20 credits are required, and doctoral students can tailor their individual curricula by choosing from all courses and events. Only a seminar on good scientific practice is mandatory.

The doctoral students hold at least three annual Thesis Advisory Committee meetings within the regular PhD time of three years. The maximum duration of PhD studies in GGNB is four years.

A Diploma supplement will be issued

No

International elements

- Language training provided
- Training in intercultural skills
- Projects with partners in Germany and abroad

Integrated internships

If necessary, lab visits and projects will be organised for students. They may last several days or several weeks.

Course-specific, integrated German language courses

Yes

Course-specific, integrated English language courses

Yes

Costs / Funding

Tuition fees per semester in EUR
Semester contribution

None

Fees amount to around 400 EUR per semester. The fees include a prepaid semester ticket that entitles students to use regional trains (in Lower Saxony and Bremen) and city buses in Göttingen free of charge. Students of the University of Göttingen receive discounts for cultural events. Meals and drinks are also available at reduced prices at all university canteens.

Fees: http://www.uni-goettingen.de/fee

Semester ticket: http://www.uni-goettingen.de/en/16432.html

Costs of living

The average cost of living in Göttingen is modest compared to other major university cities in Germany. Currently, expenses for accommodation, food, health insurance and books are approx. 1,000 EUR per month. Please note that fees for health insurance may vary according to age. Living expenses might be slightly higher. For further information, please see the following link: www.unigoettingen.de/en/54664.html

Funding opportunities within the university

Yes

Description of the abovementioned funding opportunities within the university Doctoral fellowships are available at approx. 1,200 to 1,500 EUR per month.

Requirements / Registration

Academic admission requirements	Master's degree or equivalent in physics, the life sciences, computer science, or a related discipline
Language requirements	Applicants whose native language is not English are asked to submit proof of proficiency in English. If no English test is available, proficiency in English can be evaluated during a personal interview. Proven higher education in English or a reasonably long stay in an English speaking country may also be accepted.
Application deadline	Application is possible independent of deadlines.
Submit application to	Online registration athttp://www.uni-goettingen.de/en/apply/497097.html

Services

Accommodation

The Accommodation Service of the International Office supports international students who are enrolled at the University of Göttingen in finding accommodation and serves as a point of contact for related queries. The Accommodation Service also publishes suitable offers from private landlords in Göttingen and collaborates with the Student Services ("Studentenwerk"). As the number of available accommodation options in Göttingen is limited, it is highly recommended to contact the Accommodation Service as early as possible. For further information, please see the following link:

https://www.uni-goettingen.de/en/617883.html

Please note: For doctoral students, accommodation services are only available if you have a low income.

Structured research and supervision	Yes
Research training / discussion	Yes
Career advisory service	Information on the career service for doctoral students in the natural sciences can be found here: http://www.gauss.uni-goettingen.de/career
Support for international students and doctoral candidates	Buddy programme

Contact

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Course website: https://www.uni-goettingen.de/de/56640.html

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- https://twitter.com/unigoettingen
- in https://www.linkedin.com/school/-university-of-goettingen/
- https://www.instagram.com/unigoettingen

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Disclaimer

The data used for this database was collected and analysed in good faith and with due diligence. The DAAD and the Content5 AG accept no liability for the correctness of the data contained in the "International Programmes in Germany" and "Language and Short Courses in Germany".

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