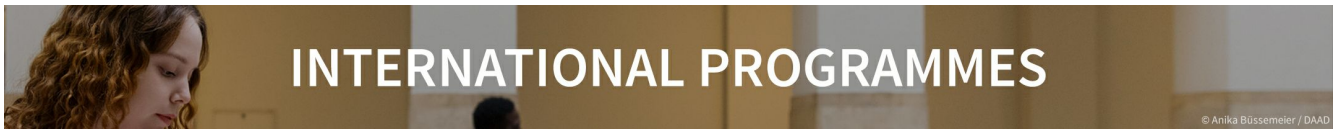
Deutscher Akademischer Austauschdienst
German Academic Exchange Service

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# Master's degree

## MSc Power Engineering

**Technical University of Munich** • München

## Overview

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| **Degree** | Master of Science in Power Engineering |
| **Course location** | München |
| **Teaching language** | • English |
| **Languages** | The programme is taught in English (100%).<br><br>During your studies, you can acquire German language skills, e.g. by attending lectures offered in German language or by taking a dedicated German language course at the TUM Language Center. |
| **Full-time / part-time** | • full-time |
| **Programme duration** | 4 semesters |
| **Beginning** | Winter semester |
| **Application deadline** | **Registration deadline TUM Test Power Engineering 2025**<br>(required for applicants outside the scope of the "Lisbon Convention"):<br>To be announced; expected January/February 2025<br>Please check https://wiki.tum.de/display/edschooloffice/Application+-+MSC-PE for the date.<br><br>**Recommended deadline to submit all application documents:**<br>15 March (especially for non-EU students)<br>Final deadline: 31 May |
| **Tuition fees per semester in EUR** | 6,000 EUR |
| **Additional information on tuition fees** | Please refer to the following website for more information on tuition fees at TUM:<br>https://www.tum.de/en/studies/fees/tuition. |
| **Combined Master's degree / PhD programme** | No |
| **Joint degree / double degree programme** | No |
| **Description/content** | Power Engineering MSc – TUM School of Engineering and Design |

The Master's programme in Power Engineering deals with power plant engineering and electricity generation. Electricity generation originates principally in large thermal and hydraulic power plants and is increasingly complemented by decentralised generation technologies providing renewable energies. Students are able to understand innovative methods, technologies and structures in the area of centralised and decentralised power generation. The aim is to develop and apply strategies for ecological, inexpensive and sustainable energy systems.

**Your profile**

The Master's programme in Power Engineering deepens students' previous knowledge of energy technologies. It addresses students with a Bachelor's degree in electrical or mechanical engineering or a related field. It is a two-year high-level international Master's programme involving lectures in the fields of electrical engineering, mechanical engineering, physics, civil, geo and environmental engineering and information technology. It is entirely taught in English. Students are able to understand innovative methods, technologies and structures in the area of centralised and decentralised power generation. The aim is to develop and apply strategies for ecological, inexpensive and sustainable energy systems.

**What you'll learn**

As a graduate, you will be able to deal independently with complex projects in the area of power generation and supply. You will be familiar with power plant construction and technologies and will be able to interface with all associated disciplines. You will know the most important processes and methods relating to power generation, energy storage and transmission and will be able to classify and assess these. Your expertise will allow you to recognise innovations in the area of electrical power supply and to evaluate their potential. A special focus is placed on sustainable energy technologies.

When at work, you will always be conscious of the technical, ecological and economic dimensions of energy systems. You will have an understanding of the competitive energy market and will be able to apply economic assessment methods. Working in project teams, you will assume responsibility and coordinate interdisciplinary cooperation between various specialised areas.

The completion of the Master's programme opens up opportunities in the energy and power plant sectors. You will be able to take up a position in the manufacturing of both power plants and components as well as at energy suppliers. Further opportunities arise in the form of research positions.

# Course Details

**Course organisation**

The Master's programme in Power Engineering deepens students' previous knowledge of energy technologies. Students are enabled to understand innovative methods, technologies and structures in the area of centralised and decentralised power generation. The aim is to develop and apply strategies for ecological, inexpensive and sustainable energy systems.

In addition to in-depth core competencies in the fields of mechanical and electrical engineering, the Master's degree programme in Power Engineering offers students a broad freedom of choice. The modules are supplemented by practical courses and research work.

- In the **first semester**, students' previous knowledge of various disciplines is deepened and completed through core modules in the area of electrical and mechanical engineering.
- The **second and third semesters** are devoted to the deepening of specialist knowledge and to an individual focus in the context of elective modules. This phase also includes practical research work, during which students collaborate on current projects conducted at a teaching or research institute. A seminar deepens the knowledge acquired from the modules and offers a further opportunity to focus on a special topic of research. Students can also supplement their management competencies and self-development through modules from outside the discipline.
- The **fourth semester** is dedicated to the Master's thesis, in which the acquired knowledge of the discipline and its methods come together in working on a larger task.

https://wiki.tum.de/pages/viewpage.action?pageId=876675773#Students%E2%80%93MSCPE-

ProgramDesign

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| **A Diploma supplement will be issued** | Yes |
| **Integrated internships** | A nine-week research internship at one of the contributing institutes is mandatory.<br><br>https://wiki.tum.de/pages/viewpage.action?pageId=876675773#Students%E2%80%93MSCPE-ResearchInternship(12ECTSCredits) |
| **Course-specific, integrated German language courses** | No |
| **Course-specific, integrated English language courses** | No |

# Costs / Funding

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| **Tuition fees per semester in EUR** | 6,000 EUR |
| **Additional information on tuition fees** | Please refer to the following website for more information on tuition fees at TUM: https://www.tum.de/en/studies/fees/tuition. |
| **Semester contribution** | For more information, refer to: https://www.tum.de/en/studies/fees. |
| **Costs of living** | In order to cover personal expenses while studying in Munich, we recommend a budget of at least 900 EUR per month.<br><br>Please refer to the following page for more information: https://www.studentenwerk-muenchen.de/en/international/international-students-in-munich/in-preparation/cost-of-living/. |
| **Funding opportunities within the university** | Yes |
| **Description of the above-mentioned funding opportunities within the university** | https://collab.dvb.bayern/display/TUMedschooloffice/International+Students+-+MSC-PE#InternationalStudentsMSCPE-Scholarships<br><br>Many international students can have their fees waived or receive scholarships to finance them. You can find all information on waivers and scholarshipshere. |

# Requirements / Registration

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| **Academic admission requirements** | To be eligible to apply for MSC-PE, you require a Bachelor's degree or equivalent from a university that is rated H+ at Anabin.<br><br>The committee that evaluates the applications examines the applicant's expertise. Expertise in |

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| | electrical and mechanical engineering, preferably in the field of energy technology, with excellent grades of particularly importance. In principle, therefore, any applicant who can demonstrate this expertise is eligible, regardless of the designation of the Bachelor's degree programme in which this expertise was acquired.<br><br>With a previous study grade of 2.5 or worse according to the German grading system, the probability of admission is significantly lower.<br><br>Repetition: Candidates who have failed to prove their eligibility for the Master's programme in Power Engineering in a previous application process may re-apply once for the aptitude process.<br><br>Please note: For many international students, participation in the**TUM Test Power Engineering**is required. It is expected to take place in January/February.<br><br>For more information: https://wiki.tum.de/display/edschooloffice/Application+-+MSC-PE#ApplicationMSCPE-General |
| **Language requirements** | For information on proving English proficiency, please see the link below. Pay particular attention to the information regarding the **"Verification of English Skills by Language of Instruction"**.<br><br>https://www.tum.de/en/studies/application/application-info-portal/admission-requirements/language-certificates |
| **Application deadline** | **Registration deadline TUM Test Power Engineering 2025**<br>(required for applicants outside the scope of the "Lisbon Convention"):<br>To be announced; expected January/February 2025<br>Please check https://wiki.tum.de/display/edschooloffice/Application+-+MSC-PE for the date.<br><br>**Recommended deadline to submit all application documents:**<br>15 March (especially for non-EU students)<br>Final deadline: 31 May |
| **Submit application to** | In order to apply at TUM, you need to open a TUMonline account:<br>https://campus.tum.de/tumonline/webnav.ini.<br><br>Our application wizard will guide you step by step through the online application procedure.<br><br>For more information, check: https://www.tum.de/en/studies/application-and-acceptance/online-application/. |

# Services

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| **Possibility of finding part-time employment** | https://collab.dvb.bayern/display/TUMedschooloffice/International+Students+-+MSC-PE#InternationalStudentsMSCPE-StudyFinancing |
| **Accommodation** | It's not easy to find a place to live in Munich – but it's not impossible either! The Technical University of Munich (TUM) supports students and staff in their search for accommodation by providing personal advice, in-house listings and useful information to ensure that you can quickly find a place to call your own.<br><br>For more information, see: https://www.tum.de/en/studies/during-your-studies/living-and-working/accommodations. |
| **Support for international** | • Welcome event |

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| **students and doctoral candidates** | • Buddy programme<br>• Tutors<br>• Accompanying programme<br>• Cultural and linguistic preparation |

## Contact

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TUM School of Engineering and Design

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