BACHELOR IN MANAGEMENT & TECHNOLOGY (TUM-BWL)
What is your plan? To acquire outstanding skills in management or become qualified in technology or the natural sciences? With our Bachelor in Management & Technology, you can do both—and that is exactly what employers are looking for today.

The program features courses in management studies as well as in natural sciences or engineering. The program runs six semesters and allows for a semester abroad through its mobility window. You will be taught using methods that draw on the latest research as well as state-of-the-art industrial practice.
AT A GLANCE

30% TECHNOLOGY
70% MANAGEMENT STUDIES

<table>
<thead>
<tr>
<th>FINAL QUALIFICATION</th>
<th>• Bachelor of Science (B.Sc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>START OF PROGRAM</td>
<td>• Winter semester</td>
</tr>
<tr>
<td>ADMISSION REQUIREMENTS</td>
<td>• German Abitur or equivalent</td>
</tr>
<tr>
<td></td>
<td>• Successful completion of the assessment procedure</td>
</tr>
<tr>
<td>FEES</td>
<td>• No fee (by German law)</td>
</tr>
<tr>
<td></td>
<td>• Student Union contribution</td>
</tr>
<tr>
<td>APPLICATION PERIOD</td>
<td>• April 1-July 15</td>
</tr>
<tr>
<td>LANGUAGE</td>
<td>• either 100 % in English or bilingual in German and English</td>
</tr>
<tr>
<td>STRUCTURE</td>
<td>• Basics in Economics, Law, Management, Mathematics and Natural Sciences</td>
</tr>
<tr>
<td></td>
<td>• Specialization in Technology (English track: Computer Engineering)</td>
</tr>
<tr>
<td></td>
<td>• Electives in Management and Technology</td>
</tr>
<tr>
<td></td>
<td>• International Experience &amp; Communication Skills</td>
</tr>
<tr>
<td></td>
<td>• Project Studies focusing on practical or research issues</td>
</tr>
<tr>
<td></td>
<td>• Bachelor’s Thesis</td>
</tr>
<tr>
<td>DURATION</td>
<td>• 6 semesters</td>
</tr>
<tr>
<td>CREDIT POINTS</td>
<td>• 30 ECTS per semester</td>
</tr>
</tbody>
</table>

THE ADVANTAGE OF COMBINING MANAGEMENT STUDIES WITH TECHNOLOGY

The structures of corporations are becoming increasingly complex: Interdependencies between corporate divisions are manifold, and traditional departmental borders are beginning to dissolve. Thus, companies need managers who combine a detailed knowledge of business, entrepreneurial skills and a solid understanding of innovation and technology.

Our Bachelor’s program is designed to give you the interdisciplinary, high-level education which you need to meet these new challenges at the interface of management and technology. We regularly receive enthusiastic feedback from our corporate partners who confirm that our graduates have a competitive advantage for shaping their careers.
STUDY OVERVIEW

Basics in Mathematics & Statistics
Required modules
- Mathematics I
- Statistics

Basics in Economics
Required modules
- Economics I
- Economics II

Basics in Law
Required modules
- Law I
- Law II

Electives in Management & Technology
Elective modules from the fields in Technology and/or from one of the following business specializations:
- Economics & Policy
- Finance & Accounting
- Innovation & Entrepreneurship
- Marketing, Strategy & Leadership
- Operations & Supply Chain Management

Specialization in Technology
Fields for specialization:
- Chemistry
- Computer Engineering (100% English)
- Electrical & Information Technology
- Informatics
- Mechanical Engineering
- Renewable Resources (in Straubing)

International Experience & Communication Skills
Required module

Bachelor's Thesis

Technology
- Technology
- Management & Technology
- Technology

International Experience & Communication Skills
Required module

Ideal Study Plan (details depend on the chosen field in Technology)

Total ECTS:
- 180 ECTS
The core of the Bachelor’s program consists of the basic modules in the areas of Business, Economics, Law, Mathematics and Natural Sciences. These subjects build the foundation of your studies and make up a total of 90 ECTS.

### Basics in Business
- Production and Logistics  6 ECTS  2. Sem.
- Cost Accounting  6 ECTS  2. Sem.

### Basics in Economics

### Basics in Law

### Basics in Mathematics and Natural Sciences

### Specialization in Technology
In their second semester students choose a specialization in Technology based on their interests and their career objectives. The courses of the chosen specialization in Technology are usually shared with students of the corresponding faculty. One of the following specializations has to be chosen and completed successfully (42 ECTS). Please note, that currently Computer Engineering is the only specialization that is taught 100% in English.

#### Computer Engineering
**Elective Modules**
- Bachelor Practical Course  10 ECTS  2.– 6. Sem.
- Programming Languages  5 ECTS  2.– 6. Sem.

#### Chemistry
**Compulsory Modules**
- Basic Laboratory Course in Chemistry (TUM-BWL)  6 ECTS  4. Sem.
- Biology for Chemists  6 ECTS  5. Sem.
- Analytical Chemistry  3 ECTS  5. Sem.

#### Electrical & Information Technology
**Compulsory Modules**
- Mathematics II  6 ECTS  2. Sem.
- Communications Engineering I.-Signal Representation  5 ECTS  5. Sem.
- Introduction into Computer Science (for non Informatics Studies)  5 ECTS  5. Sem.

**Elective Modules**
- Laboratory Analog Electronics for TUM-BWL  5 ECTS  5. / 6. Sem.
- Internet Communication  5 ECTS  5. / 6. Sem.
and/or from one of the following business specializations: lectures each semester. Students have the choice to earn 18 ECTS in either Technology School of Management will announce the list of electives available before the start of You need to earn 18 ECTS for your electives in Management and Engineering. TUM Electives in Management and Technology

**Informatics**

**Compulsory Modules**

<table>
<thead>
<tr>
<th>Course</th>
<th>ECTS</th>
<th>Sem.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Management for Digital Business Models</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Introduction to Informatics 1</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Fundamentals of Programming (Exercises &amp; Laboratory)</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Software Engineering</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Basic Principles: Operating Systems and System Software</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Fundamentals of Databases</td>
<td>6</td>
<td>5</td>
</tr>
</tbody>
</table>

**Elective Modules**

<table>
<thead>
<tr>
<th>Course</th>
<th>ECTS</th>
<th>Sem.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Informatics 2</td>
<td>5</td>
<td>5/6</td>
</tr>
<tr>
<td>Bachelor Practical Course</td>
<td>10</td>
<td>5/6</td>
</tr>
<tr>
<td>Image Understanding I: Machine Vision Algorithms</td>
<td>3</td>
<td>5/6</td>
</tr>
<tr>
<td>Electronic Publishing/Document Engineering and the World-Wide-Web</td>
<td>5</td>
<td>5/6</td>
</tr>
<tr>
<td>3D User Interfaces</td>
<td>6</td>
<td>5/6</td>
</tr>
<tr>
<td>Programming Languages</td>
<td>5</td>
<td>5/6</td>
</tr>
<tr>
<td>IT-Security</td>
<td>5</td>
<td>5/6</td>
</tr>
<tr>
<td>Software Engineering in an Industrial Setting</td>
<td>3</td>
<td>5/6</td>
</tr>
<tr>
<td>Algorithms and Data Structures (ET/IT)</td>
<td>5</td>
<td>5/6</td>
</tr>
</tbody>
</table>

**Mechanical Engineering**

**Compulsory Modules**

<table>
<thead>
<tr>
<th>Course</th>
<th>ECTS</th>
<th>Sem.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics II</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Introduction into Computer Science (for non Informatics studies)</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Engineering Mechanics for Technology Management</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Engineering Design and Production Systems</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Materials in Mechanical Engineering</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Machine Elements-Basics, Manufacturing, Application</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Basics of Machines Drawing and Computer Aided Design 1 and 2</td>
<td>5</td>
<td>3/4</td>
</tr>
</tbody>
</table>

In Mechanical Engineering students have to take modules in the amount of at least 5 ECTS in addition to the compulsory modules listed here. These additional modules will be chosen from a course catalogue from the mechanical engineering faculty, which will also be published by our faculty.

**Electives in Management and Technology**

You need to earn 18 ECTS for your electives in Management and Engineering. TUM School of Management will announce the list of electives available before the start of lectures each semester. Students have the choice to earn 18 ECTS in either Technology and/or from one of the following business specializations:

- Economics & Policy
- Finance & Accounting
- Innovation & Entrepreneurship
- Marketing, Strategy & Leadership
- Operations & Supply Chain Management

**International Experience & Communication Skills**

The module “International Experience & Communication Skills” consists of two parts.

In the submodule “International Experience”, the students are given credit for an obligatory foreign stay which must be completed in the scope of the program or an internship to develop social skills in dealing with different cultures. The submodule “Communication Skills” teaches necessary key qualifications such as moderating and presenting, conflict management or information skills. Furthermore, it is possible to take Business plan seminars to get a first idea about the necessary steps to start a company or to include language courses for 3 ECTS.

<table>
<thead>
<tr>
<th>Course</th>
<th>ECTS</th>
<th>Sem.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study abroad (min. 60 calendar days)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internship abroad (min. 60 calendar days)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other stays abroad (min. 60 calendar days, excl. pure language courses, e.g. Work-and-Travel)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For students with an international background the first semester of TUM-BWL can be acknowledged as international experience!

**Communication Skills**

- Business Plan seminars
- Presentation techniques
- Conflict and Negotiation Management
- Language courses

**Project Studies**

Your studies are not limited to theoretical classes. The program also includes a project study course where you gain hands-on practical experience and essential problem-solving skills.

In the Project Studies module, students deal with concrete questions relating to corporate practice or a current research topic. The Project Studies module usually lasts 3 months full-time or 6 months part-time.

We place great value on teamwork within the project teams and close supervision by the relevant chair. Project teams consist of 2-5 students, who each earn 12 ECTS. Together you will work on a research or industry project, supervised by a tutor from the university as well as a mentor from the industry—an excellent opportunity to get in touch with the professional world.

**Bachelor’s Thesis**

The degree program is completed with a Bachelor’s Thesis. In their Bachelor’s Thesis, students demonstrate their knowledge of the field and readiness to enter the world of work.

In the submodule “International Experience”, the students are given credit for an obligatory foreign stay which must be completed in the scope of the program or an internship to develop social skills in dealing with different cultures. The submodule “Communication Skills” teaches necessary key qualifications such as moderating and presenting, conflict management or information skills. Furthermore, it is possible to take Business plan seminars to get a first idea about the necessary steps to start a company or to include language courses for 3 ECTS.
APPLICATION PROCESS

ENTRANCE REQUIREMENTS
• Abitur (university entrance qualification) or equivalent
  In general, international applicants have to apply via uni-assist (the application and document review via uni-assist is available throughout the whole year). Please also apply in TUMonline starting the 1st of April.
• Letter of motivation of max. 2 A4 pages
• Successful completion of the assessment procedure
• Proficiency in English or German for applicants without a German university entrance qualification
  • Proficiency in English can be proven by one of the following: TOEFL (88 iBT, 605 PBT), IELTS (6.5), Cambridge (CAE, CPE)
  • English language degree or a degree from a postsecondary institution whose language of instruction is English or English-language subject courses of at least 12 ECTS
  • For options to prove your proficiency in German please visit the TU website

APPLICATION DOCUMENTS
The following documents* must be submitted in hardcopy:
• Abitur (university entrance qualification) or equivalent
• Signed application form
• Language proficiency in English or German (if applicable, original or notarized copy)
• Resume/CV
• Motivation letter (max. 2 A4 pages)
• Proof of health insurance (only necessary for enrollment)

*No guarantee for being complete and correct. Please double-check with your checklist in your online application account.

APPLICATION PERIOD: 1 APRIL-15 JULY
Online application via TUMonline http://campus.tum.de
Documents must be sent in hard copy to our Admissions and Enrollment Office (Immatrikulationsamt) not later than 15 July!

INTERVIEWS
The interviews will take place in July, August and September of each year. Detailed dates will be announced on the website of TUM School of Management.

ASSESSMENT PROCEDURE

<table>
<thead>
<tr>
<th>German Abitur</th>
<th>Other University Entrance Qualification</th>
</tr>
</thead>
<tbody>
<tr>
<td>65% Overall Grade</td>
<td>65% Overall Grade</td>
</tr>
<tr>
<td>35% German/English (1x) + Mathematics (2x) + Advanced Natural Sciences (2x)</td>
<td>35% German/English (1x) + Mathematics (2x) + Advanced Natural Sciences (2x)</td>
</tr>
</tbody>
</table>

0-100 Points

- 88 points or more
- Less than 88 points

Admission Interview
Overall Grade 50%, Interview Result 50%

Admission
70 points or more
The following rules are some of the most important regulations in regard to your study program. They are excerpts from the General Academic and Examination Regulations and the Program-Specific Academic and Examination Regulations which can be found on our website.

**MONITORING STUDENTS’ PROGRESS**
- An ECTS account is kept for each student.
- Students must have earned at least the following total number of credits by the end of the semester in question:
  - Semester 3: min. 30 ECTS
  - Semester 4: min. 60 ECTS
  - Semester 5: min. 90 ECTS
  - Semester 6: min. 120 ECTS
  - Semester 7: min. 150 ECTS
  - Semester 8: min. 180 ECTS
- In order to complete the degree program within the regular study period, students must earn 30 ECTS per semester.
- Students’ progress will be monitored once a semester.
- Students will be informed if they have earned fewer than 15 Credits in a semester.

**IMPORTANT INDIVIDUAL REGULATIONS**
- By the end of the second semester, students must have passed at least three of the following exams: Mathematics I, Management Science, Statistics I, Economics I.
- Recognition of credit earned at another university: possible during the first year of study.
- Students who have earned at least 150 credits can take additional modules from the Master’s programs during their Bachelor’s studies (see § 46a FPSO).
Experience teaching and research in an inspiring environment at TUM School of Management, we carry out teaching and research at the intersection of management, engineering, natural and life sciences. Located in the heart of Munich, a thriving city in one of Germany’s most prosperous regions, we enjoy an academic, cultural and economic infrastructure that attracts talents from all over the world.

Since its foundation in 2002, the faculty has been engaged in a broad range of research projects that bridge the gap between disciplines. Our research focuses on future trends and real-world solutions that advance innovation-based businesses and benefit society at large.

Our highly motivated, international student body as well as the cooperation with renowned universities and management schools worldwide guarantee a global perspective, while industry know-how is brought into our programs through strong collaboration with our corporate partners. Together, we create a dynamic, inspirational and international community.

Be a part of it!

TUM School of Management is part of a select international group of business schools to hold the Triple Crown Accreditation.

"The perfect choice for me: first-class education at the interface of management and technology with a variety of specializations. Plus I’m having a great international experience here and have made friends for life."

Belen Wagaw from Ethiopia, student at TUM School of Management
VISIT TUM SCHOOL OF MANAGEMENT

Plan your journey to TUM School of Management and find your way to the different locations. Our chairs are spread out over different campuses of Technical University of Munich (TUM).

CITY CAMPUS MUNICH

TUM School of Management
Arcisstraße 21, 80333 Munich, Germany
Building 0505
Email info@wi.tum.de

GARCHING RESEARCH CAMPUS

Entrepreneurship Research Institute
Lichtenbergstr. 6, 85748 Garching, Germany
Email entrepreneurship-research@tum.de
Phone +49 (0)89 289 52803

TUM SCHOOL OF LIFE SCIENCES WEIHENSTEPHAN

Alte Akademie 8, 85354 Freising, Germany
Phone +49 (0)8161 71 0

Technical University of Munich (TUM) is one of Europe’s leading research universities. Its focus areas are the engineering sciences, natural sciences, life sciences and medicine, reinforced by schools of management and education. 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 a 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.
Experience Munich’s unique combination of a cosmopolitan lifestyle and cordial atmosphere. TUM School of Management is located in the center of Munich, the capital of the federal state of Bavaria—an area known as the powerhouse of the German economy. Munich is a financial, publishing and technological hub and the city of choice for many global companies such as BMW, Siemens and Allianz.

**LIVING IN MUNICH**

**DISCOVER THE CITY**
You have probably heard of Oktoberfest, the event which attracts visitors from all over the world every year. But Munich has much more to offer: From its historic center to the space age designs of the Olympic stadium to the Allianz Arena—there is always something to discover.

**GET AROUND TOWN EASILY**
With public transportation TUM School of Management is only a two-minute walk away from the subway station “Theresienstrasse” (subway line U2). Munich is well-connected by a network of subways and suburban trains, trams and buses.

**FIND A PLACE TO CALL HOME**
It can be difficult at times to find a room in Munich, since the city is quite popular in Germany. Students here live in private rooms, flat-shares, apartments or halls of residence.

**SUPPORT SYSTEM OF THE STUDENT UNION**
The universities are responsible for research and education—the student union takes care of the economic, social, health and cultural well-being of students in Germany.

**GET SOME EXERCISE**
The University Sports Center (ZHS) is open to students of all universities in Munich. The ZHS offers a variety of sporting activities for beginners as well as for long-time athletes.

**BROADEN YOUR MIND**
Libraries are the ideal places to study and prepare for exams away from all distraction. The university library includes nine branch libraries.

**CALCULATE YOUR COSTS OF LIVING**
Recent calculations indicate that living in the capital of Bavaria costs about EUR 900 per month. Students are advised to have sufficient funds available to ensure a pleasant stay and stress-free studies at TUM.

Munich was recently ranked fourth as one of the cities with the highest quality of living worldwide. The city offers stunning architecture, wide expanses of green and, on a clear day, a fabulous view of the Alps. In Munich, people from all over the world make for a vibrant city life, while native Bavarians ensure that German “Gemütlichkeit” still has a firm place in everyday life.
Visit our website at www.wi.tum.de or find us on Social Media:
NEW SPECIALIZATION:
RENEWABLE RESOURCES,
OFFERED EXCLUSIVELY
AT CAMPUS STRAUBING
The exploitation of fossil resources, environmental degradation and the associated climate change will change our lives. This forces us to fundamentally rethink our way of life and business. The search for raw materials and energy sources that are environmentally and climate-friendly play an essential role.

The Bachelor in Management & Technology (TUM-BWL) with the specialization in Renewable Resources is aimed at outstanding, highly motivated high school graduates with university entrance qualifications (e.g. Abitur) who are interested in business administration and, at the same time, want to gain basic knowledge in natural sciences and engineering with a focus on renewable resources and energies, and sustainability. Graduates of this program will be positioned right at the interface of the related professional fields. They will be prepared for a professional career combining business management know-how with sustainable management skills and profound knowledge of the use of renewable resources.

The career prospects are excellent: About half a million new jobs are expected in the area of the production and use of renewable resources over the next five years. Possible career options can be found in the fields of energy supplying, the processing industry and mechanical engineering, as well as in the production of renewable resources, authorities and municipalities. Other relevant occupational fields encompass the areas of consulting, education and research.

RENEWABLE RESOURCES AT CAMPUS STRAUBING

The new specialization is available to students starting the Bachelor in Management & Technology in winter semester 2017/2018. Study location is the new TUM Campus Straubing for Biotechnology and Sustainability. Here, researchers and students focus on renewable resources to replace fossil oil, coal and gas. The cultivation, chemical and material utilization as well as economic aspects concerning the production, marketing and use of renewable resources is placed in the center of their research and teaching.

TWO CAMPUSES, ONE STUDY PROGRAM

The complete Bachelor in Management & Technology program can now be studied both in Munich and in Straubing. Your study location depends on your choice of specialization in natural sciences/engineering:

- Students studying at TUM Campus Straubing opt for Renewable Resources as their specialization
- Students studying at TUM’s main campus in Munich will choose 1 of the following 5 specializations (Informatics, Mechanical Engineering, Electrical & Information Technology, Computer Engineering, Chemistry)
At the TUM Campus Straubing, students find excellent conditions for their studies. New auditoriums and laboratories as well as stylishly renovated historic buildings are available to all students. Straubing is a place of short distances. The campus is within walking distance to the city center and located at the banks of the river Danube. The apartment rents are still low. The idyllic location close to the Bavarian Forest and the colorful variety of cafés and pubs are highly attractive.

**CONTACT**

Melanie Neumeier  
Studienkoordinatorin  
Email studieren.straubing@tum.de  
Phone +49 (0)9421 187 151  
Fax +49 (0)9421 187130  
www.wz-sr.de