

Entry requirements

A first degree in Computer Science or a related discipline with a minimum computer science content amounting to 110 ECTS credits, with a final grade equivalent to 2.7 in the German marking system or among the best 70% of your cohort.

As you can study this degree programme in German or English, you should provide either:

- an English language certificate such as TOEFL (567 paper-based, 87 internet-based), IELTS (score 5.5) or an equivalent certificate
- or
- a German language certificate at level B2 CEFR, e.g. DSH -1 or TestDaF TDN 3x4 or equivalent

As speaking German makes it easier to get about in Germany, it would be beneficial for you to have German language skills at level A1 CEFR or higher. Therefore, if you do not have proof of German language skills when starting out on the programme, you will complete a compulsory German course during the first year of study.

How and when to apply

Go to www.uni-passau.de/en/apply and follow the instructions on that page.

The application deadlines are **15 December** for the programme starting in April and **31 May** for the October intake.

Further information and contact details

Programme profile on the web

www.uni-passau.de/en/msc-computer-science

Faculty of Computer Science and Mathematics

International Coordinator

Primary contact for prospective international students seeking advice on study options, entry requirements and admissions-related matters
masters@fim.uni-passau.de

Academic Advice Service

General advice on studying at the University of Passau in general and for all degree programmes
www.uni-passau.de/en/academic-advice
advice@uni-passau.de

Student Registration Office

Contact for enquiries related to your application
www.uni-passau.de/en/student-registration-office
How to apply for the degree programme
www.uni-passau.de/en/apply

International Office and iStudi Coach

Information about the University for international students and assistance with the immigration formalities and with getting settled in Passau
www.uni-passau.de/en/international/coming-to-passau
www.uni-passau.de/en/iStudi

Language Centre

Offers a wide range of language courses
www.sprachenzentrum.uni-passau.de/en

German Courses Passau

German language courses for international students
www.uni-passau.de/en/learn-german

Costs and funding

www.uni-passau.de/en/costs-funding



08/2023

Study the M.Sc. Computer Science in English and/or German



Study Computer Science in English

Are you interested in gaining a top-rated master's degree in Computer Science in Germany but worried that your German skills are not up to the task? The University of Passau's English-taught M.Sc. Computer Science is ideal for international students with little or no German language skills.

The degree programmes and the Faculty of Computer Science and Mathematics have an excellent reputation in the international arena: our professors are leading experts in their field and the faculty and its degree programmes consistently attain top positions in university rankings. This programme comprises both English- and German-taught modules, and you can study the degree programme entirely in English if you wish.

While we are continually adding English-taught modules to the existing offering, we will offer you every chance to learn German; in fact, we strongly recommend that you take advantage of this offer during the first couple of semesters to give you access to the full range of focus modules later on—keeping in mind that foreign language skills in general will further boost your employability after you graduate.

Unlike the 'foreign students only' English-taught programmes of other universities, this is a regular master's programme, open to German and international students alike: for you this means it's easier to meet local students and quickly get an active social life.

Studying at the University of Passau means an outstanding student experience and top-notch teaching and research on a beautiful campus with a modern infrastructure. Passau is a vibrant city with a Mediterranean flair and a long history dating back to Roman times at an unparalleled location at the confluence of the rivers Inn, Danube and Ilz. With ten thousand students accounting for one-fifth of the population, it is also a young city with an active student scene. Munich, Vienna and Prague are a mere two- or three-hour drive or train ride away.

Features

- A research-oriented two-year programme with a modern, broad range of subjects
- If you study the whole programme in English, you gain the same degree as your German-speaking peers
- An extensive network of partnerships with academic institutions and businesses worldwide
- A full range of German language tuition options
- Excellent staff-student ratio
- Participation in cutting-edge research projects
- **Double degree options** with INSA Lyon, ENSIE Evry (Paris) or Ecole Supérieure des Communications de Tunis



Career prospects

This well-respected master's degree qualifies you for a wide range of career paths in business and industry, in the public sector and at scientific institutions. With a master's degree in Computer Science from the University of Passau you will be highly sought after by leading regional, German and multinational employers, and can look forward to earning a competitive salary. The typical starting salary for Computer Science graduates in Germany is about €45K–€50K.

Programme structure

Five **subject areas** with core and elective modules:

1. Algorithms and Mathematical Modelling (AlgMath)
2. Programming and Software Systems (ProgSoft)
3. Information and Communication Systems (InfComm)
4. Intelligent Technical Systems (ITS)
5. IT Security and Reliability (ITSecRel)

1. This module teaches you about deterministic and stochastic algorithms and how they are implemented, evaluated and optimised. You will acquire advanced knowledge of computer-based mathematical methods—particularly in the areas of algorithmic algebra and computational stochastics—as well as in-depth knowledge on mathematical modelling and complexity analysis of discrete and continuous problems.

2. The Programming and Software Systems subject area imparts modern methods for constructing large-scale software systems as well as creating and using software authoring, analysis and optimisation tools. You will also consolidate your knowledge of various programming paradigms and languages; moreover, you will explore the structure of language processing systems and learn to deal with parallelism in program routines.

3. You will study the interactions of the classic subjects of information systems and computer networks. This specialisation presents an answer to the problem of increasing volume and complexity of worldwide information distribution and networks, and for the growing demands on quality and performance of computer communication. You will also learn how to transfer database results to multimedia data.

4. This module group teaches you the necessary knowledge in systems theory, machine learning and signal and image processing to explore the theory and practical application of intelligent, self-learning systems.

5. This subject area is concerned with the security and reliability of IT systems, e.g. in hardware circuitry, communication protocols or complex, networked application systems. To ensure the secure operation of these systems you will learn design methods, secure architectures and technical implementation of the underlying components.

Degree requirements

As you progress through the programme, you should accumulate a total of 120 ECTS credits. While you are free to choose which modules to study in principle, your choice must be in accordance with the following conditions:

- 30 ECTS credits for your master's thesis (and presentation) on your chosen subject, ideally from your specialisation
- at least 40 ECTS credits from your specialisation modules
- at least 30 ECTS credits from non-specialisation modules
- one seminar (5 ECTS credits)
- for the remaining 15 ECTS credits, you are completely free in your choice of modules

All module areas can be studied in English or German.

