TUM Master‘s Days: Doing your Doctorate at the Technical University of Munich – TUM Graduate School

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Some General Facts

The German Doctoral System
Ph.D. System vs. German Doctoral System

Main differences between the Anglo-American Ph.D. system and the German doctoral system

Ph.D. – Structured
• Application deadlines
• Entry tuition fees
• Course curriculum, lectures – program schedule
• Team supervision/ assistance

German doctoral program – Individual
• Independent work on own research subject – no time limits
• Individual supervision
• No admission deadlines or fees
Who We Are
TUM Graduate School
**TUM Graduate School - Objectives**

- Established 2009
- Largest of its kind in Germany with automatic membership since 2014
- Provides a **common framework** for various doctoral schemes (incl. external doctorate) and ensures high quality of doctoral education at TUM
- Gives an **international** perspective – various exchange formats & funding initiatives
- Fosters **interdisciplinary** collaboration – across disciplines, institutions
- Strengthens **scientific and transferable skills** – 300+ courses per semester
- Increases visibility and **networking** of doctoral candidates – identity and involvement
- Provides **career** orientation and promote social responsibility – prepare graduates for international careers
The TUM Graduate School is organized into

- **Different Graduate Centers for degree-awarding institutions** and interdisciplinary Graduate Centers
- **Management Office** at TUM Campus Garching
- **Graduate Dean** as a member of the TUM Extended Board of Management
- **Graduate Council** as representative body of all doctoral candidates at TUM

**Your School Graduate Center is your first point of contact** for doctoral admission and school-specific requirements.
Doctorate @ TUM

The TUM doctoral model
Application procedure

Inform yourself about the research portfolio at TUM: https://www.tum.de/en/research/schools-departments

Excellent Master's degree in a related subject

Visit https://www.gs.tum.de/en/gs/applicants/application/application-steps/ for guidance on how to find a supervisor and how to compose a research proposal

No general language requirements for doctoral admission (requirements to be defined by doctoral supervisor)

A TUM professor to supervise your doctoral research

Develop your research proposal

Begin/continue discussions with potential TUM supervisor

Secure funding (apply for research grants, scholarships, etc.)

Sign a Supervision Agreement

Register to the TUM Doctoral List

Apply for an open doctoral position

Begin/continue discussions with potential TUM supervisor

Sign your TUM contract

Job openings: https://www.tum.de/en/about-tum/working-at-tum/open-positions

Self-Initiative Application

Open Position Application
Application for a doctorate at TUM - Prerequisites

1) Excellent Master’s Degree
   - GPA of 2.5 or better
   *If you have a foreign Master's Degree, it should be a 2-year degree following a subject-related Bachelor’s Degree (300 ECTS total Bachelor’s and Master’s Degree), completed with an examination and an independent academic thesis
   + A non-German Master’s Degree must be recognized as equivalent to a German Master’s Degree
   !Final decision & possible conditions set by the Dean’s Office!

2) Fluency in English (German not needed but a plus; depends on the research group)

3) A TUM professor who supervises the doctoral research

4) Funding (secured funding preferable but not required for admission)
Funding a Doctorate

Employment at TUM:
Research associates are employed at a TUM research group. Available positions on the TUM website and/or website of the research group.

Scholarship/Grant:
Scholarship holders finance their doctorate with funding from an external organization. No TUM scholarship programs.

External Doctorate:
Candidates work for a company or an external research institution while being supervised by a TUM professor.

- Work closely with supervisor who is also the boss
- Involves teaching and administrative tasks
- Part of TUM research staff with access to staff development facilities

- Active participation in the academic environment of TUM required
- Often more freedom in choosing the research topic and more time for research

- Active participation in the academic environment of TUM required
- Less integration into the daily-business of the TUM research group
With nearly 10,000 members, thanks to its comprehensive, university-wide format, TUM Graduate School is the largest of its kind in Germany.

The unique TUM doctoral model combines the benefits of a traditional individual doctorate and that of structured doctoral programs.
The TUM doctoral model

The TUM doctoral model ensures **independent research** while providing a **structuring framework** and extensive training opportunities. Each member can design the doctorate based on his*her individual needs.
Framework & Mandatory Elements of your Doctorate at TUM

Getting started
- Supervision Agreement + Doctoral Candidacy List

In the first 6 months of your doctorate
- Participation Kick-Off Seminar

After 2 years at the latest
- Feedback Talk with your supervisor

Usually in the form of a peer-reviewed publication/conference contribution
- Publication/Discussion of your research

After completing the mandatory elements you can submit your dissertation
- Submission of your Dissertation

Participation in subject-specific courses of your Graduate Center, for at least 6 semester credit hours throughout the doctorate

Active participation in the TUM academic environment

Mentoring

Annual data confirmation in the DocGS online platform

Minimum 2-year membership at TUM Graduate School
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Subject-specific qualification

The Graduate Centers offer a diverse range of courses for subject-specific further qualification – the ideal way for doctoral candidates to supplement and deepen their independent academic work.
Subject-specific qualification

- Available at the research groups, departments and schools
- Training at the intersection of engineering, natural sciences, health sciences and social sciences
- Scientific courses and training at international partner institutions
- Good Scientific Practice
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Transferable Skills Training

Doctoral candidates can choose from numerous tailored courses to expand their transferable skills, enabling them to improve their research methods and gain valuable orientation for next career steps.
TUM-GS provides **more than 80 courses** per semester of which **45% are in English**.

The program is organized into six different competence areas that are either **doctorate- or career-oriented** to support and prepare doctoral candidates for their next career steps.
Kick-Off Seminar

- 80-100 doctoral candidates across all disciplines in each Kick-Off Seminar

Goals:
- Interdisciplinary exchange and networking
- Get to know TUM and its resources
- Transferable skills training

Fixed program parts:
- Intro to Good Scientific Practice
- Group activities including a guided Castle Tour, Walk & Talk, Escape Game
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International research phase

The TUM-GS supports international and intercultural collaboration in research and the creation of personal networks. We offer individual mobility funding, as well as international exchange programs.
TUM-GS International Facts and Figures

(statistics 2023)

- up to **3,000€** individual mobility funding
- **>700,000€** TUM-GS annual mobility budget
- **300+** international conferences funded p.a.
- **100+** research stays funded p.a.
- USA top 1 destination
Internationalization
TUM & TUM-GS

- EuroTech Alliance
- International locations and strategic initiatives
- Flagship partners
- TUM-GS International Exchange Partners
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Career support

Through coaching, mentoring and various career workshops and information events, doctoral candidates receive individual support for their career plans in academia, industry, science management etc.
Program and services

- Mentor in addition to thesis supervisor
- Discussion of research in the international community
- Integration into academic environment
- Feedback talk & annual data confirmation
- Supervision agreement + research exposé
- Subject-related qualification (6 SWS)
- Integration into academic environment
- International research phase and individual mobility
- Double mentoring
- Additional qualification & training requirements by the Graduate Centers possible
- Transferable skills training
- University politics & responsibility
- Graduate Council engagement
- Coaching and career services
- Social and networking activities
- Summer Schools & targeted international networking
- Interdisciplinary, international & intercultural exchange
- International peer-reviewed publication
- Integration into academic environment
- Subject-related qualification (6 SWS)
- Discussion of research in the international community
- Double mentoring
- Additional qualification & training requirements by the Graduate Centers possible
TUM Graduate School

Contact the Welcome Office for information about:

• Application and funding options
• Doctoral admission process and required documents
• Accommodation and living in the Greater Munich Area
• TUM-GS services, programs, German language courses etc.
• Cultural and networking events for international doctoral candidates
• ……and many more
PrepDoc 2024

Interested? Looking for more information?

Visit us at PrepDoc 2024!

25 April – 17 May 2024

For more information see the TUM Graduate School Website!

https://www.gs.tum.de/gs/bewerberinnen/prepdoc-programm/
Your questions

How many different types of positions are available for obtaining a Ph.D. [doctorate]?

- Employment at TUM/Research Associate
- Scholarship/Grant
- External Doctorate (Candidates work for a company or an external research institution; position may either be related to doctorate (industry doctorate) or not related (doctorate in free time))
- Self-funded doctorate
For example, is there a possibility to start [a] doctorate directly after Master’s at TUM?

- Yes, you can start your doctorate directly after having finished your Master’s, if you manage to find a supervisor and funding.

Scholarships for Ph.D. students [doctoral candidates] and Weiterbildungen

- With only few exceptions, TUM does not offer its own doctoral scholarships
- See our webpage https://www.gs.tum.de/en/gs/applicants/funding/scholarship/
Is it possible to do a Ph.D. [doctorate] despite my very interdisciplinary background?

- Of course, TUM Schools are highly interdisciplinary. Look for potential supervisors in different Schools and School departments.

Possibility of industrial Ph.D. [doctorate]?

- Depends on the preferences of the respective supervisor. Discuss this option with your (potential) TUM professor.
Your questions

How to graduate at TUM? [How to graduate/complete your doctorate?]

• Minimum 2-year membership duration in the TUM Graduate School

• You need to complete all the mandatory elements and hand in your dissertation, see also https://www.gs.tum.de/en/gs/doctoral-candidates/administrative-matters/mandatory-elements/
Your questions

- What grade would I need to achieve in my Master's to be accepted for a Ph.D. [doctorate]?
  - A grade of 2.5 or better
  - Doctoral admission requirements can be found on the websites of the Schools and in the TUM Doctoral Regulations: https://www.tum.de/ueber-die-tum/organisation/satzungen-und-leitlinien
Learn more and stay in touch!

Please do not hesitate to contact us via welcomeoffice@gs.tum.de

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