The Entrepreneurial University

The Technical University of Munich (TUM) ranks among Europe’s most outstanding universities in research and innovation – an achievement powered by its distinctive character as Entrepreneurial University:

**Science beyond boundaries.** TUM’s broad spectrum of subjects is unmatched across Europe, spanning engineering, the natural and life sciences, medicine, economics and social sciences. The university leverages this enormous potential by intensively and intelligently linking the different disciplines. In doing so, it successfully develops new fields of research extending from bioengineering to artificial intelligence. Simultaneously, it addresses the social, ethical and economic issues raised by technological change.

**More than just lectures.** Doing research with the brightest minds in science, steering international projects and gaining early business experience: Students at TUM are perfectly prepared for working on the important topics of our time. That is why employers regularly nominate TUM as one of the top ten universities in the world.

**Opportunities for talent.** TUM offers amazing opportunities at every level of study and research, starting with the first semester right through to professorship. It invests more than other universities in the professional development of individual talent.

**From lab to market.** No other German university produces as many start-up founders as TUM, thanks to its unrivalled support infrastructure. More and more companies – and not just start-ups, but some of the world’s most innovative global players – are establishing roots on campus in order to build research partnerships.
Departments & Integrative Research Centers

Departments
• Aerospace and Geodesy
• Architecture
• Chemistry
• Civil, Geo and Environmental Engineering
• Electrical and Computer Engineering
• Informatics
• Mathematics
• Mechanical Engineering
• Physics
• Sport and Health Sciences
• TUM School of Education
• TUM School of Governance
• TUM School of Life Sciences Weihenstephan
• TUM School of Management
• TUM School of Medicine

Integrative Research Centers
Scientists from various departments do research and teach in interdisciplinary fields at these centers.
• Munich Center for Technology in Society
• Munich School of BioEngineering
• Munich School of Engineering
• Munich School of Robotics and Machine Intelligence
• TUM Campus Straubing for Biotechnology and Sustainability
• TUM Institute for Advanced Study

Staff

594 Professors
among these
18 % from abroad
85 on tenure track

53 New appointments 2019
among these
34 % from institutions abroad

6,918 Research and teaching staff
among these
24 % from abroad

3,358 Other staff

TUM also engages in research on the Zugspitze, Germany’s highest mountain.

Data as of December 1, 2019
Research & Innovation

8,442 Scientific Publications 2019
12 European Research Council Grants 2019
4 Clusters of Excellence (German Excellence Strategy)
50 Patents first filed in 2019
75 Spin-off companies 2019

Studies

167 Programs
among these
47 Bachelor
101 Master
56 English-language programs
30 Programs with double degree opportunity
7 Programs at TUM Asia

42,705 Students among these
32 % from abroad
9,760 Graduates 2019
25 % from abroad
82,903 Members of TUM’s Alumni Network

Research & Innovation: data as of April 1, 2020
Studies: data as of December 1, 2019
TUM International

Asia
60 partner universities
Australia & New Zealand
13 partner universities

Europe
33 partner universities and
353 Erasmus partnerships

Africa
9 partner universities

North America
23 partner universities
Central and South America
19 partner universities

TUM Campus
1 TUM Asia, Singapore

TUM Branches
2 Beijing
3 Cairo
4 Mumbai
5 San Francisco
6 São Paulo
7 EuroTech Universities Alliance (joint representation in Brussels):
- École Polytechnique – l’X
- École polytechnique fédérale de Lausanne – EPFL
- Eindhoven University of Technology – TU/e
- Technical University of Denmark – DTU
- Technical University of Munich – TUM
- Technion – Israel Institute of Technology

Data as of April 1, 2020
**Funding**

1,552.5 M euros  Total budget 2018  
(including university hospital)  
from  

660.0 M euros  State of Bavaria  
535.7 M euros  Revenue  
356.8 M euros  Raised external funds

356.8 M euros  Raised external funds  
from  

108.2 M euros  DFG  
69.4 M euros  German Federal Government  
48.3 M euros  Private enterprise  
36.6 M euros  EU  
36.4 M euros  Other private donors  
23.6 M euros  State of Bavaria  
19.0 M euros  Founders of endowed professorships  
15.4 M euros  Foundations

**Munich**

TUM is part of the Munich metropolitan region: a cosmopolitan center of research, business and culture. Munich has frequently been voted the most liveable city in the world.

The Bavarian capital ranks among Europe’s leading high-tech hubs. No other city can boast more corporations listed in the German stock index DAX. International global players have established development centers in Munich, which is also the home of many companies in Germany’s famed Mittelstand sector as well as a vibrant start-up scene. Numerous Max-Planck, Helmholtz and Fraunhofer institutes and several universities make Munich one of the world’s most powerful research clusters. In conjunction with societal actors, this has yielded a highly creative and productive ecosystem. For example, according to an EU study, Munich is the best location in Europe for the IT and communications sector.

The recreational options in the region are almost unlimited. Munich is renowned for its museums, theaters, historic castles and churches. The English Garden – one of the world’s largest urban parks – and the Isar River form a green oasis. From TUM’s rooftop terrace, the Alps look close enough to touch and the clear Bavarian lakes are only an hour away.
<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1868</td>
<td>King Ludwig II of Bavaria founds the Polytechnic School Munich as a catalyst for industrialization.</td>
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<tr>
<td>1875</td>
<td>Carl von Linde constructs the first viable refrigeration machine.</td>
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<td>1893</td>
<td>Graduate Rudolf Diesel develops the self-igniting engine. The idea came to Diesel while he was a student.</td>
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<td>1928</td>
<td>Hans Fischer reproduces the red blood pigment hemin in a test tube. (Nobel Prize 1930)</td>
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<td>1956</td>
<td>PERM, the fastest computer in the world</td>
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<td>1985</td>
<td>Robert Huber decodes photosynthesis. (Nobel Prize 1988)</td>
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<tr>
<td>1997</td>
<td>Long short-term memory, a groundbreaking method for machine learning and the basis for today's speech recognition</td>
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<tr>
<td>2000</td>
<td>The world's first minimally invasive heart valve operation</td>
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<tr>
<td>2006</td>
<td>TUM is recognized as a University of Excellence.</td>
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<tr>
<td>2008</td>
<td>Patient receives first transplant of two arms.</td>
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<tr>
<td>2014</td>
<td>Mapping of the human proteome</td>
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<tr>
<td>2018</td>
<td>Researchers identify the source of an extragalactic neutrino for the first time.</td>
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<tr>
<td>2019</td>
<td>Sensitive skin for human-sized autonomous robots</td>
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<td>2019</td>
<td>17 Nobel laureates have conducted research or studied at TUM.</td>
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</tbody>
</table>
TUM in Rankings

Rank 6  Global University Employability Ranking  
       (Times Higher Education)

Rank 7  Europe’s Most Innovative Universities (Reuters)

Rank 55  QS World University Ranking  
         (best German university)  
Rank 25  in engineering  
Rank 28  in natural sciences

Rank 43  THE World University Ranking (Times Higher Education)

Rank 57  Academic Ranking of World Universities  
        (Shanghai Ranking)

Rank 1  German Startup Monitor

Contact

Technical University of Munich  
Arcisstrasse 21  
80333 Munich, Germany  
www.tum.de

Corporate Communications Center  
Tel. +49 89 289 22778  
presse@tum.de

Student Service Center  
Tel. +49 89 289 22245  
studium@tum.de

TUM Graduate School  
Tel. +49 89 289 10600  
contact@gs.tum.de

Career openings:  
www.tum.de/open-positions

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