

German-Czech Joint Study Programme leading to the issuance of a double degree
University of Passau and Charles University Prague

M.Sc. Computer Science – Magistr (Mgr.) Computer Science – Software and Data Engineering

Inhalt

Overview of the Joint Study Programme	2
Information on application and enrolment	2
Application and selection process at the University of Passau.....	2
Enrolment.....	2
Practical information about your stay abroad in Prague	3
Scholarships.....	3
Study organisation	3
Specialisations and course selections	3
Minimum award requirements.....	4
Compulsory elective modules	4
Diploma thesis/Master’s thesis	4
Master’s thesis defence and final oral examination	5
Degrees/certificates	5
Regulations and module catalogue.....	5
Local academic coordinators	5
Sample course of study	6

Overview of the Joint Study Programme

The University of Passau offers the opportunity to apply for the English-taught, German-Czech Joint Study Programme (Double Master) in cooperation with the Charles University in Prague as part of the Master's degree programme in Computer Science.

Computer Science – Software and Data Engineering is a two-year Master's joint programme with the curriculum taught jointly at Charles University, Faculty of Mathematics and Physics by the members of its School of Computer Science and at the University of Passau, Faculty of Computer Science and Mathematics.

Graduates of this programme will have acquired knowledge of software engineering, software development, Web engineering, database systems, and Big Data processing, allowing them to work in a wide variety of fields of computer science in international environments. The study programme aims at expertise in the analysis, design and development of complex software solutions and systems focused on Big Data processing. The portfolio of courses covers several technological platforms, from classic, web-based to modern cloud and distributed solutions.

After successfully completing the Joint Study Programme, students receive two Master's degree certificates, which refer to each other. At the University of Passau, students graduate with an M.Sc. in Computer Science. At the Charles University in Prague, they graduate with the Magistr (Mgr.) Computer Science – Software and Data Engineering.

Information on application and enrolment

Application and selection process at the University of Passau

To be accepted into the Joint Study Programme, you must apply in two stages:

1. Apply for the regular M.Sc. Computer Science programme

[Entry requirements, how to apply, application deadlines](#)

2. As a student enrolled for the regular M. Sc. Computer Science programme, apply for the Joint Study Programme

Application deadline: 15th April

Required documents:

Please submit the following documents in English:

- Detailed CV
- Letter of motivation
- Proof of English language proficiency at minimum level B2 GER
- *Studienverlaufsbescheinigung* (confirmation of periods of study)
- Certificate of your first university degree
- Transcript of records (overview of academic achievements in the Master's programme to date)

Please send your **application as a joint PDF-Document** to: joint-study-programme-prague@uni-passau.de

The students in the Joint Study Programme will be selected for participation by the programme coordinators by mid-May. Participants are selected based on their prior academic performance, including the courses studied so far in the Master's programme, as well as their letter of motivation (evaluation criteria and weights: Motivation letter – 20%, academic transcripts – 40%, interview – 40%). Special achievements reflected in the candidate's CV are also taken into consideration.

Up to **five** students can participate per year.

Enrolment

Following your successful selection, the International Office of the University of Passau will nominate you to the partner university. You will then be contacted by the partner university with further instructions on the enrolment procedure.

Participants in the Joint Study Programme with University of Passau as their home university must be enrolled at the University of Passau during the whole duration of the programme. In the second year, they are also enrolled at Charles University in accordance with all applicable rules.

Semester fees

No tuition fees are charged by the respective partner universities within the framework of the Joint Study Programme. Students originally enrolled at the University of Passau pay the [semester fees of the University of Passau](#) for the entire duration of their studies (1st-4th semester). In addition, students are required to pay the semester fees of Charles University in Prague for the duration of the stay there.

Practical information about your stay abroad in Prague

Charles University offers accommodation for incoming students in local halls of residence (usually at the 17. Listopadu dormitory).

You can find a rich body of information about your stay in Prague on the [website of Charles University](#) (e.g. accommodation, orientation events).

Contact: [International Office of Charles University Prague](#)

Scholarships

At the same time as applying for participation in on the Joint Study Programme, candidates can also apply for the [Erasmus+ scholarship programme](#).

Alternatively, the Bavarian-Czech University Agency (BTHA) awards mobility grants [[Mobilitätsbeihilfen](#)] or [scholarships](#) on a small scale for study visits to the Czech Republic. [Political foundations](#) and the [DAAD](#) also offer funding opportunities.

Study organisation

The Joint Study Programme usually begins in the winter semester. Students spend the first and second semesters at their home university. They complete the third and fourth semesters at the partner university.

At the University of Passau, most courses are taught in English. However, some are offered in German and may be selected by students with a good command of the language. At Charles University, lectures are available in both English and Czech. Students who have sufficient proficiency in Czech may choose courses in either language.

Specialisations and course selections

All courses are divided into compulsory courses and compulsory elective courses.

The minimum requirements for ECTS credits are as follows:

Common requirements:

- At least 120 ECTS credits in total.
- At least 45 ECTS credits to advance to the second year.
- At least 30 ECTS credits (excluding the ECTS credits for the Master's thesis) from courses of each partner.

Requirements of the University of Passau:

- At least 40 ECTS credits for ProgSoft courses and at least 30 ECTS credits for courses outside ProgSoft (excluding the ECTS credits for the Diploma thesis),
or
- at least 40 ECTS credits for InfKomm courses and at least 30 ECTS credits for courses outside InfKomm (excluding the ECTS credits for the Diploma thesis).

Requirements of Charles University:

At least 50 ECTS credits for the compulsory elective modules (i.e., for Programming and Software Systems (ProgSoft) or Information and Communication Systems (InfKomm) courses). These are modules where students can choose between different courses.

In order to attain degree certificates from both universities, you must meet all the requirements of both universities.

Minimum award requirements

Compulsory courses

In order to attain degree certificates from both Universities, you must pass the compulsory courses specified by each University.

Compulsory courses at Charles University

Modules with equivalences are marked with an asterisk (*)

Code	Title	ECTS credits	Semester
NTIN090	Introduction to Complexity and Computability (*)	4	winter
NTIN066	Data Structures 1	6	summer
NSZZ023	Diploma Thesis I (*)	6	winter/summer
NSZZ024	Diploma Thesis II (*)	9	winter/summer
NSZZ025	Diploma Thesis III (*)	15	winter/summer
NPRG081	International Research Project	6	winter/ summer

Compulsory modules at the University of Passau

Modules with equivalences are marked with an asterisk (*)

Code	Title	ECTS credits	Semester
450001	Seminar	5	winter/summer
458999	Presentation of the Master's Thesis (*)	3	winter/summer
459900	Master's Thesis in Computer Science (*)	27	winter/summer

Equivalences:

Equivalent courses or course combinations share more than 70% of the content and thus can be applied interchangeably. These courses must be taken either at the home university or at the partner university.

Charles University			Equivalent to	University of Passau		
Code	Title	ECTS credits		Code	Title	ECTS credits
NTIN090	Introduction to Complexity and Computability	4	Module	482211	Computational Complexity Theory	9
NSZZ023	Diploma Thesis I	6	Module combination	459900	Master's Thesis in Computer Science Presentation of the Master's Thesis	27+3
NSZZ024	Diploma Thesis II	9				
NSZZ025	Diploma Thesis III	15				

Compulsory elective modules

Please see the [module catalogue](#) of the degree programme M.Sc. Computer Science for the list of compulsory elective courses offered by the University of Passau. The module catalogue also includes a table indicating which courses are mutually exclusive.

Diploma thesis/Master's thesis

The final thesis of the Joint Study Programme is called "Master's thesis" at the University of Passau and "Diploma thesis" at the Charles University. Both terms are used equivalently. Students choose the thesis topic, preferably at the host university. For students starting at the University in Passau, this is the Charles University. The thesis is written in English under the joint supervision of a supervisor and consultant from both partners.

The thesis must be submitted and defended according to the regulations of the partner universities where the thesis was registered.

Master's thesis defence and final oral examination

The studies are successfully completed by passing a final oral examination. In Prague, this is called the final state examination. You may register for the final state examination after completing at least 90 ECTS credits and successfully submitting your Master's thesis.

The final oral examination is conducted in a hybrid format in front of a committee consisting of members jointly proposed by both universities. The examination will consist of:

- (1) your Master's thesis defence,
- (2) an oral examination.

You must successfully pass both parts to finish their studies within the programme.

The final oral examination will take place immediately after the successful defence of the Master's thesis. It will be implemented in the form of an expert discussion on topics closely related to the presented thesis.

Grading

The quality of the thesis and the correctness of the answers to the committee's questions are graded independently. A comprehensive final grade is awarded on the basis of the two partial grades. The ECTS credits for the Master's thesis will be given after the successful defence of the thesis, prior to the oral examination.

Resits

A student is entitled to one regular attempt and maximum of two retake attempts of the final oral examination.

Degrees/certificates

You can participate in the graduation ceremonies of both partner universities and will receive two Master's degree certificates, which mutually refer to each other:

- University of Passau: **M.Sc. Computer Science**
- Charles University: **Magistr (Mgr.) Computer Science – Software and Data Engineering**

Regulations and module catalogue

- [General study and examination regulation \(AStuPO\)](#) for the faculty's Master's programmes
- [Subject-specific study and examination regulation \(FStuPO\)](#)
- [Module catalogue](#)

Local academic coordinators

University of Passau

Professor Stefanie Scherzinger
Faculty of Computer Science and Mathematics
Innstraße 43, 94032 Passau
Stefanie.Scherzinger@uni-passau.de

Charles University

Doc. RNDr. Irena Holubová, Ph.D.a
Faculty of Mathematics and Physics
Malostranské nám. 25, 118 00 Praha 1
Irena.Holubova@matfyz.cuni.cz

Sample course of study

The complete list of eligible courses, including equivalence tables, can be found in the [module catalogue](#). The following table is an example.

Let us consider a student who wants to specialise in software engineering, which is covered mainly by modules in the the **ProgSoft** group. If the student starts their studies at the University of Passau, their course of study could be as follows:

University of Passau: 1st year – winter semester

Code	Title	ECTS credits	Semester	Module Group
450001	Seminar	5	winter/ summer	-
455420	Reproducibility Engineering	6	winter	InfKomm
453010	Research Seminar for the Focus “Programming Methods and Software Systems“	5	winter/ summer	ProgSoft
455378	Search-Based Software Engineering	6	winter	ProgSoft
455418	Reverse and Reengineering	6	winter	ProgSoft
	TOTAL	28		

University of Passau: 1st year – summer semester

Code	Title	ECTS credits	Semester	Module Group
451006	Safety and Security of Critical Infrastructures	6	summer	InfKomm
405236	Methodological Foundations of Distributed Systems	6	summer	InfKomm
405031	Multimedia Databases	7	summer	InfKomm
455368	Software Analysis	6	summer	ProgSoft
455424	Engineering Dependable Software	6	summer	ProgSoft
	TOTAL	31		

Charles University: 2nd year – winter semester

Code	Title	ECTS credits	Term	Module Group
NTIN090	Introduction to Complexity and Computability	4	winter	-
NPRG081	International Research Project	6	winter/ summer	-
NSZZ023	Diploma Thesis I	6	winter/ summer	-
NSWI166	Introduction to recommend. systems and user preferences	4	winter	InfKomm
NSWI130	Software System Architectures	5	winter	ProgSoft
NTIN043	Formal Foundations of Software Engineering	5	winter	ProgSoft
	TOTAL	30		

Charles University: 2nd year – summer semester

Code	Title	ECTS credits	Semester	Module Group
NTIN066	Data Structures 1	6	summer	-
NSZZ024	Diploma Thesis II	9	winter/ summer	-
NSZZ025	Diploma Thesis III	15	winter/ summer	-
NSWI126	Advanced Tools for SW Development. and Monitoring	2	summer	ProgSoft
	TOTAL	32		