DAAD

Deutscher Akademischer Austauschdienst
German Academic Exchange Service

INTERNATIONAL PROGRAMMES

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Master's degree

Research in Computer & Systems Engineering (RCSE)

Technische Universität Ilmenau • Ilmenau

Overview

Degree	Master of Science
Teaching language	• English
Languages	Courses are held 100% in English, but you can also choose German courses. A German language course for beginners is included in the curriculum.
Full-time / part-time	• full-time
Mode of study	Fully on-site with voluntary online elements
Programme duration	4 semesters
Beginning	Winter and summer semester
Application deadline	**Winter semester** Application period for students with certificates from non-EEA / international countries: 16 January – 15 May Application period for students with certificates from EEA countries, Switzerland, or the UK: 16 April – 15 September **Summer semester** Application period for students with certificates from non-EEA / international countries: 1 August – 15 November Application period for students with certificates from EEA countries, Switzerland, or the UK: 16 October – 15 March Foreign applicants who need to apply for a visa to enter Germany should submit their application at least three months before the application deadline.
Tuition fees per semester in EUR	None
Combined Master's degree /	No

PhD programme	
Joint degree / double degree programme	No
Description/content	This four-semester, Master's degree programme is structured into four phases:

Phase 1 – **Basic studies:** consists of fundamental courses spanning the following areas:

- Algorithms
- Information Systems
- Mobile Communication Networks
- Software & Systems Engineering
- Control Engineering

In addition, students will train research skills in seminars.

Phase 2 – **Advanced studies:** Students choose modules from a large catalogue of elective subjects providing in-depth and advanced knowledge on, e.g.:

- Machine Learning and Deep Learning
- Distributed Systems
- Complex Embedded Systems
- Cellular Communication Systems
- Systems Identification & Optimisation
- Systems Security and Software Safety
- Advanced Computer Graphics
- Advanced Database Systems
- Quantum Computing

Phase 3 – **Individual studies:** Students work on research projects individually as well as in teams. Students are expected to apply their acquired knowledge to solve state-of-the-art industrial and research problems and to enhance their presentation and teamwork skills. In this phase, students may conduct an optional internship.

Phase 4 – **Master's thesis:** The goal of the Master's thesis is to apply theoretical knowledge to new and challenging research topics, thereby preparing students for a career in research or industry.

Course Details

Course organisation	The programme consists of lectures, seminars, practice elements (such as labs and group studies), research projects, and small-group discussions.
A Diploma supplement will be issued	Yes
Integrated internships	An optional 10-week internship can be completed in industrial or research organisations offering suitable tasks and positions.
Course-specific, integrated German language courses	Yes
Course-specific, integrated English language courses	No

Costs / Funding

Tuition fees per semester in EUR	None
Semester contribution	Approx. 150 EUR per semester (including a train ticket and reduced prices in the university canteen and cafeterias)
Funding opportunities within the university	Yes
Description of the above-mentioned funding opportunities within the university	Students at TU Ilmenau do not pay tuition fees; instead, they only need to pay the semester contribution of approximately 150 EUR per semester. Further information on funding opportunities is available at: https://www.tu-ilmenau.de/en/international/service/we4you-student-service/funding-opportunities

Requirements / Registration

Academic admission requirements	Bachelor's degree in computer science or computer engineering comprising at least six semesters (180 credits) from a university
Language requirements	Applicants must provide proof of their proficiency in English at level C1 with one of the following certificates: • TOEFL IBT 95 • TOEIC 945 • IELTS 7 • CEFR C1 • CAE
Application deadline	**Winter semester** Application period for students with certificates from non-EEA / international countries: 16 January – 15 May Application period for students with certificates from EEA countries, Switzerland, or the UK: 16 April – 15 September **Summer semester** Application period for students with certificates from non-EEA / international countries: 1 August – 15 November Application period for students with certificates from EEA countries, Switzerland, or the UK: 16 October – 15 March Foreign applicants who need to apply for a visa to enter Germany should submit their application at least three months before the application deadline.
Submit application to	Online application: https://www.tu-ilmenau.de/apply

Services

Possibility of finding part-time employment	Temporary jobs are available at local enterprises. In some departments of TU Ilmenau, Master's students are regularly employed as scientific assistants.
Accommodation	Various student residences are available on campus. The rent in the residences is between 250 EUR – 350 EUR per room and month, depending on the type of residence. Registration is required in advance at the administering office of the "Studierendenwerk Thüringen". Information on the residences and registration can be found at:https://www.stw-thueringen.de/en/housing/ Student applicants have a good chance of getting a room if the application for a room is submitted in good time, approx. three months before the start of the semester. Of course, there is also the option to look for a privately rented apartment/room in Ilmenau or the surrounding area. For further information on privately rented accommodation, please contact TU Ilmenau's international student service, we4you: https://www.tu-ilmenau.de/en/international/service/we4you-student-service/team
Career advisory service	TU Ilmenau's we4you career counselling service provides assistance to international students, enabling an easier transition from the classroom to the working world. Through individualised career counselling, workshops on CV writing, and interview practice, we give students the tools they need to succeed in today's job market. Opportunities for internships and part-time or graduate jobs are further bolstered by our industry network and accessible job portal. Visits to local and nationwide job fairs are also on the agenda. These activities and events seek to equip students with the tools to confidently pursue their professional aspirations in the region surrounding the university, in Germany, and beyond. For more information, visit: https://www.tu-ilmenau.de/en/international/service/we4you-student-service/career-counseling
Support for international students and doctoral candidates	- Welcome event - Buddy programme - Tutors - Specialist counselling - Visa matters - Help with finding accommodation - Support with registration procedures - Accompanying programme - Cultural and linguistic preparation
General services and support for international students and doctoral candidates	TU Ilmenau offers an international student service called we4you, aimed at supporting prospective and current students during the application and arrival process, everyday student life, and beyond. The we4you team provides advice, organises events and excursions, and helps students feel comfortable in Ilmenau. For online and on-site we4you support, please visit: https://www.tu-ilmenau.de/en/international/service/we4you-student-service

Technische Universität Ilmenau

Campus of the Technische Universität Ilmenau
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Technische Universität Ilmenau is public university with a strong focus on research. Located in the centre of Germany, it has a long tradition in engineering and natural sciences, making it a sought-after destination for interdisciplinary research and education. With five faculties dedicated to delivering cutting-edge and sustainability-oriented programmes, the university offers 19 Bachelor's degree programmes, 25 Master's degree programmes, and doctoral education designed for real-world impact. Interested students can apply for a programme in the fields of engineering (e.g. Biomedical Engineering, Automotive Engineering, Mechanical Engineering), technology (e.g. Computer Science, Micro and Nanotechnologies, Renewable Energy Technology), mathematics (e.g. Business Mathematics), natural sciences (e.g. Biotechnical Chemistry, Technical Physics), or economic and social sciences (e.g. Media and Communication Science, International Business Economics). Many of the university's programmes are taught in English, and the large number of registered patents per staff provides just one example of the university's many innovation activities. Students at Technische Universität Ilmenau enjoy a great supervision ratio, access to excellent facilities conducive to research-driven learning (including modern labs and makerspaces), and career counselling and events to support global professional connections. The we4you international student service assists students in integrating into the university's vibrant campus community, which comprises over 100 nationalities. Through its extensive national and international partnership network and mobility options, Technische Universität Ilmenau fosters the expertise and personal development of its students and staff.

📍 University location

Ilmenau is a vibrant hub of innovation and enterprise, where tradition intertwines with a strong focus on the future. The university town with its approximately 40,000 residents is situated in the centre of Germany in the federal state of Thuringia. Thuringia is known for its rich cultural heritage, with influential historic figures such as Goethe, Bach, and Luther having strong ties to the region. Thuringia offers stunning green landscapes, meandering rivers, and idyllic lakes, with the Thuringian Forest covering large areas of the state. In Ilmenau, the Kickelhahn monument – situated atop the verdant woods – serves as a tribute to Goethe's profound connection to the town. It not only offers breathtaking panoramic views of the Thuringian landscape but also features verses from Goethe's immortal poetry, translated into multiple languages. Thuringia has a strong tradition of academic excellence and innovation, particularly in the fields of technology, engineering, and biotechnology.

Ilmenau, located in the picturesque valley of the Ilm River and nestled in the northern foothills of the Thuringian forest, is more than a living monument to the past. Once renowned for its exquisite glass and porcelain craftsmanship, Ilmenau pulsates with a dynamic energy as a science and technology centre.

For TU Ilmenau students, this blend of heritage and innovation offers ample opportunities, such as forging connections with experienced and visionary mentors, fellow students, and pioneering companies. It allows them to immerse themselves in a realm where theoretical knowledge meets real-world application.

Ilmenau is well-connected by public transport and positioned at an equal distance (about two hours) from the major German cities of Berlin, Frankfurt, and Munich, as well as their international airports.

Contact

Technische Universität Ilmenau
Department of Computer Science and Automation

98693 Ilmenau

✉ info.apply@tu-ilmenau.de
🌐 Course website: https://www.tu-ilmenau.de/en/study/before-the-study/range-of-courses/master/research-in-computer-systems-engineering-msc

🅕 https://www.facebook.com/TU.Ilmenau

⬤ https://twitter.com/TU_Ilmenau

🅛 https://www.linkedin.com/school/tu-ilmenau/

🅞 https://www.instagram.com/tu.ilmenau/

🅨 https://www.youtube.com/user/tuilmenau

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International Programmes in Germany - Database

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