

Degree Program in Brief

Duration of Study/Credits

4 semesters/120 credits, full-time program

Degree Type

Master of Science (M. Sc.)

Start of Course

Winter and summer semester

Language

English

Costs per Semester

<https://www.tum.de/en/studies/fees>

Further Information

<https://www.cit.tum.de/en/cit/studies/degree-programs/master-information-engineering/>

Admission Requirements & More: (Scan)



Contact

Program-specific Questions

Student Service Center
 Costanza Terino
 Tel. +49 7131 264 189 04
programs-heilbronn@cit.tum.de

General Questions about Studying at TUM

TUM Center for Study and Teaching
 Student Advising and Information Services
 Arcisstrasse 21, 80333 Munich
 Room 0144 (Service Desk)
 Tel. +49 89 289 22245
studium@tum.de

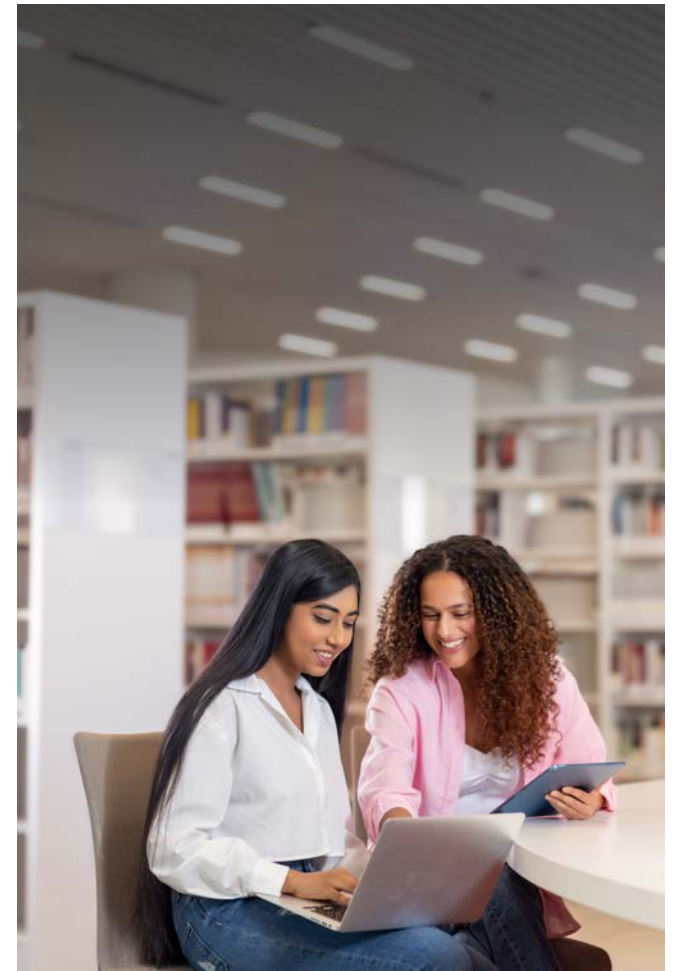
Technical University of Munich

School of Computation, Information and Technology
 Boltzmannstraße 3, 85748 Garching, Germany
www.cit.tum.de

Master of Science

Department of Informatics

Information Engineering at Campus Heilbronn



Learning Objectives

New digital technologies offer companies extensive opportunities for gathering, linking, and analyzing data. To leverage these innovations, like intelligent products, companies require skilled professionals to design and implement interconnected IT systems. Information engineering considers the entire process from sensor to IT system to business model, making it crucial for digital transformation. Creating end-to-end cyber-physical business systems to tackle complex socio-technical issues demands expertise in sensor technology, information systems, and business models, which come from different disciplines.

The four-semester Master's degree in Information Engineering aims to equip students to become innovation-driven, research-qualified information engineers capable of designing such systems comprehensively. Building upon skills acquired in a Bachelor's degree in Information Engineering or related fields like Informatics. The degree also qualifies students for further academic education in the context of a doctorate (research qualification).

During the two year course, students will acquire in-depth knowledge in the areas of Information Engineering and Cyber-physical business systems through compulsory and elective modules. At the practical course students will work on a practice-oriented question in the area of Information Engineering. Some chairs offer this practical course in cooperation with an industry partner. A more scientific question will be completed in a seminar with a scientific paper. The elective modules in the areas of Information Engineering, Management and Economics as well as Ethics in Information Engineering provide the opportunity to round off their profile as an Information Engineer individually according to their interests and affections. As part of the Support Electives, students finally have the opportunity to further their education in other areas, e.g. in language courses or intercultural trainings.

Degree Program Structure

1st semester	Machine Learning Advanced Topics of Software Engineering Electives in Information Engineering Electives in Ethics in Information Engineering Electives in Management and Economics Support Electives
2nd semester	Advanced Practical Course Information Engineering Master Seminar Information Engineering Electives in Information Engineering Electives in Management and Economics Support Electives
3rd semester	Electives in Information Engineering
4th semester	Master's Thesis

For details visit: <https://www.cit.tum.de/en/cit/studies/degree-programs/master-information-engineering/curriculum/>

Distinctive Features of the Degree Program

- The Master in Information Engineering at TUM Campus Heilbronn is a novel and unique program that offers the opportunity to specialise in the interdisciplinary field of Information Engineering.
- Students study at the new TUM Campus Heilbronn in the heart of Heilbronn-Franken, the region of innovative world market leaders.
- The Master's Practical Course offers students the opportunity to apply your theoretical knowledge in a joint scientific project with their fellow students.
- In addition to informatics expertise, TUM teaches interdisciplinary foundations including the social consequences of the use of technology.
- A large number of elective modules offer the opportunity to customise their studies in the field of Information Engineering and Management to suit their individual interests.
- The Department of Informatics encourages its students to spend a part of their studies abroad and supports them in doing so.

Career Profile

As Information Engineering Master students, students engage with a range of topics, from practical to theoretical, in international and interdisciplinary teams. Upon graduation, students have the necessary competencies and skills to be able to consistently design cyber-physical business systems comprehensively, driven by innovation and research. Students are able to fundamentally understand the interaction between new technologies and socio-technical systems, anticipating future developments for holistic, sustainable solutions. Students bring expertise in the areas of sensor technology, information systems and business models - different disciplines that have often established their own specialist cultures and terminology and use different (software) tools and models to solve problems.