



Deutscher Akademischer Austauschdienst  
German Academic Exchange Service



## Table of Contents

<b>Master's degree .....</b>	<b>2</b>
<b>Elite Master of Science in Neuroengineering (MSNE) • Technical University of Munich • München ...</b>	<b>2</b>

# Master's degree



## Elite Master of Science in Neuroengineering (MSNE)

Technical University of Munich • München



## Overview

Degree	Master of Science (By completing an optional Research Excellence Certificate [30 ECTS], students will be awarded a degree with the special title "with honours".)
In cooperation with	Elite Network of Bavaria (ENB) / Elitenetzwerk Bayern
Teaching language	<ul style="list-style-type: none"><li>English</li></ul>
Languages	<p>The programme is entirely taught in English. German language training at various levels is offered by TUM Language Center.</p> <p><a href="https://www.sprachenzentrum.tum.de">https://www.sprachenzentrum.tum.de</a></p>
Full-time / part-time	<ul style="list-style-type: none"><li>full-time</li></ul>
Programme duration	4 semesters
Beginning	Winter semester
Application deadline	<p>All applicants: 31 May for the following winter semester</p> <p>Applicants who need a visa to study in Germany are strongly advised to apply earlier (at the latest by the end of March).</p>
Tuition fees per semester in EUR	None
Combined Master's degree / PhD programme	No
Joint degree / double degree programme	No
Description/content	<p>The ENB Elite Master of Science programme in Neuroengineering (MSNE) at the Technische Universität München is a two-year graduate programme, with an optional Research Excellence Certificate. The programme is interdisciplinary and combines experimental and theoretical neuroscience with profound training in engineering. Besides taking a series of mandatory core</p>

courses, students will have the opportunity to choose from electives from multiple disciplines and to gain research experience under the guidance of world-renowned faculty. The programme aims to attract high-profile international students. It will provide a unique skill set that will open up career possibilities beyond the conventional job market.

## Course Details

<b>Course organisation</b>	<p>The programme is designed as a two-year full time (120 ECTS) Master of Science training, with an optional Research Excellence Certificate (additional 30 ECTS). The curriculum is innovative in the sense that all mandatory modules include hands-on implementation of acquired knowledge in small team projects with close supervision to ensure that the students are able to apply the relevant methods and techniques. Due to the interdisciplinary character, the mandatory modules ensure that all aspects of the qualification profile (neuroscience, engineering, mathematics, psychology, and informatics) are covered, while still leaving students the choice of the preferred form of implementation during tutorials and labs. The Literature Seminar, Scientific Debating, and Colloquium build a framework for the individual choice of a topic and related research papers, strengthening students' abilities to identify relevant research, analyse the research, and write about this research. Furthermore, the programme includes one or two individual research projects (of 8 and 12 ECTS, respectively) during the semester breaks to enable students to perform independent research early during their education.</p> <p>We offer a mandatory set of core courses to cover all basic aspects of neuroengineering from brain anatomy to neurorecording, electronics, and computational processing. Thereby, MSNE students acquire a rich toolbox and a deep understanding of neuroengineering concepts, despite the breadth of the field. The courses are conducted in a way that sets the framework for each topic covered. During the tutorials and labs, students have the opportunity to focus on individual problems as they work towards the individual qualification for research excellence. Students are free to select remaining courses ("Learning Agreement"). The overall timeline is three semesters of classes. This includes hands-on projects and intensive study projects during the semester breaks (possibly abroad). The fourth semester is dedicated to the mandatory Master's thesis.</p>
<b>A Diploma supplement will be issued</b>	Yes
<b>International elements</b>	<ul style="list-style-type: none"> <li>• International guest lecturers</li> </ul>
<b>Description of other international elements</b>	Research projects may be performed abroad
<b>Integrated internships</b>	The research projects after semester one (optional) and semester two (mandatory) give students first-hand exposure to the individual independent application of learned concepts. All associated faculty and international partners agree to offer small, tightly supervised research projects during the semester breaks, thereby allowing students to explore their interests and pursue an early specialisation. Students have the option to publish the results of these research projects as small papers and present these papers at the NeuroEngineering Summit (after the third semester).
<b>Special promotion / funding of the programme</b>	<ul style="list-style-type: none"> <li>• Other (e.g. state level)</li> </ul>
<b>Course-specific, integrated German language courses</b>	No
<b>Course-specific, integrated English language courses</b>	No

## Costs / Funding

Tuition fees per semester in EUR	None
Semester contribution	152.30 EUR per semester, according to <a href="https://www.tum.de/en/studies/fees-and-financial-aid">https://www.tum.de/en/studies/fees-and-financial-aid</a> (as of April 2023)
Costs of living	<p>Naturally, the cost of living in Munich depends on your needs and your lifestyle. Compared to other German cities, however, living in Munich is relatively expensive. As a rule, you can expect to spend 1,000 EUR a month. Most of this will be for rent. Average costs per person:</p> <ol style="list-style-type: none"><li>1. Rent for shared living or studio apartment (including utilities): at least 550 EUR</li><li>2. Food: at least 250 EUR</li><li>3. Local public transit: 29 EUR (included in TUM semester contribution)</li><li>4. Health insurance: 50 to 120 EUR</li><li>5. Phone/Internet/radio and TV fees: 45 EUR</li></ol> <p>If you are bringing your domestic partner or family to Munich, the costs will increase accordingly. Rent for a two-bedroom apartment ranges from 800 to 1,200 EUR a month. A cheaper alternative to the private rental market is living in a student dormitory at the Munich student union. However, rooms in student dormitories are very popular and there are usually long waiting lists.</p>
Funding opportunities within the university	No

## Requirements / Registration

Academic admission requirements	<p>Bachelor's degree or equivalent from a university that is rated H+ at Anabin in Electrical Engineering, Computer Engineering, Computer Science, Biomedical Engineering, Psychology with an Engineering minor, or a similar degree</p> <p>Paper-based assessment and interview</p>
Language requirements	<p>Score thresholds and updates regarding recognised English language certificates are available online:</p> <p><a href="https://www.tum.de/en/studies/application/application-info-portal/admission-requirements/language-certificates">https://www.tum.de/en/studies/application/application-info-portal/admission-requirements/language-certificates</a></p>
Application deadline	<p>All applicants: 31 May for the following winter semester</p> <p>Applicants who need a visa to study in Germany are strongly advised to apply earlier (at the latest by the end of March).</p>
Submit application to	<p>In order to apply at TUM, you need to open a TUMonline account:</p> <p><a href="https://campus.tum.de/tumonline/webnav.ini">https://campus.tum.de/tumonline/webnav.ini</a></p> <p>Our application wizard will guide you step by step through the online application procedure.</p>

## Services

Possibility of finding part-time employment	Students can apply for jobs as research assistants or teaching assistants.
Accommodation	It's not easy to find a place to live in Munich – but it's not impossible either! The Technische Universität München (TUM) supports students and staff in their search for accommodation by providing personal advice, listings for housing, and useful information to ensure that they can find a place to call their own.
Support for international students and doctoral candidates	<ul style="list-style-type: none"><li>• Specialist counselling</li></ul>
Supervisor-student ratio	Mandatory modules: approx. 1:20 in classes, approx. 1:10 in labs

## Our Partners



### Portrait: Technische Universität München – 150 Years of a Culture of Excellence

The Technische Universität München (TUM) is one of Europe's top universities. It is committed to excellence in research and teaching, interdisciplinary education, and the active promotion of promising young scientists. The university also forges strong links with companies and scientific institutions around the world.

» more:  
<https://youtu.be/iu6UboRqanI>

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# Technical University of Munich

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The Technische Universität München (TUM) is one of Europe's leading research universities, with around 550 professors, 41,000 students, and 10,000 academic and non-academic staff. Its focus areas are the engineering sciences, natural sciences, life sciences and medicine, combined with economics and social sciences. TUM acts as an entrepreneurial university that promotes talents and creates value for society, in that it profits from having strong partners in science and industry. It is represented worldwide with the TUM Asia campus in Singapore as well as offices in Beijing, Brussels, Cairo, Mumbai, San Francisco, and São Paulo. Nobel Prize winners and inventors such as Rudolf Diesel, Carl von Linde, and Rudolf Mößbauer have done research at TUM. In 2006 and 2012, it won recognition as a German "Excellence University". In international rankings, TUM regularly places among the best universities in Germany.



## University location

Munich is a city with a cosmopolitan, international outlook. In all areas of life - from economy to science, culture to sport, nightlife to nature - people from all over the world are drawn to Munich's creative, dynamic happening lifestyle. TUM's historic campus is located right in the middle of the city's museum quarter. You can go straight from a conference at a major company's HQ to the peaceful expanse of the "English Gardens". Germany's largest university sports community is based in the Olympic Park. From the roof terrace of TUM's city campus, the Alps look close enough to touch, and the clear waters of the Bavarian lakes are just an hour away.

## Contact

### Technical University of Munich

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🌐 Course website: <https://www.cit.tum.de/en/cit/studies/degree-programs/master-neuroengineering/>

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# International Programmes in Germany - Database

[www.daad.de/international-programmes](http://www.daad.de/international-programmes)  
[www.daad.de/sommerkurse](http://www.daad.de/sommerkurse)

## Editor

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## GATE-Germany

Consortium for International Higher Education Marketing  
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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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