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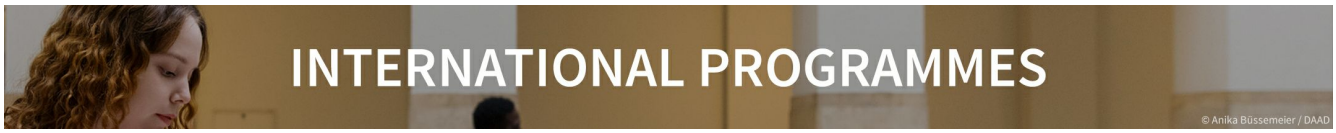
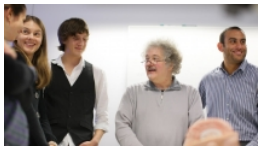


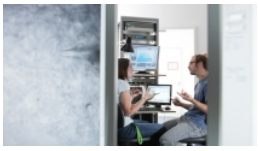
Table of Contents

Master's degree

Master's Programme in Neurosciences

Ludwig-Maximilians-Universität München • München





Overview

Degree	Master of Science in Neurosciences
Course location	München
Teaching language	• English
Languages	The course language is English.
Full-time / part-time	• full-time
Programme duration	4 semesters
Beginning	Winter semester
Application deadline	Annually on 15 February for the following winter semester More information
Tuition fees per semester in EUR	None
Combined Master's degree / PhD programme	Yes
Joint degree / double degree programme	No
Description/content	**How does the brain work?** Significant progress has been made in the field of cellular and molecular neuroscience and modern in vivo techniques have revolutionised non-invasive observation of brain activity even in humans. Today's challenges lie in understanding the brain as a complex functioning system and many problems remain to be solved. For example, we still cannot explain how information processed in parallel pathways within one sensory modality (as in the visual or auditory system) is fused into the complex object we perceive, such as a face or particular voice.

Based on their teaching and research expertise, the members of our teaching faculty, which includes members of the Graduate School of Systemic Neurosciences (GSN) and guest lecturers from external institutions, believe that the overwhelming complexity of the human brain can only be explained by applying different approaches and methods of the disciplines in neuroscience. Thus, our programme constantly works on educating a new generation of neuroscientists starting at the level of graduate students. With an excellent understanding of the molecular, cellular and systemic principles of neurobiology, our students acquire a deeper knowledge of neuron-neuron interaction, the dynamics of neuron-glia interaction, rules of information transfer in simple and complex circuits of single brain centres, interaction of different brain centres, and the function of the human brain. This educational concept can be seen reflected in the curriculum.

Course Details

Course organisation

1. General education

The educational programme is based on four main scientific topics, that of systems neurobiology, molecular and cellular neurobiology, computational neuroscience and neurophilosophy. Our curriculum provides the students with a profound understanding of the biological principles in brain structure and neuron-neuron communication before broadening the scope towards cognition and higher brain functions, computational methods and philosophical aspects in neurosciences. The main portion of the general education takes place in the first two semesters of study.

2. Individual research training

Each semester the student has to complete an individual research project. This will guarantee hands-on research training from the very beginning and gives students the opportunity to become acquainted with participating laboratories and researchers. In addition to the mandatory general courses, students can choose from a broad spectrum of methods and interdisciplinary courses.

3. Transferable skills

Our educational concept would not be complete without training of complementary skills, which supplement our core curriculum and help to optimally prepare students for their future career goals. In their second year, our students obtain first-hand teaching experience (and credits). In addition to a scientific education, the Master's programme includes modular workshops on academic transferable skills such as communication training, presentation skills, scientific writing, and time management.

4. Mentoring

Each student has their own mentor from the GSN faculty. The mentors serve as academic advisers, helping students plan their educational career and facilitate contacts in collaborating institutions. In informal meetings, a student has an excellent opportunity to discuss problems, receive guidance or have an informative scientific chat.

Two academic tracks

Starting 2018, the GSN curriculum has been expanded in order to offer students more flexibility as well as the opportunity to sharpen their academic profiles. Students can now choose courses along either a **Systemic-Cellular-Molecular Neuroscience track** or a **Computational Neuroscience track**. Regardless of the selected track, all students will complete coursework within the other area, but at a more moderate level.

A Diploma supplement will be issued

Yes

International elements

- International guest lecturers
- Training in intercultural skills
- Courses are led with foreign partners

- Projects with partners in Germany and abroad

Description of other international elements	International internships, international workshops for transferable skills, exchange programmes with internationally renowned universities, lab visits abroad, etc.
Integrated internships	During the programme, students are required to complete individual practical work within a project of ongoing research for about six to eight weeks. The student chooses from a wide variety of projects within the framework of the GSN faculty or external institutions. Our curriculum requires a total of three research projects and one laboratory internship before starting the Master's thesis project. Research projects give students the opportunity to explore different fields of neuroscience before deciding upon an area of study for the Master's thesis.
Special promotion / funding of the programme	• Other (e.g. state level)
Course-specific, integrated German language courses	No
Course-specific, integrated English language courses	No

Costs / Funding

Tuition fees per semester in EUR	None
Semester contribution	Basic fee 85 EUR + additional fee for the Deutschlandticket
Costs of living	See our "Life in Munich" webpage for more information:https://www.gsn.uni-muenchen.de/apply/living_in_munich/index.html
Funding opportunities within the university	No

Requirements / Registration

Academic admission requirements	Applicants for the MSc programme in Neurosciences must hold a Bachelor's or equivalent degree in biology, psychology, medical sciences, bioinformatics, engineering, physics, computer sciences, philosophy, or a related field.
Language requirements	English is the lingua franca of the programme for both instruction and research, thus a good command of English is required for participation. More information is availablehere.
Application deadline	Annually on 15 February for the following winter semester

	More information
Submit application to	https://www.gsn.uni-muenchen.de/apply/index.html

Services

Accommodation	The International Office helps visiting academics, PhD students, and postdocs who are travelling to Munich for a set period of time to find accommodation. For further information, please visit the following link: https://www.lmu.de/en/study/important-contacts/international-office/index.html Rooms in shared flats are popular on the private market and reasonably priced at 400-600 EUR per month if located in central parts of Munich.
Career advisory service	Individual career counselling, workshops, mentoring by alumni
Support for international students and doctoral candidates	• Welcome event • Buddy programme • Tutors • Accompanying programme • Specialist counselling • Cultural and linguistic preparation • Visa matters
General services and support for international students and doctoral candidates	Mentoring by faculty members and support from the GSN teaching coordinator are complemented by administrative assistance and dedicated support from the GSN staff. All new students attend the GSN orientation week, which consists of seminars from GSN faculty members, poster sessions of current GSN research projects, excursions around Munich, and informational workshops to help navigate the degree programme.

Our Partners

Brain Works – MSc Neurosciences at GSN-LMU

The essential question in modern neurosciences is to understand how the human brain is functioning on all levels, from molecules to cognition. In order to approach these questions, the MSc programme at the GSN-LMU provides basic and individual teaching concepts for students with varied educational backgrounds – from neurosciences to related fields in life sciences, maths, physics etc.

» more:
https://youtu.be/naJzbuxtU44

Ludwig-Maximilians-Universität München

The GSN is located in the LMU Biocenter, which is part of the Martinsried life science campus.

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The international Master's programme in Neurosciences is part of the integrated training programme at the Graduate School of Systemic Neurosciences (GSN-LMU).

General information on Master's programmes at LMU can be found here:https://www.en.uni-muenchen.de/students/int_student_guide/index.html

In addition, general information on doctoral studies is offered by the GraduateCenter LMU (www.graduatecenter.lmu.de)

University location

Ludwig-Maximilians-Universität München (LMU Munich) is recognised as one of the top-ranked universities in Europe. Research and teaching at the university's 18 faculties are committed to the highest international standards of excellence. Students can choose from over 200 degree programmes ranging from the humanities and social sciences to economics and law as well as medicine and natural sciences. A growing number of Master's and doctoral programmes are taught in English.

Ludwig-Maximilians-Universität München forms part of a unique network of research institutions, foundations, and corporations in and around the city. Its campuses and a lively international student community constitute an integral part of the urban landscape. Home to approximately 1.5 million people, Munich is not only an important hub for higher education, research, technology, and the media. With its renowned museums, galleries, theatres, and festivals, the capital of Bavaria also ranks among the major European cultural centres. Its proximity to the surrounding lakes and the Bavarian Alps adds to Munich's inimitable appeal.

Contact

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Graduate School of Systemic Neurosciences (GSN-LMU)

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Course website: https://www.gsn.uni-muenchen.de/

https://de.linkedin.com/school/gsn-lmu-munich/

https://www.youtube.com/c/MunichNeuroscienceChannelbyMCNLMU

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