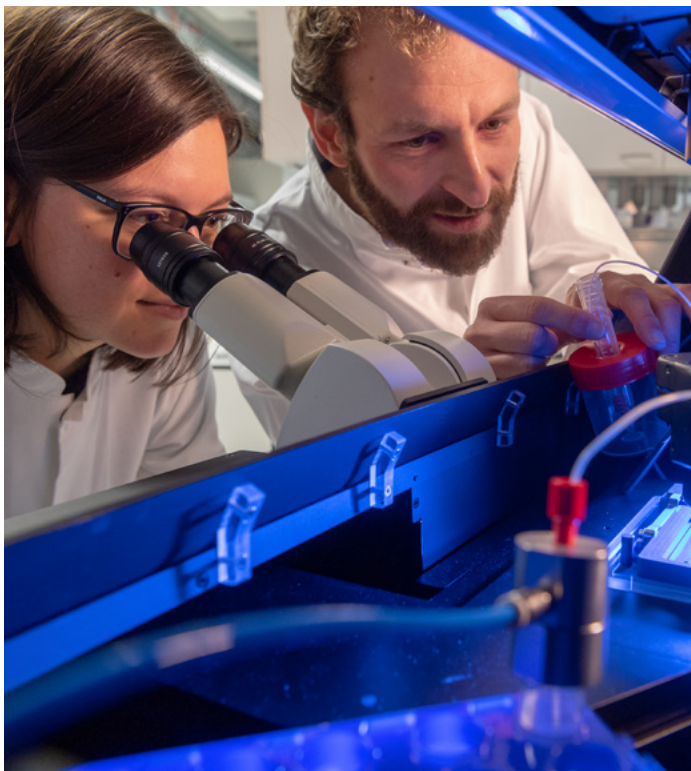


Technical University of Munich

Facts & Figures 2019/20





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

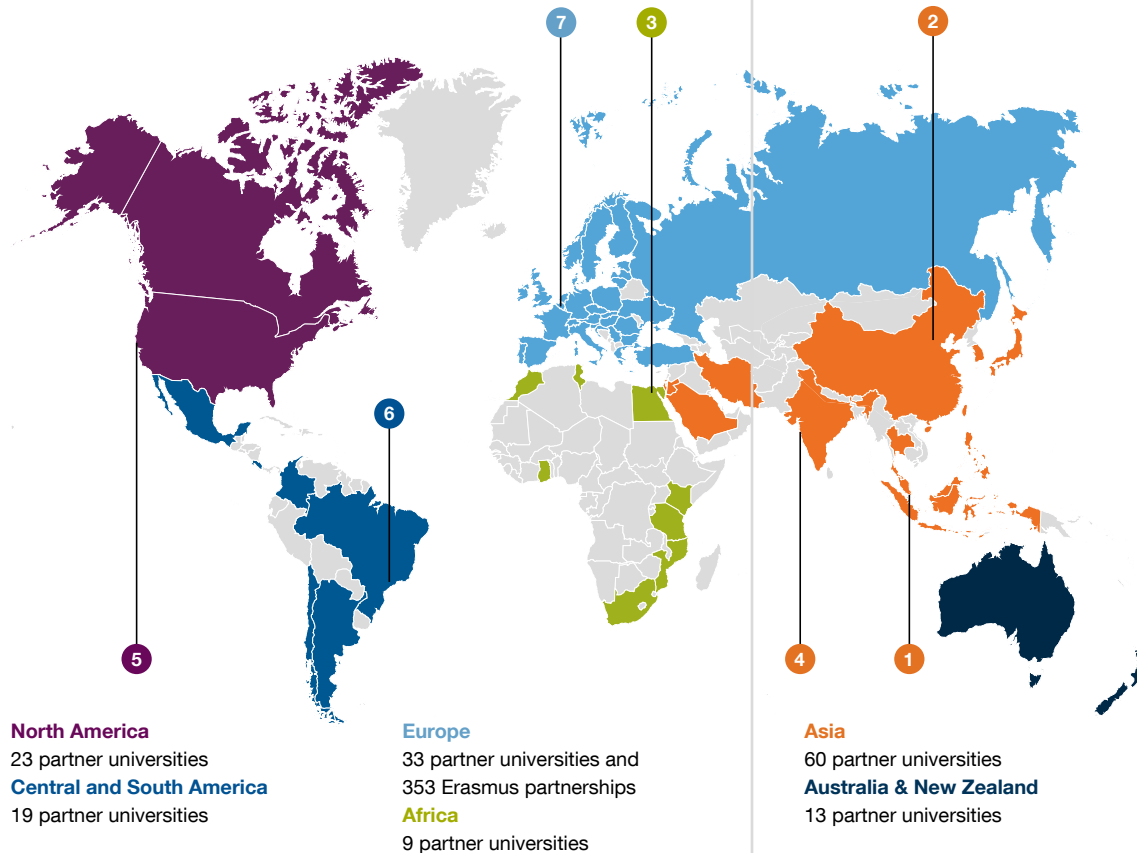
25 % from abroad

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



Data as of April 1, 2020

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

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

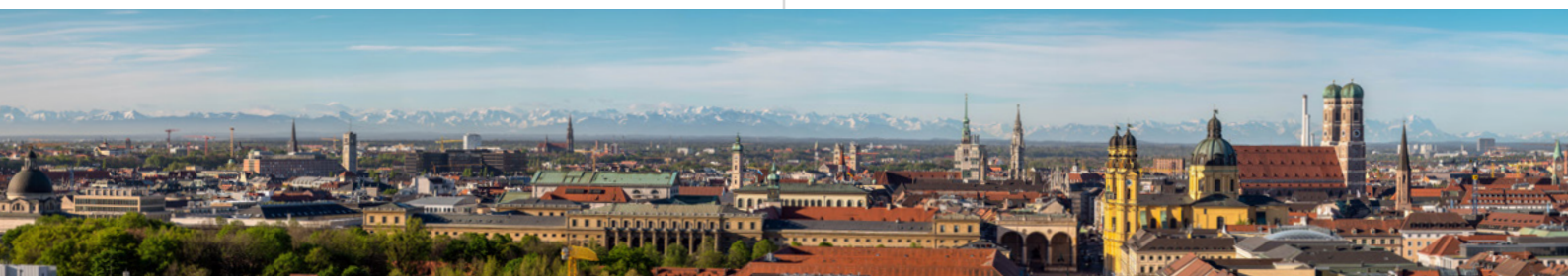
15.4 M euros Foundations

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.



Inventions, Discoveries, Successes

1893

Graduate Rudolf Diesel develops the self-igniting engine. The idea came to Diesel while he was a student.

1928

Hans Fischer reproduces the red blood pigment hemin in a test tube. (Nobel Prize 1930)

1997

Long short-term memory, a groundbreaking method for machine learning and the basis for today's speech recognition

2000

The world's first minimally invasive heart valve operation

2014

Mapping of the human proteome

2018

Researchers identify the source of an extragalactic neutrino for the first time.

1868

King Ludwig II of Bavaria founds the Polytechnic School Munich as a catalyst for industrialization.

1875

Carl von Linde constructs the first viable refrigeration machine.

1956

PERM, the fastest computer in the world

1985

Robert Huber decodes photosynthesis. (Nobel Prize 1988)

2006 / 2012 / 2019

TUM is recognized as a University of Excellence.

2008

Patient receives first transplant of two arms.

2019

Sensitive skin for human-sized autonomous robots

17 Nobel laureates

have conducted research or studied at TUM.

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

Publications: 2019

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