



# International Student Handbook

Faculty of Computer Science  
and Mathematics

*Last revised in April 2024*

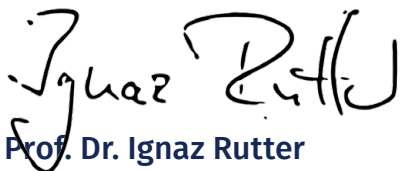


## Dear International Students,

On behalf of the Faculty of Computer Science and Mathematics, I have the honour of welcoming you to the University of Passau! We are delighted that you have chosen to apply for one of our master's programmes in Computer Science, Artificial Intelligence Engineering or Computational Mathematics, and I wish to personally congratulate you on your highly prestigious offer to study here. The entire Faculty, in particular our professors and lecturers, will strive to conduct first-class teaching and research enabling you to pursue a successful career in one of our domains which have never been as important as they are today. Please do take advantage of this opportunity!

In order to succeed in your studies, active participation will be essential. The best way to deepen your understanding in the fields of computer science and mathematics will be through proactive scrutiny rather than passive consumption of contents. You should attend your lectures and seminars, but you should especially complete your exercises independently in order to experience utmost progress. That way, your degree programme will be fun and yield the best results preparing you for stellar opportunities on the job market, be it in academia or the private sector.

As your Dean, I can proudly say that you will be in the best of hands with our team of International Student Assistants. We all look forward to welcoming you to our beautiful University and wish you a marvellous start in Passau!



**Prof. Dr. Ignaz Rutter**

*Dean of the Faculty of Computer Science and Mathematics*

## Our Student Assistants

This Handbook was compiled by the International Student Assistants of the Faculty of Computer Science and Mathematics (in short: FIM). After reading it, you will be well equipped to manage your stay at our University! If you have any questions or problems regarding your studies, the master's programme in particular, or your life in Passau in general, please do not hesitate to contact us:

✉ [master-help@fim.uni-passau.de](mailto:master-help@fim.uni-passau.de)

Welcome to the University of Passau!



Jule & Ashish  
International Student Assistants

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# Our University

The campus of the University of Passau stretches along the river Inn, only a very short distance from the city centre. Around 12,000 students are enrolled in the degree programmes offered by our five faculties: The Faculty of Law, the Faculty of Business, Economics and Information Systems, the Faculty of Social and Educational Sciences, the Faculty of Humanities and Cultural Studies, and - last, but not least - the Faculty of Computer Science and Mathematics.

Since the University prides itself on its interdisciplinary teaching approach, you might also get to enjoy classes from a different faculty than your own!

Apart from the degree courses offered by the faculties, you will also have the opportunity to participate in free language classes at the Language Centre, recreational sports classes at the Sports Centre, and soft skill seminars at the Centre for Careers and Competencies (ZKK). The refectory (*Mensa*) and cafeterias keep you supplied with food, coffee and snacks and sometimes even serve as a stage for various cultural activities organised by student groups.

**If you are not yet in Passau, why not explore the university grounds in a virtual tour?**

➤ <https://www.virtualtour.uni-passau.de/en/>

## Advice on Organising Your Studies

As you will soon notice, students in Germany are expected to be very independent and self-sufficient in their studies. Applied to your situation, this means: There are special orientation programmes at the beginning of your studies to help you settle in and acclimatise. Beyond that, you are responsible for your own study progress and for solving your own problems. Of course, there are

several offices in our administration to help you with specific issues and answer any questions you might have. However, please do not expect them to actively seek you out and offer help. **YOU need to take the initiative and ask for help or information yourself!** Please check if you need to make an appointment beforehand for in-person visits.

## Who is Who?



**Prof. Dr. Ulrich Bartosch**  
*President*



**Dr. Achim Dilling**  
*Head of Administration*

# Our Faculty

Out of the five faculties at our University, the Faculty of Computer Science and Mathematics (FIM) is the smallest, and the faculty with the largest percentage of international students. Accordingly, the master's programmes offered are taught primarily (*M.Sc. Computer Science*) or completely in English (*M.Sc. AI Engineering,*

*M.Sc. Computational Mathematics*). The Faculty of Computer Science and Mathematics has an excellent reputation 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.



**Prof. Dr. Rutter**  
*Dean*



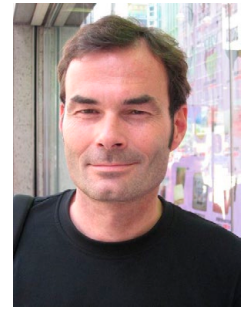
**Prof. Dr. Fraser**  
*Vice Dean*



**Prof. Dr. Zumbrägel**  
*Dean of Studies*



**Dr. Offinger**  
*Faculty Manager*



**Prof. Dr. Müller-Gronbach**  
*Chairman, Board of Examiners*



**Wolfgang Mages**  
*International Coordinator*

You have probably already been in contact with our International Coordinator Wolfgang. He supervises all international affairs at our Faculty. You should e-mail him if you

- encounter difficulties obtaining your entry visa
- are forced to defer your study offer as a result
- require a deadline extension for your enrolment
- face any problems with the local authorities.

Wolfgang will also try to assist you with all other kinds of unique situations you may find yourself in, so please do not hesitate to get in touch with him!

✉ [wolfgang.mages@uni-passau.de](mailto:wolfgang.mages@uni-passau.de)

**FS info**  
Fachschaft für Informatik und Mathematik

Our Faculty's FSinfo student committee represents your interests in various governing boards across the University. They also support you with problems or questions you might have concerning your studies, regularly organise social events and keep a collection of previous exams. Do not hesitate to reach out to them!

🔗 [fsinfo.uni-passau.de](https://fsinfo.uni-passau.de)

✉ General: [fsinfo@fim.uni-passau.de](mailto:fsinfo@fim.uni-passau.de)  
Exams: [exams@fsinfo.fim.uni-passau.de](mailto:exams@fsinfo.fim.uni-passau.de)

# University Services

*Check beforehand on corresponding websites whether you need to make an appointment for in-person visits at a specific office. Otherwise you might find yourself in front of closed doors!*

## iStudi Coach

*istudicoach@uni-passau.de*

For information and questions about internships, student jobs and/or work in or around Passau during or after graduation, please contact the  [iStudi Coach](#) Luise Haack. She can help you find internships as well as entry-level positions.

## International Office

*international@uni-passau.de*

 [Website](#)

- Financing your studies
- International Orientation Weeks
- Student accommodation

Administration Building  
Innstr. 41

## Academic Advice Service

*advice@uni-passau.de*

 [Website](#)

- Information on degree programmes
- Studying with disabilities or illnesses
- Advice for students with psychological problems/illnesses

Administration Building  
First Floor  
Innstr. 41  
+49 851 509 1154

## Student Registration Office

*registry@uni-passau.de*

 [Website](#)

- Enrolment and re-enrolment
- German language requirements
- Student fees
- Health insurance

Administration Building  
Ground Floor  
Innstr. 41  
+49 851 509 ext. 1127 or 1128

## Examinations Office

M.Sc. Computational Mathematics:

 [Website](#)

*Ms. Lang* [Contact Form](#)

- Exam registration
- Transcripts of records
- Creditability of modules

M. Sc. Computer Science, AI Engineering

*Ms. Steiger* [Contact Form](#)

## Family Services

*familienservice@uni-passau.de*

 [Website](#)

- Support for families
- Maternity protection
- Child care

Law Faculty Building (Juridicum)  
Room JUR 012  
Innstr. 39  
+49 851 509 1026

## Student Services Association

*Sandra Rüdiger-Müller*

 [Website](#)

+49 851 509-1922  
*info-punkt-pa@stwno.de*

- CampusCard
- Public dormitories
- Psychological counseling

Room 163  
Innstr. 29

# Enrolment

You have received an offer for your desired degree programme in the Campus Portal? Great! Now you need to complete the following steps in order to enrol at our University:

## 1. Online Enrolment

By enrolling online, you indicate that you intend to accept the offer. Specific information about the process has been provided together with your offer letter.

Please note: If you are unable to join the programme for the semester in which you were originally offered a place (see [👉 Admission Deferral](#)), there is no need to complete the online enrolment procedure. You may do so prior to the semester in which you know you will be able to commence your studies.

## 2. Enrolment with the Student Registration Office

To complete your enrolment, you need to present the original documents you provided during the application stage (or legitimately certified copies thereof) unless you have done so already during your application. Furthermore, you must submit all supplementary documents specified in the explanatory notes which came with your offer letter. Only then will you be properly enrolled at the University of Passau. This may be done until the last business day before the start of lectures, at the latest. Deadline extensions require substantial proof of a legitimate reason (such as delayed issuance of your entry visa) and are possible in rare justifiable cases only. They may be requested by providing relevant evidence to the Student Registration Office and are ultimately possible until the last day of the third week of lectures. No exceptions will be made! Once you are matriculated, you will receive your user name and password for the university computer network. Then you are officially enrolled.

For questions and problems concerning the enrolment procedure, please contact the [👉 Student Registration Office](#):

✉ [registry@uni-passau.de](mailto:registry@uni-passau.de)

## Important: Before You Enrol

During your first year of study, you have to acquire a minimum of 30 ECTS points. In our experience, students who arrive late and miss out on essential information events offered at the beginning of the semester (including during Orientation Weeks) struggle with their first-semester examinations and often acquire few or even no ECTS points. Therefore, you should really try to be here well before the start of lectures. If you cannot, deferring to the subsequent semester might be the better option for you in order to not lose your chance to continue your studies after the second semester due to the aforementioned 30-ECTS threshold. Arriving late is not a legitimate reason to avoid exmatriculation!

Complete the enrolment procedure only if you are sure that you can actually start your studies properly, which requires being in Passau. Once you are officially enrolled, the semester will count as your first semester on the programme.

## Admission Deferral

The Faculty of Computer Science and Mathematics is aware of visa appointment problems in some German diplomatic missions abroad. All students who are admitted to one of our programmes but are unable to arrive in Passau on time for the semester due to visa issues may be granted permission from the Dean's Office to defer their admission to the subsequent semester if they can present evidence that they unsuccessfully attempted to secure an entry visa on time. If this applies to you, please e-mail your [👉 International Coordinator](#) at

✉ [wolfgang.mages@uni-passau.de](mailto:wolfgang.mages@uni-passau.de)

explaining your situation. He will guide you through the process and notify the Student Registration Office accordingly.

# Preparing For Your Stay



## Checklist: Preparing For Your Stay

### Before your arrival in Passau

- Acquire health insurance
- Enrol at the University of Passau
- Find accommodation

### After your arrival in Passau

- Open a bank account
- Register with the public authorities and get your residence permit
- Find accommodation (if you weren't able to find one before your arrival)



## Visa and Residence Permit

You will find all necessary information about entry regulations on the website of the [Federal Foreign Office](#) (*Auswärtiges Amt*). Please note that many students have to apply for an entry visa at a German diplomatic mission (Embassy or Consulate General) in their country, which can take several months to be processed.

After your arrival, you will have to acquire a residence permit ('Aufenthaltstitel'), allowing you to stay in Germany for an extended period of time (usually at least 12 months). During Orientation Weeks at the University (see [Orientation Weeks](#)), a team of Student Assistants will help you complete the required documents. In order to apply for a residence permit, you need to contact the Foreigners' Office (*Ausländeramt*) in Passau.

Rathausplatz 1  
94032 Passau  
Phone: +49 851 396512

✉ [auslaenderamt@passau.de](mailto:auslaenderamt@passau.de)

➤ [More information on residence permits and the German Immigration Act](#)



## Health Insurance

Germany has a highly advanced healthcare system. As a university student, you are not only obligated to have health insurance coverage, but the insurance policy must also meet a number of basic German standards. You must provide a health insurance certificate when you enrol at the University of Passau and also when you apply for your residence permit.

If you are an EU/EEA citizen, your foreign insurance is valid in Germany. You will, however, need a European Health Insurance Card (EHIC) and get a certificate stating that you are exempt from the German health insurance requirement (i.e. a certificate of exemption). To request this certificate, contact one of the health insurance companies in Passau (see the University link below for their addresses).

Non-EU citizens should check whether their foreign insurance policy is valid in Germany. To do so, please go to [the University's info website](#).

If you want to acquire a German public health insurance policy, there are special offers at lower rates for students up to the age of 30 years. Students aged 31 or older often choose to opt for a private insurance company instead. Additional information can be found on the University's info website on that topic.

Student health insurance coverage starts on the first day of the semester, i.e. on October 1st (winter semester) or April 1st (summer semester). Please make sure that you have private insurance (e.g. through short-term traveller's insurance) during the time between your arrival in Germany and the beginning of the semester.

## Travelling to Passau

Please note that the University is not responsible for your journey to Passau. You have to make your travel arrangements independently.

Passau does not have an airport. The closest airport to Passau is Munich Airport (MUC). Some airlines might also fly to Nuremberg Airport (NUE). The biggest airport in Germany is Frankfurt am Main Airport (FRA). From those airports, Passau can be reached best by train. Train schedules and ticket prices can be found on the [website](#) of the Deutsche Bahn national railway company.

### Customs Regulations

Upon entering Germany, there are certain regulations you have to consider regarding restrictions and limitations on certain goods, especially if you come from a non-EU member state.

You will find all information on import regulations on the official [customs website](#).

### From Munich Airport (MUC)

Take bus line 635 to *Freising Bahnhof* and from there take a train to *Passau Hauptbahnhof*. The trip takes approximately two hours. For the current bus schedule, please visit the [website](#) of MVV München.

### From Nuremberg Airport (NUE)

Take the U2 subway towards *Nürnberg Röthenbach* and exit at *Nürnberg Hauptbahnhof/Hbf*. From there you will be able to take a long-distance train to Passau. There are many trains with different destinations that stop at *Passau Hauptbahnhof*.

### From Frankfurt am Main Airport (FRA)

Take the train from *Frankfurt am Main Flughafen Fernbahnhof* to *Frankfurt Hauptbahnhof/Hbf*. There are different trains with various final destinations that go to or via Passau.

# Accommodation

Finding accommodation in Passau can be challenging, especially if you are searching from abroad and do not speak German well or at all. It is very important that you start looking early, as most places are occupied well before the semester starts. We recommend that you apply for all dormitories and try searching for a private flat or a shared apartment at the same time.

At German universities, students are responsible for finding their own accommodation. Our Student Assistants are happy to help with fine-tuning applications or mediating between you and a German landlord, but the initiative to find a suitable space has to come from you.

## Dormitories

Ideally, you will receive a room in one of the dormitories and sign the contract before your arrival. However, rooms in dormitories are in very high demand, which makes it difficult to receive an offer. Nevertheless, we suggest you apply for a room in all dormitories anyway to maximise your chances.

### Public Dormitories

The Studentenwerk operates multiple public student dormitories which are fully furnished and affordable but also extremely sought-after. Getting a room in one of those dormitories is very difficult, especially for international master's students, because undergraduate and exchange students are given priority. Only German students can apply for a room directly; European and other international students must apply through the International Office. Even though your chances are small, you should still apply for a room as there are always some last-minute cancellations from which you might benefit.

To apply for a room in a public dormitory, please follow these [👉 instructions](#).

*The application deadlines are:*

December 15th for the summer semester

June 15th for the winter semester

Even if the regular application deadline for the dormitories may have ended before you have received your acceptance letter from the University, you can still apply in order to be considered or waitlisted. There is still a chance for you to receive a room if somebody else cancels.

Please contact Ms. Winterkorn at the International Office for advice and further information on the dormitories. She manages all of the University's dormitory rooms, and she might also have some other offers available on the private housing market. You can find her contact details below:

✉ [alexandra.winterkorn@uni-passau.de](mailto:alexandra.winterkorn@uni-passau.de)

Raum VW 103

Innstr. 41

Phone: +49 851 509-1161

## Private Dormitories

There are numerous privately run dormitories in the city which are a little bit easier to get into. The rooms in these dormitories are provided by private landlords or real estate agents. You can find a list of private dormitories below. Each of them has their own application form/procedure. Please beware that the Kloster Hamberg is located across the border in Austria.

👉 [List of private dormitories](#)

## Private Housing Market

Look for an apartment or shared flat on the free housing market as early and relentlessly as possible. Sharing a flat is the most common living arrangement among university students. One-person apartments are rare and usually more expensive. Therefore, you might want to focus on finding a room in a shared flat. That way, getting to know locals and other students is much easier, too.

Although Passau is an “*Universitätsstadt*” and home to many people from all over the world, there is still a fair share of people who do not (dare to) speak much English. Hence, please try to contact landlords/landladies or real estate agents in German. To do so, most online translation services produce sufficiently satisfactory results nowadays. Please be as polite as possible and check that there are no mistakes. If you require help drafting a proper letter, you may contact us via e-mail at:

✉ [master-help@fm.uni-passau.de](mailto:master-help@fm.uni-passau.de)

➔ [Websites with accommodation offers](#)



# Financing Your Studies

➤ [Comprehensive information collected by the International Office](#)

## Tuition Fees

There are no tuition fees at most public universities in Bavaria. Nevertheless, you are required to pay the semester fee of EUR 104.-. This includes EUR 72.- for the student services association (*Studentenwerk*) and EUR 32.- for the semester bus pass. The latter allows you to use the city's buses for the duration of one semester. It is valid only within the city of Passau.

## Living Expenses

For an estimate of living expenses, see the ➤ [Costs and Funding](#) section on the University website.

## Student Employment

In order to support yourself financially during your studies, you can take the most common route and work part-time. However, there are some things you have to consider:

EU/EEA citizens have complete access to the German employment market. Lawful employment for students from non-EU member states is limited to 120 full days per year (or 240 half days per year). If you want to work more than that, you have to get a work permit from the Foreigners' Office (*Ausländeramt*) in Passau. The ➤ [iStudi Coach](#) will help you with questions regarding those regulations.

## Scholarships

The University of Passau's International Office offers scholarships for international students each year. You may be eligible if you have been enrolled in a degree programme at the University of Passau for at least two semesters.

The application deadlines are:

For the summer semester: February 28th

For the winter semester: July 31st

You can also apply for a *Deutschlandstipendium*, a scholarship which supports students with EUR 300.00 per month. It is awarded once a year in the winter semester. To be eligible, you have to be enrolled at the University of Passau as a regular degree-seeking student (which all of our master's students are). Criteria for selection are personal accomplishments, commitment and grades.

More information about the application procedure can be found on ➤ [this website](#).

Furthermore, the German Academic Exchange Service (*Deutscher Akademischer Austauschdienst, DAAD*) runs a scholarship database for international students. Follow ➤ [this link](#) and select your status, country of origin and field of study to get information on potential scholarships for you.

Depending on the scholarship, there may be additional qualifications that you have to fulfil in order to apply.

# Master's Programmes

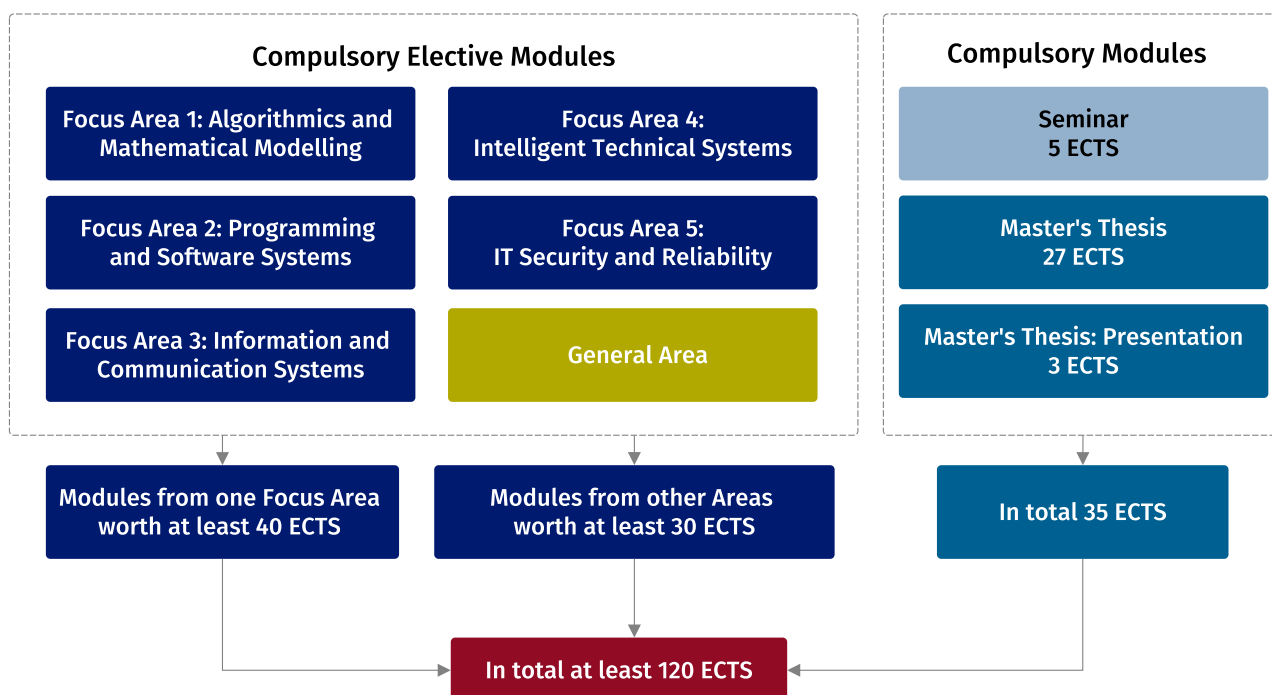


# M.Sc. Computer Science

The standard duration of study for the *M.Sc. Computer Science* is four semesters, during which you should gather at least 120 credit points. You will be able to customise your curriculum according to your personal

interests. Keep in mind that you need to accumulate at least 20 ECTS by the end of your first or 30 ECTS points by the end of your second semester. Otherwise you will face exmatriculation.

## Degree Structure



### Overall, the 120 credit points must include:

- 30 credit points for a master's thesis, supervised by a professor (typically in your area of specialisation)
- at least 40 credit points from one specialisation module group
- at least 30 credit points for modules that are not from your specialisation
- the completion of one compulsory seminar worth 5 credit points
- 'freely selectable' modules: the remaining 15 credit points may stem from any of the modules taught as part of the master's programme regardless of specialisation or subject area.

You can select modules from the Focus Areas 1-5 or the General Area. The General Area contains modules that are part of the master's curriculum but do not belong to any of the focus areas detailed on the next page.

To see which courses are available, you can check the [module catalogue](#). Once you have your student login credentials, you can also look up all offered classes in the *Master Informatik* course directory on Stud.IP.

## Choosing a Focus Area

You can customise your curriculum according to your personal interests. However, you will choose one area of specialisation towards the end of your studies. You only need to declare your area of specialisation when you request your master's degree certificate. Until then, you have to make sure that you accumulate

at least 40 ECTS points in one area and that you fulfill the other degree requirements (cf. above). To find out whether an offered module can be counted towards your specialisation area, please consult the [👉 module catalogue](#).

## Focus Areas

### Area 1: AlgMath

#### *Algorithmics and Mathematical Modelling*

Courses in this subject area convey knowledge about deterministic and stochastic algorithms, their implementation, evaluation and optimisation. You will gain advanced knowledge in computer-based mathematical methods – particularly in the areas of algorithmic algebra and computational stochastics – as well as developing an in-depth expertise in mathematical modelling and complexity analysis of discrete and continuous problems.

### Area 2: ProgSoft

#### *Programming and Software Systems*

Imparting modern methods for constructing large-scale software systems as well as creating and using software authoring, analysis and optimisation tools, this module group will consolidate your knowledge of the various programming paradigms and languages, the structure of language processing systems, and teach you how to deal with parallelism in programme procedures.

### Area 3: InfComm

#### *Information and Communication Systems*

Courses in this subject area will further your understanding of interactions between information systems and computer networks – being two classic areas in computer science. This module group represents an answer to the problem of increasing volume and complexity of worldwide information distribution and networks, as well as to the growing requirements on quality and performance of computer communication. Additionally, you will learn how to transfer database results to multimedia data.

**Area 4: ITS*****Intelligent Technical Systems***

This module group will familiarise you with digital image and signal processing, embedded systems and applications of intelligent technical systems in industrial and assistance systems, which are necessary for production automation and process control, traffic control, medical and building technology. You will learn how to develop complex applications using computer systems and deal with topics such as image reconstruction, camera calibration, sensor data fusion and optical measurement technology.

**Area 5: ITSecRel*****IT Security and Reliability***

Courses from this subject area deal with the security and reliability of IT systems, e.g. hardware circuits, communication protocols as well as complex networked application systems. To ensure the secure operation of these systems, you will learn about design methodology, secure architectures and the technical implementation of the underlying components.

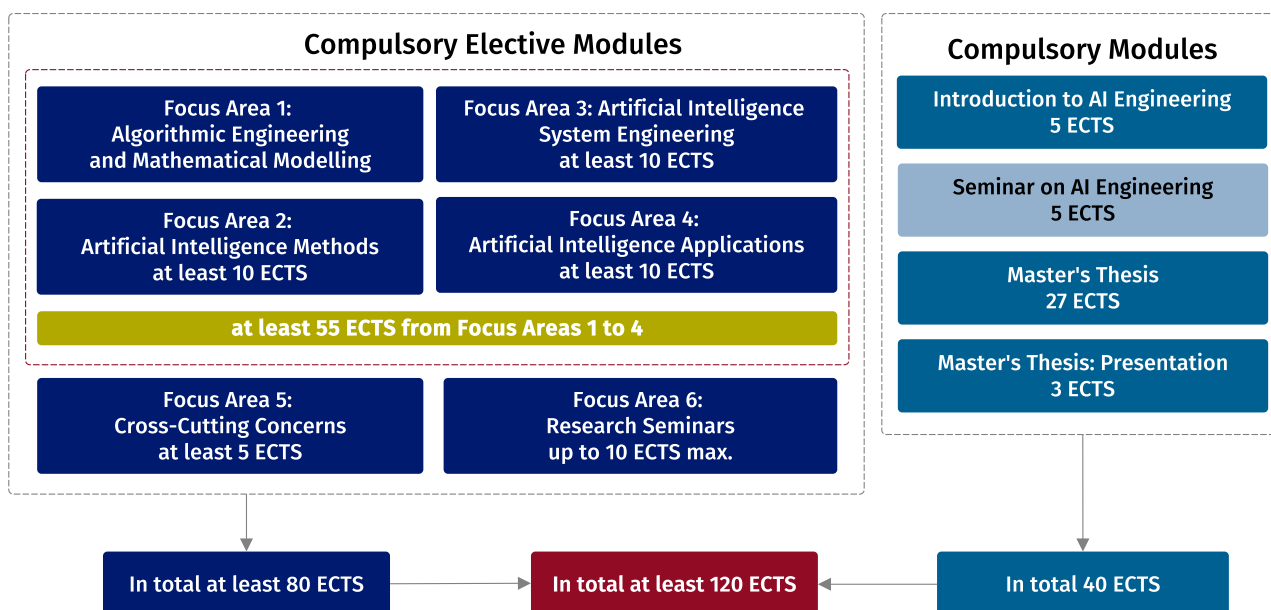


# M.Sc. AI Engineering

The standard duration of study for the *M.Sc. Artificial Intelligence Engineering* is four semesters, during which you should gather at least 120 credit points. You will be able to customise your curriculum according to your

personal interests. Keep in mind that you need to accumulate at least 20 ECTS by the end of your first or 30 ECTS points by the end of your second semester. Otherwise you will face exmatriculation.

## Degree Structure



### Overall, the 120 credit points must include:

- 30 credit points for a master's thesis, supervised by a professor
- the mandatory lecture "Introduction to AI Engineering" worth 5 credit points (within the first 2 semesters)
- the completion of one compulsory seminar worth 5 credit points
- at least 80 credit points from Compulsory Elective Modules (*cf. Degree Structure above*).

To see which courses are available, you can check the [module catalogue](#). Once you have your student login credentials, you can also look up all offered classes in the *Master AI Engineering* course directory on Stud.IP.

## Focus Areas

### Area 1: AEMM

#### Algorithmic Engineering and Mathematical Modelling

Courses in this area focus on the construction of deterministic and stochastic algorithms, their implementation, evaluation and optimisation as well as the modelling and complexity analysis of discrete and continuous problems using mathematical methods. In addition, you will acquire fundamental knowledge of mathematical logic, stochastics, functional analysis and discrete mathematics to enable a deeper algorithmic mathematical understanding of AI-based systems.

**Area 2: AIM****Artificial  
Intelligence  
Methods**

This area encompasses methods and algorithms of symbolic and sub-symbolic artificial intelligence and machine learning (e.g. reinforcement learning, knowledge representation and deduction systems). Furthermore, you will get to know the underlying theories of learning systems and the application of algorithmic and mathematical principles for the realisation of artificial intelligence.

**Area 3: AISE****Artificial  
Intelligence  
Systems Engineering**

Courses in this area will provide you with methods and structured process models for the development of AI-based systems. In particular, these include testing and evaluation strategies (e.g. generative adversarial testing or simulation), data and knowledge modelling methods, methods and systems for operationalising AI-based systems and the evaluation of properties such as security, traceability, reliability, explicability and transparency.

**Area 4: AIA****Artificial  
Intelligence  
Applications**

You will gain insight into different application areas and possibilities of artificial intelligence, such as speech, text and media analysis, business information systems or energy informatics. The specific characteristics of the application domains and their influence on the selection of AI methods and the development of AI-based systems are also covered.

**Area 5: CCC****Cross-Cutting  
Concerns**

You will learn about the legal, ethical, social and economic considerations involved in using AI-based systems and reflect on the societal impact of AI. Language courses and writing workshops, soft-skills seminars and practical courses will complement your academic studies and prepare you for your professional life.

**Area 6: RS****Research Seminars**

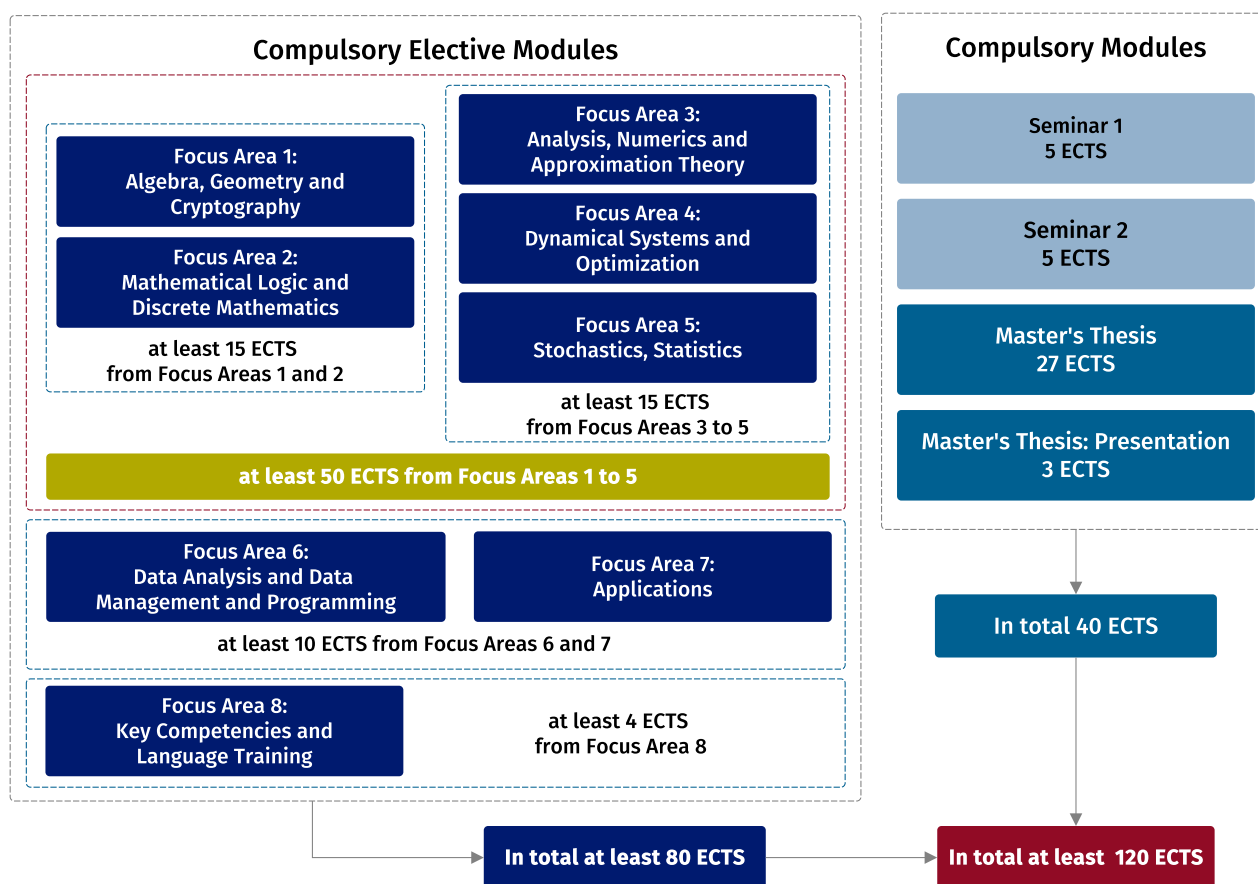
You will learn to familiarise yourself independently with the current state of research in the AI Engineering field, collate this information and deliver oral presentations. You will acquire in-depth knowledge of research work in the field of artificial intelligence and thus be prepared for a future career as a researcher.

# M.Sc. Computational Mathematics

The standard duration of study for the *M.Sc. Computational Mathematics* is four semesters, during which you should accumulate a minimum of 120 credit points. You will be able to customise your curriculum according to

your personal interests. Keep in mind that you need to accumulate at least 20 ECTS by the end of your first or 30 ECTS points by the end of your second semester. Otherwise you will face exmatriculation.

## Degree Structure



### Overall, the 120 credit points must include:

- 30 credit points for a master's thesis, supervised by a professor
- the completion of two compulsory seminars worth 5 credit points each
- at least 64 credit points from Compulsory Elective Modules (cf. Degree Structure above)
- 'freely selectable' modules: the remaining 16 credit points may stem from any modules taught as part of the master's programme.

To see which classes are available, you can check out the [module catalogue](#). Once you have your student login credentials, you can also look up all offered classes in the *Master Computational Mathematics* course directory on Stud.IP.

## Focus Areas

### **Area 1: AGC**

#### *Algebra, Geometry and Cryptography*

This module group imparts advanced results in the areas of algebra and geometry, which constitute the foundation for algorithmic calculations – particularly in cryptography, but also in many other mathematical areas.

### **Area 2: MLDM**

#### *Mathematical Logic and Discrete Mathematics*

The theoretical possibilities and limitations of algorithm-based solutions are the subjects of this module group.

### **Area 3: ANAT**

#### *Analysis, Numerics and Approximation Theory*

Methods from the fields of mathematical analysis, applied harmonic analysis and approximation theory for modelling and approximating continuous and discrete data and systems as well as efficient numerical implementation and evaluation of these methods are the scope of this module group.

### **Area 4: DSO**

#### *Dynamical Systems and Optimization*

Dynamical systems theory deals with the description of change over time. This module group is concerned with methods used for the modelling, analysis, optimisation and design of dynamical systems, as well as the numerical implementation of such techniques.

### **Area 5: SS**

#### *Stochastics, Statistics*

This module group deals with methods for modelling and analysing complex random phenomena as well as the construction, analysis and optimisation of stochastic algorithms and techniques used in statistical data analysis.

### **Area 6: DADMP**

#### *Data Analysis and Data Management and Programming*

The core methods used in computer science to analyse data of heterogeneous modalities (e.g. multimedia data, social networks and sensor data) and for the realisation of data analysis systems are the topics in this module.

**Area 7: A**  
*Applications*

In this module group, you will learn to use the mathematical methods taught in module groups 1-6 in real-world applications such as Marketing, Predictive Analytics and Computational Finance.

**Area 8: KCLT**  
*Key Competencies  
and Language  
Training*

Choosing seminars from this module will help you develop your non-subject-specific skills such as public speaking, academic writing and other soft skills; you may also complete an internship with academic supervision. This serves to complement your technical expertise gained during your studies and helps you prepare for your professional life after university.

# Managing Your Studies



## *Checklist: Your First Semester*



Participate in the Orientation Weeks, especially the events offered by our Faculty!



Request and collect your CampusCard



Create your semester schedule and sign up for your classes on [Stud.IP](#)



Enrol in a German language course



Request your FIM login credentials



## Orientation Weeks for International Students

In order to settle in well at the University, taking part in the Orientation Weeks (*O-Wochen*) for International Students is essential!

The programme includes plenty of informative events as well as guided tours of the campus, the library and the city of Passau. You will also have lots of opportunities to ask questions. Furthermore, you will receive an introduction to the *Sports Centre*, the study management platform *Stud.IP*, and so on. *O-Wochen* are also a great opportunity to make new friends. Make sure to register for the Orientation Weeks in time!

For more information please visit the [➤ Orientation Weeks' website](#) and check out the [➤ detailed timetable](#).

Please note that the pages are updated with information on the new semester only a few weeks before the semester starts.



## Your Student ID Card „CampusCard“



Your student ID card is proof of your enrolment. Have it with you whenever you are at the University because it will allow you to:

- print or make photocopies
- pay for food at the *Mensa*
- grab a snack at the University cafeterias
- borrow books and other items from the library
- use the sports facilities
- access the Faculty building on Sundays and during night-time for extra-long study sessions

Furthermore, it will allow you to use the buses in Passau for free or benefit from some special discounts at stores, cinemas or restaurants.

To apply for your student ID card, log into *Stud.IP* and click on 'CampusCard'. Fill out the form and add a passport-sized picture of yourself. You will be notified when your CampusCard is ready for pick-up.

Once you have received your card, all you have to do is go to one of the local validation machines to validate it. Now your CampusCard is ready for use. Sounds complicated? Don't worry – we will guide you through the process during Orientation Weeks.

If you lose or accidentally damage your CampusCard, you can block it in the card portal in *Stud.IP*. When you apply for a replacement card, your old CampusCard is automatically blocked.

## Student IT Services

### Stud.IP

➤ Stud.IP is a study management platform that you will use to enrol in lectures and most importantly to download all relevant materials and information for your classes. Furthermore, you can use Stud.IP to communicate with fellow students, professors and staff.

Everything concerning your classes can be found and managed here except for signing up for your exams, which is done via the Campusportal (see below). You can use Stud.IP on any browser or smart phone by simply logging in to the website <https://studip.uni-passau.de/studip> using your username and the password that you received at matriculation.

Registering for a course in Stud.IP is primarily a way for you to access documents and information from the lecturer or fellow students. Even though attendance is not mandatory in most cases, we strongly advise you to enrol and participate in the lecture and corresponding exercise. Some seminars or lectures do have a restricted number of participants. For those, you must enrol in order to attend. Attending those classes might also be compulsory, particularly if they are practical or research-intensive in nature.

Try to check the available lectures and seminars for upcoming semesters as early as possible to ensure you get a place in your desired courses. You will learn how to use Stud.IP during the *Orientation Weeks*.

### Campusportal

The ➤ Campusportal is another platform besides Stud.IP helping you throughout your studies. The platform allows you to sign up for examinations and check your grades. It also allows you to change your address in order to inform the University that you have moved. You can also download your enrolment certificate and other credentials there.

You can access the *Campusportal* using the URL <https://campus.uni-passau.de/>

### University E-Mail Address

Your student e-mail address has the format `[username]@ads.uni-passau.de`. You can check your inbox at [email.uni-passau.de](mailto:email.uni-passau.de).

We STRONGLY recommend that you activate the forwarding mechanism to your regular e-mail address. Otherwise you might miss important information! Please also whitelist any e-mails coming from `@uni-passau.de` or `@ads.uni-passau.de` in your e-mail client.

### Software Licences for Students

Our University offers the Microsoft Office 365 and Sophos Antivirus software to all students free of charge. More information (in German only) is provided by the ➤ IT purchasing department.

Some software (Visual Paradigm, JetBrains IntelliJ Idea...) is licensed only for members and students of our Faculty. More information is available on this ➤ website (German only).

### FIM IT Services

In order to use our Faculty-internal ➤ IT services properly, you first need to set up your FIM account. The FIM tech support offers a detailed set of instructions on their ➤ website.

With this FIM account, you can then use the computer labs of our Faculty and various online services like Git ([git.fim.uni-passau.de](https://git.fim.uni-passau.de)) or Mattermost ([mattermost.fim.uni-passau.de](https://mattermost.fim.uni-passau.de)). The IT Services also provide you with computing resources and VMs for project work (e.g. your master's thesis).



## Course Formats

The most common course formats at our Faculty are **lectures** accompanied by **exercises** which deepen the lecture content and offer a perspective on practical application.

**Seminars** are structured differently and aim at teaching you academic writing and creating an understanding of research methods.

**Labs** are usually more practical than other courses; there you might be able to work on individual projects.

## SWS, V and Ü

The course descriptions in Stud.IP usually refer to **SWS (Semesterwochenstunden)** to inform about the amount of hours taught per week. These hours do not include the time needed for self-study and homework. SWS are most commonly split into V + Ü (e.g. 2V+2Ü). **V** is an abbreviation of „Lecture“ (**Vorlesung**) and **Ü** stands for „Exercise“ (**Übung**). In the 2V+2Ü example above, you would have to attend two hours of lecture and two hours of exercise every week.

## Attendance

Unless otherwise specified, attendance is not monitored. However, we strongly recommend that you do attend all of your classes! The pace of lectures picks up fast, and it is very easy to fall behind. If there are multiple lecture slots per week, you should attend all of them. If multiple exercise slots are offered, you can choose the one that best suits your class schedule.

## Seminars

At the end of each semester, our Faculty's professors present topics of the next semester's seminars. Sometimes the seminar sessions start early (before the official lecture period starts). Please note that you **should not take a seminar in the first or second semester** of your studies. Generally, it makes sense to attend a seminar in the second half of your studies (i.e. the semester just before you start writing your thesis) since it can be seen as „practice“ for your master's thesis. Participant

numbers are limited, so don't wait too long and inform yourself in due time! The presentation of the seminars for the next semester is an event that can be found on Stud.IP with the number 6030.

## Study and Examination Regulations

A legally binding description of your study programme is detailed in the [👉 \*\*Study and Examination Regulations\*\*](#). If you want to know about your rights and constraints within your degree programme, we suggest that you give them a thorough read.

Information about specific courses can be found in the [👉 \*\*module catalogue\*\*](#) for your programme. This catalogue contains detailed course descriptions and information on ECTS credit points and creditability for particular focus areas. Module catalogues may not include brand-new courses, so if you cannot find a module, you can rely on its description in **Stud.IP** or ask the responsible lecturer for clarification if needed.

## Exams

At our Faculty, you can attempt to take an exam at most three times. If you fail a compulsory module for the third time, you cannot finish your studies and will get exmatriculated. You cannot repeat an exam once you have passed it, so there is no way to improve its grade.

Unless otherwise stated, you register for exams via the **Campusportal**. Registration periods differ from faculty to faculty, they get announced via Stud.IP and by the Examinations Office. Within that same period you can also deregister from an exam if you do not feel up to taking it after all. Please make sure to register on time, as retroactive registrations are generally not possible.

At the FIM, there are usually two exam dates offered for written exams. In most cases, you can choose freely between the two; just make sure that you appear for your exam on the correct date! Try to take the exam on the first date so that in case you fail, you have the opportunity to repeat it on the second date without having to wait for a whole year,

as most courses are only offered every other semester.

If you need to withdraw from an examination due to illness (after the de-registration deadline), you need to fill out [➤ this form](#) (in German). The Examinations Office also details the necessary steps in this [➤ English-language document](#).

## Master's Thesis

The search for a thesis topic can be quite time-consuming, so it is advisable to start thinking about your thesis in an early phase of your studies. You should consider which field you are most interested in and contact professors who best represent your area of expertise. The exact procedure, however, varies between chairs. Some professors publish lists of potential thesis topics on their websites, or they may ask students to get in touch for an up-to-date list. The Faculty website has a [➤ list with information](#) about theses, which contains links to topics, contact information or special requirements or procedures set by the individual chairs. For those professors who don't require a fixed assignment procedure, you might want to discuss thesis procedures and topics directly with a member of the chair.

As a first point of contact, you can usually ask the lecturers of exercise sessions; there are some professors, however, who prefer to be contacted directly. **Do not** randomly spam chairs with thesis requests, and **do not** send the same e-mail to multiple chairs or different people working at the same chair! Always be polite and precise in your writing. In some cases, thesis topics are also offered at the end of a seminar or lecture, e.g. as a continuation of the lecture's topic. Some chairs may also be open to discussing your own ideas for possible topics, but there is no guarantee, as theses usually need to align with the chair's specific research areas.

After registering for your master's thesis, you will have 6 months to complete it. The exact details of your thesis (including content, scope, time frame etc.) will be arranged between you and your supervisor.

## Plagiarism

Our University maintains high academic standards. Plagiarism - copying from sources without adequate attribution - is strictly forbidden and has severe consequences when detected. Whether you are writing a seminar paper or your master's thesis: always credit your sources! The **ZKK** (Centre for Careers and Competencies) offers courses on academic writing if you feel like brushing up on intellectual integrity.

## Libraries

The University has five libraries offering a wide range of materials to support you during your studies. If you want to know whether the libraries have a book that you need, just visit the [➤ University Library homepage](#) and click on 'Passau Search Portal'. The libraries offer free e-books, databases, newspapers and a nice and quiet study environment.

If you want to order books from the stacks or use the interlibrary loan service or (more probable) you want to download an e-book or borrow a book from the textbook collection, you need to use your library credentials. Your user number is printed on the back of your CampusCard (starting with the digits „064“), and your password upon first login is your date of birth in the form of DDMM.

In addition to quiet workspace in the reading room, the FIM Library also offers a separate study room. If you have a group project, you can reserve this room at the library counter if it is not already occupied.

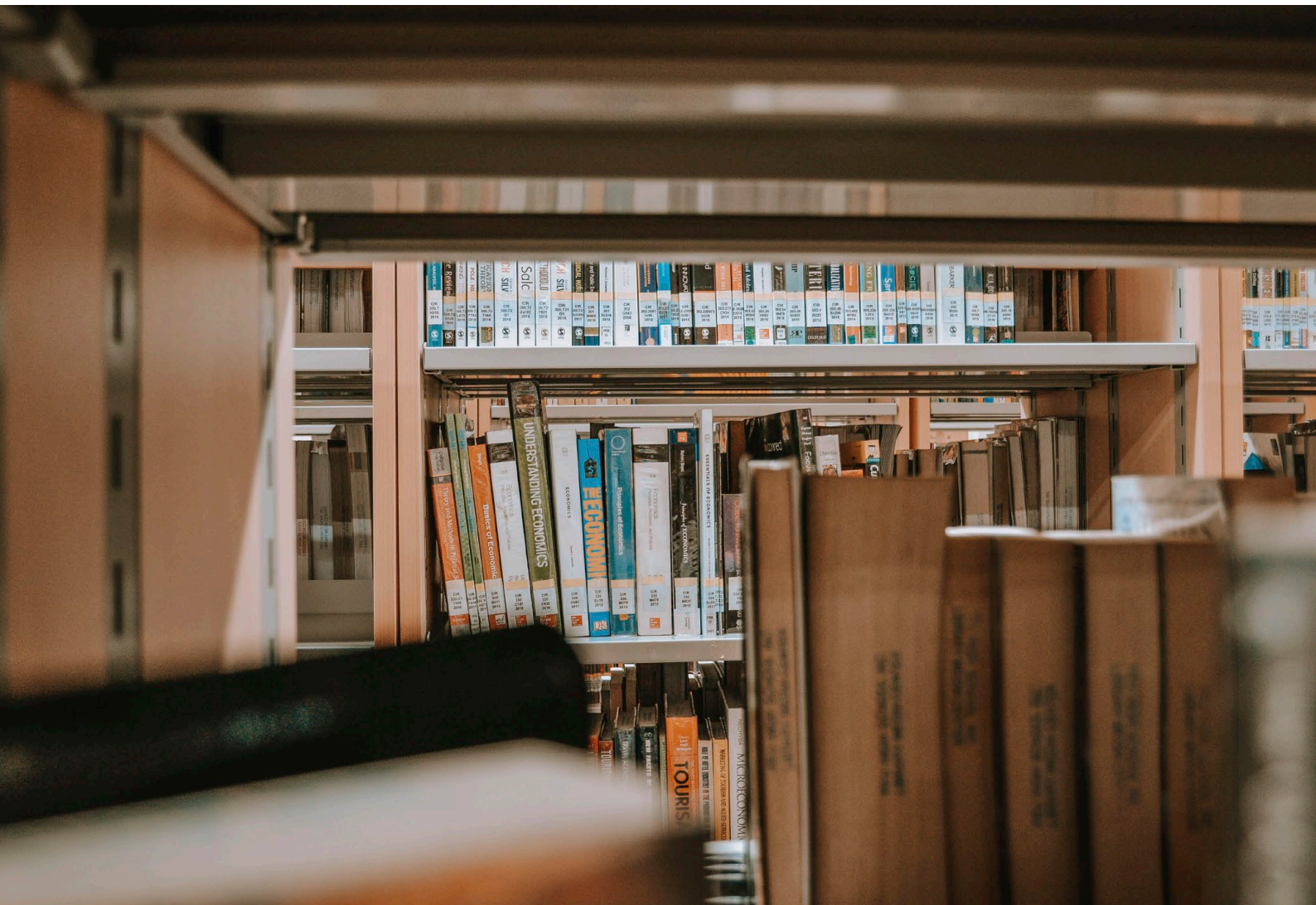
## German Language

The University's Language Centre offers German or other foreign-language courses. Keep in mind that those credits do NOT count towards your degree! If you are enrolled at the University, you can sign up for free using **Stud.IP**.

Like most language courses in Europe, the German courses at the University of Passau are based on the Common European Framework of Reference for Languages (CEFR). It consists of 6 levels: A1, A2, B1, B2, C1 and C2, with A1 being the lowest (basic knowledge) and C2 the highest (native) level. It is highly recommended that you take advantage of these free German-language classes to learn at least some basic German, which is definitely helpful for your daily life in Germany. **By the end of your first year of study, you must possess proficiency in German at a level of A1, at least.**

If you want to learn more about German culture and language, check out [👉 German Courses Passau](#). However, unlike the German courses in which you can participate once you are an enrolled student, these courses are not free of charge.

The Language Café (,Sprachcafé') is a good opportunity to practice what you've learned in your language courses. It targets students from various cultural and linguistic backgrounds who meet in order to practice their language skills in a casual atmosphere at Café Duftleben (Theresienstr. 22, 94032 Passau) every Thursday at 8 pm during the semester. For current information, check out their [👉 web page](#).



## careersUp

The portal [careersUp](#) offers you an opportunity to get in touch with recruiting employers. Whether you're searching for an internship, a part-time job or even an entry-level career position, the portal provides you with information about vacancies regionally, nationally and across all of Europe.

All you need to do is log in using the same credentials you use to get into Stud.IP. You can use the portal to find jobs not only during your stay at the University but also after you graduate.

## Internships

In the M.Sc. Computer Science and M.Sc. Computational Mathematics programmes, it is possible to earn 4 ECTS credits for an internship. However, there are very strict limits and regulations:

- Supervision by a professor
- At least 6 weeks full-time and 50% of its content relevant for your studies
- Presentation after the internship

You should decide for yourself whether a few credit points are worth the bureaucratic effort, but an internship is generally a good idea to broaden your horizon and form professional connections! If you want to do a longer internship (over the course of several months), you can apply for a leave of absence. This freezes your semester count. More information can be found on [this website](#).

## ZKK: The Centre for Careers and Competencies

The courses and seminars offered by the ZKK **do not** count towards your degree programme, but they are a very good option to polish your soft skills! Classes offered include time or self management, IT courses, or preparing you to apply for jobs in Germany. Have a look at the [course schedule](#) and see what strikes your interest. Sign-up usually ends on the first day of the semester, but you can still try to get waitlisted.



# University Life Hacks

## Do you have a problem with your studies or cannot find a specific document?

### > Step 1: Google the problem!

- Find a University website with related content.
- Search for relevant information on that page.
- Most likely you will find what you need or a link to a page with further information.

### > Step 2: Look for the problem in this Handbook!

### > Step 3: Identify the correct person to ask!

- If you have completed both steps above and couldn't solve your problem, feel free to ask, depending on the issue, either
  - an **administrative staff member**
  - our **International Student Assistants** ([master-help@fim.uni-passau.de](mailto:master-help@fim.uni-passau.de))
  - the **FSinfo student committee** ([fsinfo@fim.uni-passau.de](mailto:fsinfo@fim.uni-passau.de))
  - or the **International Coordinator**
- Choose ONE entity and send an e-mail with your request clearly stated. If recipients are not responsible, they will forward your message to the correct person.

## Using the University Website

If you are looking for information on our University's website, don't use the search bar on the page. Instead, use the external search engine of your choice and make sure you start any query with the words „uni passau“.

## „Du“ or „Sie“? Code of Conduct at the Faculty

The FIM is a relatively small faculty and the atmosphere among students and staff is generally rather relaxed. However, you should always address a professor and administrative staff with their title and family name. Exercise tutors and research assistants are usually a bit more relaxed, but unless they offer you the „Du“ (first-name basis), you should also keep the „Sie“ and address them by their family name. Students are „per Du“ and use first names when talking amongst each other.

## Writing an E-Mail

When writing an e-mail to University staff, please maintain the following rules:

- Use your official **University e-mail address**.
- Be formal and polite in your address: Dear Sir/Madam or Dear [title] [family name] are a must!
- Be clear and precise when you state your case, problem or question. Add all the information the other person might need in order to help you.
- Do not forget to sign off with a “Thank you” and “Best regards” or a similar greeting and your full name.
- Do not send the same e-mail to different people at the same time!

If you don't get an answer within a few days, there is no need to worry. Unless your case is very urgent (it usually isn't!), wait at least one week before sending a follow-up e-mail. In Germany, sending several e-mails regarding the same issue within a couple of days is considered rude and will not work in your favour.

# Life in Passau

## Sports Centre

The University of Passau offers a wide range of sports activities and recreational sports classes for students. Sports Centre membership costs EUR 15.- per semester. Some of the activities (like accessing the gym) have additional fees, which are still very low compared to memberships in a commercial setting.

Once you are registered, you can choose from a broad variety of different types of sports. Why not take a course in something you have never tried before? If you just want to play with your friends or meet new people, every section also offers just-for-fun playing sessions. You will learn how to register your CampusCard and sign up for the different kinds of sports during *Orientation Weeks*.

## Student Clubs

Currently there are over 100 [👉 student clubs and societies](#) registered at the University ranging from sports, politics, religion, community engagement to drama clubs and multiple choirs, there is something for everyone.

At the beginning of every semester, the AStA (the executive committee of our student government) organizes a fair where you can chat with different club representatives and find a group that resonates with you. Getting involved may expand your circle of friends and serve as a healthy balance to studying and work life.

## Social Life

Passau is a great place to study, but also to party and have fun. The city offers a rich selection of clubs, bars and restaurants that will satisfy even the most advanced night owls.

Dancing to the latest club tracks, partying on a riverboat at night, enjoying a cold beer in a traditional *Biergarten* overlooking Passau, or how about playing board games at a bar? Passau has it all, and the best thing is that everything is within walking distance. Passau's

streets are full of clubs and bars which are right next to each other and yet completely different. Everyone will find their perfect spot for a fun night out.

In addition, there are many annual events and festivals in the city that attract visitors from near and far. From arts and music festivals to infamous *Oktoberfest*-style celebrations like "Dult" in Passau, or Christmas markets, the city has events to offer all year.

## Public Transport and Connecting to the Region

In Passau, public transport is covered by your student ticket, the CampusCard. Beyond the city limits, there is a ticket called *Deutschland-Ticket* which allows you to travel affordably within all of Germany. Please note that you can only use this ticket for regional trains; fast trains like ICE or IC are excluded.

The normal price for the ticket is EUR 49.-, for students EUR 29.-, and as a student at the University of Passau you can get it for EUR 23.70.- if you book it on [👉 this website](#). The website is only available in German, but you can find additional English language information about the ticket on the University website [👉 here](#).

## Psychological-Psychotherapeutic Counselling Centre

If you are facing any personal crises during your studies such as mental health issues or other difficult situations, please don't hesitate to reach out and ask for help. You can schedule an appointment for free counselling at the University Counselling Centre here:

✉ [psychologische.beratung@uni-passau.de](mailto:psychologische.beratung@uni-passau.de)

[👉 more information](#)

If you are in an urgent crisis, please reach out to a helpline (can be found at the link above) and if you or another person is in immediate danger, you can call emergency services at phone number 112.

# Campus Map

