

Application and selection process

To be eligible for this double-degree programme, students from Passau must be enrolled in the M.Sc. Computer Science programme (or have gained a favourable result in the selection process) and have had their application approved by Professor Joachim Posegga. HSE Moscow candidates should be enrolled in the M.Sc. Big Data Systems or another degree programme within the School of Business Informatics. They are nominated by Professor Mikhail M. Komarov at the Faculty of Business and Management. Students are selected and admitted to the double-degree programme in a two-step process that takes into account their academic profile and their motivation for joining the programme.

Approved applicants have to conclude a Learning Agreement, which includes details on the courses to be completed at the host university and their acceptance for credit at the home university. All courses in this programme are taught in English at both institutions. It is therefore necessary that applicants submit an English-language certificate at level B2 of the Common European Framework of Reference for Languages (CEFR). For additional information, please contact the University of Passau's International Coordinator at the Faculty of Computer Science and Mathematics (masters@fim.uni-passau.de).

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| Programme | Double Master's Programme |
| Degrees awarded | M.Sc. Computer Science M.Sc. Big Data Systems/ Business Informatics |
| Duration and ECTS | 4 semesters; 120 ECTS credits |

Further information and contact details

Programme pages on the web

University of Passau: www.uni-passau.de/en/msc-computer-science
HSE Moscow: www.hse.ru/en/ma/bigdata

University of Passau Programme Convenor

Professor Joachim Posegga
Delegate of International Relations
joachim.posegga@uni-passau.de

HSE Moscow Programme Coordinator

Professor Mikhail M. Komarov
Deputy Head for International Relations
mmkomarov@hse.ru

Information about the University

www.uni-passau.de/en/university/about-the-university

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

International Student Assistants

Help with questions related to the visa process, housing, insurance, academics, course subscription, exam enrolment and student life in Passau
master-help@fim.uni-passau.de

International Office

Assists international students with the immigration formalities and with getting settled in Passau
www.uni-passau.de/en/international

Language Centre

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

Centre for Careers and Competencies

Helps students seeking internships or career entry positions and offers transferable skills courses
www.uni-passau.de/en/zkk

Funding and scholarships

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



German-Russian Double Master's Programme M.Sc. Computer Science – M.Sc. Big Data Systems/ Business Informatics



English-taught degree programme

University of Passau –
National Research University
HSE Moscow



NATIONAL RESEARCH
UNIVERSITY



Join the international double master's programme between the University of Passau and HSE Moscow!

Students enrolled in the German-Russian double master's programme have the opportunity to gain two degrees: a Master of Science in Computer Science from the University of Passau and a Master of Science in Big Data Systems/Business Informatics from the National Research University – Higher School of Economics (HSE) in Moscow. The University of Passau gives credit for courses completed in Moscow and vice-versa.

Computer Science at the University of Passau

The University of Passau's English-taught M.Sc. Computer Science and the Faculty of Computer Science and Mathematics have an excellent reputation for top-notch teaching and research in the international arena: our professors are leading experts in their fields, and the faculty and its degree programmes consistently attain top positions in university rankings.

The degree programme is ideal for international students with little or no German language skills. While we are continually adding English-taught modules to the existing repertoire, we also encourage students with pre-existing knowledge of the German language to further enhance their proficiency in order to give them access to the full range of focus area modules later on – keeping in mind that foreign-language skills in general will further boost your employability after you graduate.

Studying at the University of Passau means an outstanding student experience 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 some 13,000 students accounting for a quarter of the city's population, Passau is a lively city with an active student scene. Furthermore, the metropolitan areas of Munich, Vienna and Prague are merely a couple of hours away by train, bus or car.



Features

- A research-oriented programme with a modern, broad range of subjects
- Top place in the CHE Computer Science Master's rankings
- An extensive network of partnerships with academic institutions and businesses worldwide
- Participation in cutting-edge research projects

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 offering competitive salaries. The typical starting salary for Computer Science graduates in Germany is about €45K–€50K.

Duration and Cost

The standard duration of study is 4 semesters. Participants may place their year abroad flexibly at the beginning, in the middle or at the end of the programme. However, the double master's application procedure is carried out only once a year. The move to the other university usually takes place in the fall.

Students enrolled in the double master's programme are exempt from paying tuition fees at the host institution. They will, however, have to cover their cost of living, health insurance premiums, the costs involved in gaining a visa and residence permit, travel expenses etc. For an estimate of students' expenses throughout their studies and a selection of potential scholarship opportunities, please go to www.uni-passau.de/en/costs-and-funding. Receiving institutions will provide assistance for student housing.

University of Passau programme syllabus

For the portion of the programme to be completed in Passau, participants will choose modules belonging to a general area or to one of five subject areas:

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 group 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 programme routines.

3. You will study the interactions of the classic subjects of information systems and computer networks. This specialization 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.

You are free to choose any of the five subject areas as your specialisation; however, if you intend to study the whole programme exclusively in English, only Information and Communication Systems, Intelligent Technical Systems and IT Security and Reliability currently have a sufficient number of English-taught modules to be selected as your specialisation focus area. Since many recognisable HSE Moscow modules belong to the InfComm subject area, that is the specialisation of choice for most double degree graduates.

