Master’s Program
Computer Engineering

The 2-years English Master’s program Computer Engineering (MCE) is primarily devoted to the theoretical foundations and the rigorous systems engineering of reliable, hybrid, and autonomous cyber-physical systems, which are omnipresent in application areas such as the Internet of Things, automation, and robotics. Building on the knowledge and skills typically obtained in technically oriented Bachelor curricula of computer science and/or computer engineering, it combines research-orientation with opportunities for individual specialization.

The overall goal of the MCE is the integration of computer science, mathematics, and system theory/electrical engineering, albeit from the computer science perspective. Enabled by advanced foundations in discrete mathematics, formal methods, and algorithms/programming, it offers opportunities to dive into specialized areas such as system and fault models, stochastic and logical foundations, programming languages and algorithms, hardware/software architectures, analysis of concurrency and real-time behavior, correctness proofs and formal verification up to model-based design/testing and synthesis. Building upon a few mandatory foundational courses, this is primarily achieved by the individual choice of at least three of six key areas (KA) in Computer Engineering, which consist of a gatekeeper module and elective modules each:

→ Automation
→ Computer-Aided Verification
→ Cyber-Physical Systems
→ Dependable Distributed Systems
→ Digital Circuits and Systems
→ Digital Signal Processing and Communication

The Master in Computer Engineering is an excellent basis for a subsequent PhD.

CONTACT US

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Live in Vienna – the city with the highest living quality (Mercer 2018 et al.)

German is not required for studying and living

Low enrollment fee

Excellent student job market and career opportunities

Admission Requirements and Further Information

What are the admission requirements?
We distinguish basic prerequisites, which must be fulfilled already before MCE admission, and prerequisites for the selected key areas, which can be fulfilled as additional obligations (that need to be taken before regular MCE courses except Discrete Mathematics). Prerequisites are specified via modules from TU Wien's Bachelor Technische Informatik, with the meaning that they are satisfied if courses reasonably equivalent w.r.t content, level, and ECTS-credits have been/are being taken:

**Basic prerequisites**
- Introduction to Programming
- Algebra and Discrete Mathematics
- Calculus (Analysis)
- Probability theory and Stochastic Processes
- Algorithms and Data Structures
- Theoretical Computer Science and Logic
- Operating Systems

**Prerequisites for the individual key areas (KA)**
- KA Digital Circuits and Systems: Digital Design
- KA Digital Signal Processing and Communication: Signals and Systems
- KA Automation: Distributed Automation
- KA Cyber-Physical Systems: Control Theory, Microcontroller

What are the requirements regarding English and German?
No German language skills are necessary. For English, we expect level B2 of the Common European Framework of Reference for Languages.

How is my application evaluated?
Your application is processed in two stages. First, the admission office checks whether your application meets certain formal requirements. You need a degree on level six (bachelor) or higher in the European Qualifications Framework awarded by a recognized institution (classified as "H+" in ANABIN).

Depending on your country of origin, further conditions may apply. In the second step, the Deans of Academic Affairs check whether the documents you have supplied with the application (like degrees, transcripts, certificates) allow us to conclude that you fulfill the admission requirements.

Where do I get more information?

**Admission**
Forms, deadlines, tuition fees: [http://www.tuwien.ac.at/en/services/studienabteilung/the_conditions_for_admission_of_foreigners](http://www.tuwien.ac.at/en/services/studienabteilung/the_conditions_for_admission_of_foreigners). For further information contact the admission office at studienabteilung@zv.tuwien.ac.at

**Curriculum**
The curriculum is the authoritative, legally binding document. Find additional information at [http://www.informatik.tuwien.ac.at/studium/angebot/master/technische-informatik](http://www.informatik.tuwien.ac.at/studium/angebot/master/technische-informatik)
[https://ti.tuwien.ac.at/institute/teaching](https://ti.tuwien.ac.at/institute/teaching)

**MCE Courses and Contents**
[https://tiss.tuwien.ac.at/curriculum/public/curriculum.xhtml?key=56543](https://tiss.tuwien.ac.at/curriculum/public/curriculum.xhtml?key=56543)