



Deutscher Akademischer Austauschdienst
German Academic Exchange Service



Table of Contents

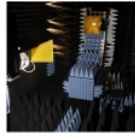
Master's degree	2
Communication Systems and Networks (MSc) • Technische Hochschule Köln (University of Applied Sciences) • Köln	2

Master's degree

Technology
Arts Sciences
TH Köln

Communication Systems and Networks (MSc)

Technische Hochschule Köln (University of Applied Sciences) • Köln



Overview

Degree	Master of Science in Communication Systems and Networks
In cooperation with	Hochschule Bonn-Rhein-Sieg (University of Applied Sciences)
Teaching language	<ul style="list-style-type: none">English
Languages	Mandatory courses are held in English (100%). Some courses are held in the German language, but they are not mandatory.
Programme duration	3 semesters
Beginning	Winter and summer semester
Additional information on beginning, duration and mode of study	The regular (minimum) programme study time comprises three semesters. However, individual time planning is possible (e.g. as a part-time programme).
Application deadline	Application deadline uni-assist: 31 March for the following winter semester and 31 October for the following summer semester Please also check the "How to Apply" section of the individual TH Köln programme websites: http://www.th-koeln.de/programs .
Tuition fees per semester in EUR	None
Combined Master's degree / PhD programme	No
Joint degree / double degree programme	Yes
Description/content	The focus of the study programme lies on the consolidation of theoretical knowledge in combination with practical scientific work in the field of communication systems and networks. This programme is organised in close cooperation with the Bonn-Rhein-Sieg University of Applied Sciences in St Augustin.

During the first semester, some basic courses on fundamentals from the area of communication systems and networks are conveyed (advanced mathematics, networks and signal processing). In addition, the programme is structured in such a way that students can focus on one of two different study profiles:

- Communication Systems
- Communication Networks

Students have to take at least four courses within a profile. To improve their scientific capabilities, students have to conduct an individual research project. A broad range of further modules from the fields of electrical engineering, optical technologies, informatics, and media technologies are available as electives due to the close cooperation between both universities. A final Master's thesis completes the programme in the third semester.

Both profiles (Communication Systems and Communication Networks) can be studied entirely in the English language, even if there are further modules in German. The thesis must also be written in English.

Course Details

Course organisation

The educational organisation is based on a regular start in March / summer semester. The study programme has been developed in a modular way. Each module is assessed according to the European Credit Transfer System (ECTS). This facilitates participation in European exchange programmes. Each semester has a scope of 30 ECTS points, in total 90 ECTS. Each module counts for 5 ECTS.

Semester one

- Advanced Mathematics (5 ECTS)
- Basics in Systems and Networks (5 ECTS)
- Research Project (10 ECTS) (no fixed start)
- Two profile courses, depending on the study profile (5 + 5 ECTS)
- Project Management (5 ECTS)
- Elective (5 ECTS)

Semester two

- Two profile courses, depending on the study profile (5 + 5 ECTS)
- Research Project (if not yet started in first semester) (10)
- Project Management (5 ECTS)
- Two electives (5 + 5 ECTS)

Semester three

- Master's thesis (27 + 3 ECTS, incl. thesis presentation)

Study Profiles:

(The language of lecture titles corresponds strongly to the lecture language.)

Communication Systems (choose 4 out of N)

Communication Networks (choose 4 out of N)

At least four courses have to be chosen from one profile. Both profiles offer more than four courses in the English language.

[» PDF Download](#)

A Diploma supplement will be issued

Yes

International elements	<ul style="list-style-type: none"> • Courses are led with foreign partners
Course-specific, integrated German language courses	No
Course-specific, integrated English language courses	No

Costs / Funding

Tuition fees per semester in EUR	None
Semester contribution	<p>Approx. 305 EUR per semester</p> <p>Included in the semester fee is the "semester ticket" for public transport throughout Germany.</p>
Costs of living	The cost of living for your stay largely depends on your personal needs. When planning your stay, you should calculate monthly costs of approx. 1,000 EUR.
Funding opportunities within the university	Yes
Description of the above-mentioned funding opportunities within the university	International students are eligible to apply for the "Deutschlandstipendium". The scholarship holders receive approx. 300 EUR per month for the duration of one year.

Requirements / Registration

Academic admission requirements	<p>Successful applicants are required to have obtained a recognised undergraduate degree in a suitable scientific or technological field with at least 210 credits in accordance with the European Credit Transfer System (ECTS) and a final cumulative grade of 2.3 or better in the German grading system or equivalent.</p> <p>A degree programme is deemed suitable if it teaches competencies in the fields of mathematics, physics, electrical engineering and computer science comprising a total of at least 110 credits. If applicants do not meet 210 ECTS, they can only be admitted under the condition that they will be able to attest to the missing prerequisites before registering for the Master's thesis by having successfully completed specific courses offered in Bachelor's programmes. The nature and scope of these conditions are individually determined by the examination board based on the courses completed by the applicant in his/her undergraduate programme. Admission to the Master's programme will be denied if the applicant has obtained a final cumulative grade of worse than 2.3.</p>
Language requirements	<p>Applicants need to submit evidence of English language proficiency by submitting one of the following documents:</p> <ul style="list-style-type: none"> - TOEFL paper-based (550 points) - TOEFL computer-based (213 points) - TOEFL Internet-based (80 points) - IELTS (6.0)

- Annotation in the Abitur certificate confirming English language proficiency on at least a B2 level of the Common European Framework of Reference for Languages (CEFR)

Or an equivalent qualification:

- prior enrolment of at least one year in a university programme with English as the language of instruction

- prior schooling of at least one year with English as the language of instruction

- completion of a suitable degree programme that includes courses in technical English worth at least 3 credits (This specifically includes the degree programmes in Electrical Engineering and Computer Engineering at TH Köln.)

- Native speaker of English

Students need to provide evidence of their English language proficiency by the time of application for the Master's programme.

Students may only opt for profiles that include modules taught in German if they passed the German Language Proficiency Test for Admission of International Students (DSH 2) or if they obtained their Higher Education Entrance Qualification at an institution where the language of instruction was German.

Although there are no general language requirements regarding the German language, we still recommend that all students complete at least one beginners' language course. This simplifies daily life in Germany.

Application deadline

Application deadline uni-assist: 31 March for the following winter semester and 31 October for the following summer semester

Please also check the "How to Apply" section of the individual TH Köln programme websites: <http://www.th-koeln.de/programs>.

Submit application to

If you are a prospective international student, the way to apply is determined by your citizenship, your desired degree programme, and your previous academic qualifications.

Further information on how to apply: www.th-koeln.de/howtoapply

Services

Possibility of finding part-time employment

Taking on a part-time job while studying has lots of benefits. Students can earn some extra money and gain valuable professional experience, and they might even take a first step up on the career ladder. Gaining a first insight into the German corporate world is especially beneficial for international students.

Many students partially fund their studies at TH Köln by taking on a part-time job in or outside the university.

Accommodation

Being Germany's fourth largest city, Cologne is a highly attractive place to live. The increasing influx of people can make the search for adequate accommodation quite difficult. Dozens of apartment hunters often compete for one single apartment. This is why we strongly recommend that you start looking for a place to live as soon as possible.

Cologne's most convenient and economical housing option is often a student dormitory. A public student services association called "Kölner Studierendenwerk" (KSTW) operates 88 student dorms offering roughly 4,800 rooms. The seemingly large number of dorm rooms is misleading; as the dormitories are open to the roughly 90,000 students enrolled at all Cologne universities, they are in extremely high demand. Please be aware that TH Köln does not allocate the rooms in these dorms. Please apply directly to the KSTW: <https://www.kstw.de/wohnen>. You do not yet need a letter of admission in order to apply.

The fierce competition on the private housing market has resulted in above-market rents – particularly in proximity of the city centre. We therefore encourage you to be flexible. Try to look for

apartments outside the centre or share an apartment – and the cost of rent – with other students.

www.th-koeln.de/accommodation

Support for international students and doctoral candidates

- Welcome event
- Buddy programme
- Tutors
- Accompanying programme
- Cultural and linguistic preparation
- Visa matters

– Technische Hochschule Köln (University of Applied Sciences)



Main building, Südstadt Campus

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Technische Hochschule Köln – abbreviated as TH Köln – University of Applied Sciences – sees itself as a university of technology, arts, and sciences. With its disciplinary and cultural diversity and openness, TH Köln's activities are aimed at cultural and technological breakthroughs of high societal relevance. Thus, TH Köln contributes substantially to resolving social challenges. As a community of faculty and students, we see ourselves as a learning organisation forging new paths. For instance, TH Köln is one of the pioneers in the field of development and formation of concepts for higher education didactics.

Our subject range includes the fields of applied natural sciences, architecture and construction, information and communication, computer science, engineering, culture and society, and social sciences as well as business studies. More than 100 degree programmes are offered as full-time programmes or, in some cases, as career-integrated or part-time programmes. As a place where research-based learning and academic education take place, the university nurtures prospective scholars through cooperative dissertations. Annually, more than 5,000 students take up their studies at TH Köln. Overall, 23,500 students from about 120 different countries along with 430 professors and 2,000 staff members apply their potential.

Research mainly focuses on future-related issues, including climate change, energy supply, health, and food safety as well as demographic changes. While developing solution strategies for the most important questions of our time, researchers offer their professional expertise in interdisciplinary interaction. At the same time, they collaborate closely with local, national, and international cooperation partners, including 350 international institutions of higher education. The university offers its researchers an attractive sphere of activity. The quality seal "HR Excellence in Research" awarded by the European Commission certifies that TH Köln meets international standards in the field of human resources development.

TH Köln's campuses are located in Cologne, Gummersbach, and Leverkusen.

University location

Its metropolitan vibe, diverse student scene and a cityscape abounding with cultural and historical treasures make Cologne one of Europe's prime university cities. Cologne's origins date back to the Roman Empire more than 2,000 years ago. Today, Cologne is Germany's fourth largest city with a population of just over one million and has evolved as an economic and cultural metropolis at the heart of Europe. The city's characteristic landmark and source of pride for every inhabitant is without a doubt the magnificent Cologne Cathedral, locally known as the "Kölner Dom". Towering over the quaint Old Town of Cologne at 156 metres, this masterpiece of Gothic architecture is the world's third-highest cathedral and attracts around six million visitors a year, making it Germany's most popular tourist attraction. Visitors from all over the world are bound to feel at home immediately, as Cologne is a true melting pot of cultures. Close to one-fifth of its inhabitants have an international background. Cologne's economy is characterised by its amalgamation of different industries and trades. Home to the country's most influential television and radio stations, Cologne is unquestionably Germany's media capital and host to some of the continent's biggest trade fairs. Quite a few of the world's most renowned enterprises call the metropolitan region their home, in particular, corporations operating in the automobile industry, biotechnology and life sciences, chemicals and pharmaceuticals as well as commerce and banking.

Please note that TH Köln also has two remote campuses outside Cologne, which are located in the towns of Gummersbach and Leverkusen.

Gummersbach is a town with 50,000 inhabitants located 55 km east of Cologne, surrounded by a hilly landscape which is a recreational area for residents from Cologne and other cities nearby. The campus can be reached in a few minutes from Gummersbach train station. A train ride to Cologne, which is the largest city in the region, takes one hour and ten minutes and will be covered by the semester ticket, which is included in the semester fee. Students will be able to find affordable accommodation in Gummersbach and focus on their studies in the great environment of a modern campus.

The Leverkusen campus is located 15 km north of Cologne in the Neue Bahnstadt Opladen and was opened in 2022. It is close to the CHEMPARK in Leverkusen, which is one of the largest chemical parks in Europe. Global players from the chemical and pharmaceutical industry, such as Bayer and LANXESS, are located there. With 160,000 inhabitants, Leverkusen is a smaller industrial city that has plenty of opportunities for relaxation, thanks to its location in the foothills of the Bergisches Land region. In Leverkusen, you can find urban buzz and village-like tranquillity in close proximity. The campus can also be reached with TH Köln's semester ticket.

Contact

Technische Hochschule Köln (University of Applied Sciences)

Department of International Affairs

50679 Köln

 Course website: <https://www.mcsn.de>

 <https://www.facebook.com/technischehochschulekoeln>

 <https://de.linkedin.com/school/cologne-university-of-applied-sciences/>

 https://www.instagram.com/th_koeln/

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Editor

DAAD - Deutscher Akademischer Austauschdienst e.V.
German Academic Exchange Service
Section K23 – Information on Studying in Germany
Kennedyallee 50
D-53175 Bonn
www.daad.de

GATE-Germany

Consortium for International Higher Education Marketing
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Disclaimer

The data used for this database was collected and analysed in good faith and with due diligence. The DAAD and the Content5 AG accept no liability for the correctness of the data contained in the "International Programmes in Germany" and "Language and Short Courses in Germany".

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