

# INTERNATIONAL PROGRAMMES

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# Master's degree



### **Computer and Information Science (MSc)**

**University of Konstanz • Konstanz** 











### Overview

Degree	Master of Science
Teaching language	• English
Languages	Courses are held in English. Participants can choose to write the Master's thesis in either German or English.
Full-time / part-time	• full-time
Programme duration	4 semesters
Beginning	Winter and summer semester
Additional information on beginning, duration and mode of study	The MSc Computer and Information Science programme is designed to be two years of full-time study (four semesters). An application can be submitted for both the winter and summer semesters. The programme is classroom-based study programme.
Application deadline	Winter semester: March - 15 April (visa required) / 15 June (no visa required)
	Summer semester*: November - 15 January (no visa required)  * An application for the summer semester is only possible if there are no visa requirements for Germany!
	The application portal is only open during the application periods. You can find more information here.
Tuition fees per semester in EUR	Varied
Additional information on tuition fees	Students from an European Union (EU) member state or from the European Economic Area (EEA) are not required to pay tuition fees for their first degree in Germany.  Students from countries outside of the EU or EEA are required to pay 1,500 EUR in tuition fees per semester.  You can find all information about tuition fees and scholarships on our website.
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Combined Master's degree /
PhD programme

No

### Joint degree / double degree programme

No

#### Description/content

#### Study programme objective

A Master's degree in Computer and Information Science provides students with the opportunity to specialise in a particular area of computer or information science, especially with regard to topics pertaining to the exploration of large volumes of data (data science), visualisation (visual computing), and human-computer interaction.

Graduates will be able to apply and further develop practical methods of computer and information science across different sectors. Graduates with this profile will find jobs in all areas and sectors of national and international organisations and companies.

#### Joint research focus and fields of specialisation

The Master's programme takes on the research of our esearch groups, especially in the mentioned area of exploratory analysis and visualisation of large information spaces. This kind of departmental and interdisciplinary joint research is unique in Germany and highly acknowledged internationally. The Master's programme has a strong research orientation and an emphasis towards research-driven teaching. Furthermore, it provides exciting opportunities for specialisation:

- Data Science
- Interactive Systems
- Software System Engineering
- Visual Computing
- Algorithmics

#### Mentoring programme

Master's students are guided and mentored by a university professor during the Master's programme. A mentor will help students to structure their studies and will be chosen according to the field of specialisation at the beginning of the study programme.

#### **Course Details**

#### Course organisation

#### Study structure

The structure of the Master's programme provides for specialisation and is based on different module areas such as the basic module area, advanced module area, supplementary area and final part of study. A total of 120 ECTS credits must be achieved. 90 ECTS credits are fixed and clearly assigned to the different module areas. Another 30 ECTS credits can be distributed among the different areas. In each module area students can choose from a pool of different modules/courses according to their own preferences.

#### Basic module area (24 to 54 ECTS credits)

 a minimum of four and a maximum of nine basic modules (6 ECTS) from the Computer Science Department

#### Advanced module area (36 to 66 ECTS credits)

modules in the range of 36 to 66 ECTS credits, comprising a Master's seminar (3 ECTS), a
 Master's project (9 ECTS) and 24 to 54 ECTS credits from the "Master" advanced modules
 with a total of 6 or 9 ECTS credits each

#### Supplementary area (0 to 18 ECTS credits)

• interdisciplinary courses or courses of other subjects up to a maximum of 18 ECTS credits

#### Final part of study (30 ECTS credits)

• Master's thesis and Master's colloquium

#### **Specialisation**

The Master's programme offers students the possibility of specialising in a particular field.

• Students need to complete at least three advanced modules as well as the Master's seminar, the Master's project and the Master's thesis in one specific field.

#### **Programming skills**

A solid knowledge of the principles and practice of software engineering and programming is required. Students need to be able to read, understand, and write high-quality code in a modern, object-oriented language such as Java or C++, which are among the most frequently used programming languages at the department. For some advanced courses, you also need to have the willingness to learn and work with other programming languages that are used for data analysis and visualisation, such as Python.

#### » PDF Download

A Diploma supplement will
be issued

Yes

#### Integrated internships

An internship period is not a compulsory element in our Master's programme curriculum. However, it has become quite common for our Master's students to take the second semester off (leave of absence) for a voluntary internship. The department supports you with an internship portal and several career-oriented activities that focus on different aspects of employability, e.g. our "Career Passport" programme.

Course-specific, integrated
German language courses

No

Course-specific, integrated English language courses No

### **Costs / Funding**

### Tuition fees per semester in EUR

1,500 EUR

### Additional information on tuition fees

Students from an European Union (EU) member state or from the European Economic Area (EEA) are not required to pay tuition fees for their first degree in Germany.

Students from countries outside of the EU or EEA are required to pay 1,500 EUR in tuition fees per

You can find all information about tuition fees and scholarships on our website.

#### Semester contribution

Students currently pay the following fees per semester:

- Administrative fee: 70 EUR
- Student services fee ("Seezeit"): 95 EUR
- Student body fee: 14 EUR

For detailed information, please check ourwebsite.

#### Costs of living

The good news is that studying at German public universities is not expensive. For your stay, you will require a budget for daily life and certain study expenses.

The cost of living for students in Konstanz is approx. 790 EUR per month.

Example of the average monthly living cost in Konstanz:

Rent (including utilities): 352 EUR

Food: 168 EUR

Clothing, laundry, personal hygiene: 42 EUR
Learning materials (books, copies): 20 EUR
Health insurance, medical care, medicine: 115 EUR
Phone, Internet, broadcasting fees: 31 EUR
Leisure time, culture, sports: 61 EUR

Funding opportunities within the university

Yes

Description of the abovementioned funding opportunities within the university Students with great academic credentials and community service experience can apply for scholarships in Germany. In cases of unexpected financial hardship, the university will try to help with emergency financial support. For an overview of financial support options, check out our websites:

https://www.uni-konstanz.de/en/international-office/study-in-konstanz/degree-studies/fees-and-scholarships/#c219152

http://www.uni-konstanz.de/en/study/study-essentials/finances/financing-your-studies

For example, you may apply for the Deutschlandstipendium. The scholarship amounts to 300 EUR per month and is awarded without regard to income for a minimum of two semesters.

### Requirements / Registration

#### Academic admission requirements

#### Admission criteria

Our departmental admission committee decides on the applicant's eligibility for the Master's programme in Computer and Information Science on the basis of the application documents and a point system.

Criteria such as the final grade, subject relevance, motivation and additional subject-related activities such as internships, study abroad or work experience and/or special subject-related commitments such as subject-related MOOCs, etc. are assessed and evaluated.

Detailed information on the procedure and the admission requirements can be found on our website.

#### Language requirements

The language of instruction is English. We expect a level of at least high B2 as defined by the Common European Framework of Reference for Languages (CEFR). Please note that only specific language certificates can be accepted. Detailed information can be found on the website.

#### Application deadline

Winter semester: March - 15 April (visa required) / 15 June (no visa required)

Summer semester\*: November - 15 January (no visa required)

\* An application for the summer semester is only possible if there are no visa requirements for Germany!

The application portal is only open during the application periods. You can find more information

Submit application to

Online application portal

#### **Services**

#### Possibility of finding parttime employment

IT experts are in high demand in Germany. Due to this, part-time and full-time jobs for computer science students and graduates are generally available. Furthermore, the Department of Computer and Information Science at the University of Konstanz provides qualified students with several student assistant jobs.

If you want to earn some extra cash while you study, you can get a student job. The university administration and many departments offer student assistant jobs. You can find a number of advertisements for jobs both on and off campus on online platforms (in German):

Jobbörse Seezeit: the job portal of "Seezeit", which is our student services

Hilfskraftstellen an der Universität | Datenbank Career Service our career service's job portal

Jobs are also posted on the university's notice boards in the foyer and canteen areas as well as in the departments.

#### Accommodation

There are a number of possibilities for accommodation for students: in apartments, flat shares, or residence halls run by the university. Check out our website, where we provide an overview of the different options as well as general tips. You can also contact the team of our International Office for advice on housing.

Please note that it is important to begin your search for accommodation as early as possible since our city and surroundings are very popular not only with students but also with families and outdoor enthusiasts. Since both Switzerland and Lake Constance border Konstanz, the available living space is limited and not always inexpensive.

#### Career advisory service

The University of Konstanz supports you with its Career Passport Programme (CPP). With the CPP, we offer you a structured and manageable preparation for the German job market that can be easily integrated into your everyday study life. Over three to four semesters, you will complete various activities (modules) in a different range of subjects. Don't worry; all of the modules are offered in English. At the end, you will receive an official "CPP certificate".

The "Career Passport" programme was developed for English-speaking students to best prepare them for the German labour market.

# Support for international students and doctoral candidates

- Welcome event
- Buddy programme
- Tutors
- Accompanying programme
- Specialist counselling
- Cultural and linguistic preparation

#### General services and support for international students and doctoral candidates

The International Office and the Welcome Center of the University of Konstanz take care of all of the non-academic concerns of international students and doctoral candidates. In addition, the departments have study- and internationalisation coordinators who provide subject-related support and serve as the primary contact persons for international students.



# University of Konstanz in Two Minutes

Discover our YouTube channel and learn more about us.

more: https://www.youtube.com/watch? v=429KiHpcFzc

## University of Konstanz



The University of Konstanz
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Would you like to study at one of the best research universities in Germany? Then the University of Konstanz is the right place for you. We offer you excellent study conditions in a beautiful location between Lake Constance and the Alps. For us, excellence in studies and teaching also means cultivating close cooperation. We encourage our students to take part in discussions and get involved in research from the start.

Our university is currently home to some 11,000 students enrolled in around 120 different degree programmes in the fields of mathematics and natural sciences, humanities, politics, law, and economics. With students from more than 90 countries around the world, we are proud to call our university an international community.

The University of Konstanz is a campus-based university: you will get to know other students quickly, come into contact with other departments and feel at home right away. Our university has an open-door policy: professors are very accessible and happy to help you with any questions or issues you might have.

We will give you a very warm welcome and support you in every stage of your stay. We have an excellent supervision ratio and top advisory services. You will learn in small groups and work across disciplines. We promote innovative teaching methods and strategies such as transfer formats or virtual classrooms and support lecturers in further developing their teaching. Our Advanced Data and Information Literacy Track (ADILT) complements all study programmes with fundamentals of computer science, data processing methods and their legal foundations as well as reflection on their relevance for society.

In Konstanz, you will find optimal conditions for research, studying, and teaching.

The University of Konstanz has set the following five research priorities:

- Human | Data | Society
- Collective Behaviour
- Cultural Dynamics and Social Transformation
- Molecular Principles of Life
- Inequality and Conflict

We want to give you the best possible opportunities to develop personally and professionally. You will get lots of chances to put your own ideas into action – whether you conduct research or start a spin-off. The idea behind our "creative.together" concept as a University of Excellence is that close communication and a strong sense of community enhance the creative potential of our university members at all levels. We bring together our different backgrounds and disciplines to create something truly extraordinary. All the while, you can enjoy an attractive environment with a lake, mountains and great sports facilities.

Find out more about our university and student life in Konstanz on our website.



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#### University location

Konstanz is situated in south-west Germany in the federal state of Baden-Württemberg, and it shares its border with the Swiss town of Kreuzlingen. It is beautifully located on the shores of the Rhine River and Lake Constance, central Europe's second-largest lake, where the borders of Austria, Germany and Switzerland converge. The lively university city, with about 86,000 inhabitants, among them more than 15,000 students, is the economic and cultural centre of the Lake Constance region. Take a stroll through the shopping mall and the historical centre, with its department stores and small specialist shops. Take a break in one of the many cafés, restaurants, ice cream parlours, pubs and wine bars. Konstanz is not only a popular tourist destination but also an attractive business location (light industry, commerce, high technology). It is a very safe place to live, and it offers a high quality of life, with its excellent infrastructure and its diverse range of cultural and recreational facilities. Konstanz has a long and rich historical tradition. The first settlements were erected in Konstanz Bay in 2000 BC, and the city was given its name "Constantia" by the Romans in the fourth century AD. Konstanz has a well-preserved medieval town and numerous historical buildings from the Romanesque, Gothic and Baroque periods.

Konstanz has the perfect location for all kinds of outdoor leisure activities. The region has an excellent network of routes for walking, cycling and in-line skating tours. The beaches are a major attraction for relaxing in the sun and swimming in the lake or the Rhine. The lake offers various water sports, such as sailing, canoeing and diving, and the nearby Alps provide year-round enjoyment for skiers, snowboarders, hikers and climbers. Konstanz is the home of the oldest running theatre in Germany and of the famous Southwest German Philharmonic Orchestra. There are several museums, art galleries and art centres offering a broad spectrum of events: art and documentary exhibitions and concerts in all genres of music. Konstanz is also an ideal starting point for excursions to many attractions in Germany, Switzerland, Austria and Liechtenstein. On the city's doorstep are the famous gardens of Mainau Island and the Island of Reichenau, a UNESCO World Heritage Site. You can take boat trips to beautiful towns around the lake, such as Meersburg, Überlingen and Lindau. The lakeside town of Friedrichshafen is the home of the Zeppelin, and the Austrian city of Bregenz is renowned for its summer festivals, with spectacular opera and musical performances on a floating stage in the lake. A boat trip along one of the most beautiful parts of the Rhine takes you to the magnificent Rhine Falls at the Swiss town of Schaffhausen. From Konstanz, you can easily reach major cities, such as Zurich, Basel, Strasbourg, Stuttgart, Munich and Milan.

### **Contact**

#### **University of Konstanz**

Department of Computer and Information Science

PO box: 188 78457 Konstanz

- Course website: https://www.informatik.uni-konstanz.de/studium/master-of-science/msc-computer-and-information-science/
- https://twitter.com/unikonstanz
- in https://www.linkedin.com/school/university-of-konstanz/
- https://www.instagram.com/unikonstanz/

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### International Programmes in Germany - Database

www.daad.de/international-programmes www.daad.de/sommerkurse

#### Editor

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#### **GATE-Germany**

Consortium for International Higher Education Marketing www.gate-germany.de

#### 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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