

Master-Inform #3

2024/25

# Inform

Magazine of the CS student body



fachschaft.info

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Ich berate Sie gern:

**Lukas Baumann**

Hochschulberater

Tel. 040 - 460 65 10 91 52

lukas.baumann@tk.de



**TK**  
Die  
Techniker

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## Editorial

Welcome to the Computer Science, Cyber Security and Life Science Informatics programs at the University of Bonn!

You probably have many questions regarding your degree, your course of study, life in Germany, especially in Bonn, how the University of Bonn works and much more. But don't worry, we all have been there and therefore can hopefully answer some, if not all of your questions. In addition to this magazine we also organize an Orientation Unit (OE because in German it's Orientierungseinheit), in which we show you around campus and provide some insight into student life, in addition to getting you to know each other. Any remaining questions after reading this can and will be answered by us, so do not hesitate to ask us anything you want! You can either come to our office in room 0.019 right in the foyer of the Institute for Computer Science or reach out to us by e-mail via [fs@fachschaft.info](mailto:fs@fachschaft.info).

With kind regards  
Your student body council

# The Student Body

### Whats a “Student Body”?

The student body (Germ. *Fachschaft*) is actually two things: Firstly, all students enrolled in programs at the Institute of Computer Science and B-IT are the student body – so you are a part of it too! Secondly it is a group of students who are doing committee work in the name of the student body. By the way, *Fachschaft* in German does not only mean these two, it also refers to our office, which most students also call the “Fachschaft”.

### What Does the Student Body Do?

For starters, the magazine you are reading right now is part of our First-Semesters welcome program. We organize (online) meetups, as well as game nights and parties to get to know your peers. We are there for you when you have a question or a problem regarding your program. We have daily office hours when you can give us a visit and ask us anything straight away, you can also write us an e-mail at [fs@fachschaft.info](mailto:fs@fachschaft.info). We provide a bunch of services to you at our office:

**Student Exam Protocols** We have a growing collection of protocols from old exams that you can borrow to have a look at. It is really handy to be able to know what kind of questions or tasks an exam might contain. The collection only exists because of students who provided their protocols to us, so it is up to you to expand it. If you and your friends each memorize a question and write it down after the exam, we will quickly have another protocol that we can provide for the next students who take the course. We have physical copies at our office, but we also have a more up-to-date archive at

[altklausuren.fachschaft.info](http://altklausuren.fachschaft.info). You can only visit that website from within the eduroam network or via VPN.

**Drinks** At our office, we have a fridge we regularly refill with different types of *Fritz* lemonade and cola, as well as *Clubmate* and bottled fizzy water. You can get the beverage of your choice for a small price. We also have coffee and tea which are free for everyone who brings a cup.

**Stationery** Like any normal office we have staplers, hole punchers, pens, scissors and an assortment of glues all of which you can lend if you are in a pinch. We also have a laminator and a binding machine for up to 200 pages that you can use. You will only have to pay the material costs.

### Committee Work

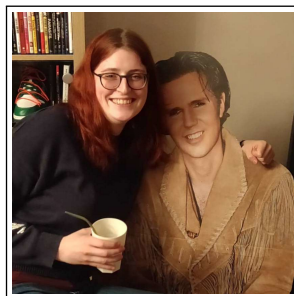
Last but definitely not least, the student body represents you in many committees. We try to represent the voice of our student community. We fight for good conditions regarding the exam regulations at the Examination Board, have a say in which new professors are appointed to the Institute at the Faculty Advisory Committee on Tenure and we even decide who gets funds for their teaching at the Committee for the Improvement of Quality of Teaching. If you are interested to be a part of these committees, let us know!

Student body sound cool? Wanna help? Come to our weekly meeting where we discuss current topics and problems we want to solve. You don't have to participate right away, you can just listen if you want to. We have our weekly meeting Wednesdays 18:15 in 0.016 in the Institute of Computer Science.

### Your Student Body Representatives



Benedikt



Katharina



Lukas



Michael

## Awareness

Hello, hope you've been having a good first week of your studies!

We - Linus, Robin, Erik and Sophia - are known as the Response-Team of the Student Body of Computer Science, and want to help everyone feel comfortable at our institute. You can find us as a so-called Awareness-Team on e.g. game nights, the orientation unit and the summer festival, where we want to make sure that you feel safe and welcome, and where we're available to talk to if there are any incidents.

Of course you can also talk to us outside of the events organized by the student body; feel free to approach us or write us an email whenever someone does not treat you or other students appropriately, or if someone repeatedly violates our code of conduct and you can't or don't want to speak up on your own.

The code of conduct offers guidelines in order to make people feel safe and treated respectfully. You can find it via the following link:

### Code of Conduct

<https://www.sp.uni-bonn.de/dokumente/idx/Sonstige/Fachschaften/COC-Informatik.html>

Is there something from your student life that's troubling you? Did you have a bad experience with others on campus, or do you just need someone to talk to? Then feel free to reach out to us :)

We have one E-Mail-address that every member of the team has access to: [informatik.awareness@protonmail.com](mailto:informatik.awareness@protonmail.com) You can contact us either via this e-mail, or contact specific members via one of the addresses below. This is us :)



Linus Rodríguez  
Gómez  
[linus.awareness@protonmail.com](mailto:linus.awareness@protonmail.com)



Robin Meth  
[robin.awareness@protonmail.com](mailto:robin.awareness@protonmail.com)



Erik Böhme  
[erik.awareness@protonmail.com](mailto:erik.awareness@protonmail.com)



Sophia Sirtl  
[sophia.awareness@protonmail.com](mailto:sophia.awareness@protonmail.com)

Please note that we can't offer general psychosocial counseling. If you are unsure what kind of support you would like or if you want someone to reach out to first who is closer to the regular student life, then you can always contact us; together we can discuss where you might find something that's right for you, and can redirect you there if you want us to.

# Strengthening Equality in Computer Science



**Who we are:** We are a loose association of cool students and scientists, who are committed to improving the situation of underrepresented groups at the Institute of Computer Science.

**What we do:** We organize networking adventure and workshops on diverse topics and company visits, where you can get can gain insights into various specialist areas and, among other things get to know the reality of women's working experiences.

Sign up for our mailing list so you don't miss anything!

Missing anything? We can also be reached via Discord and Instagram. That's not enough for you? In the Equalendar you can find more cross-faculty equality events!

### Links

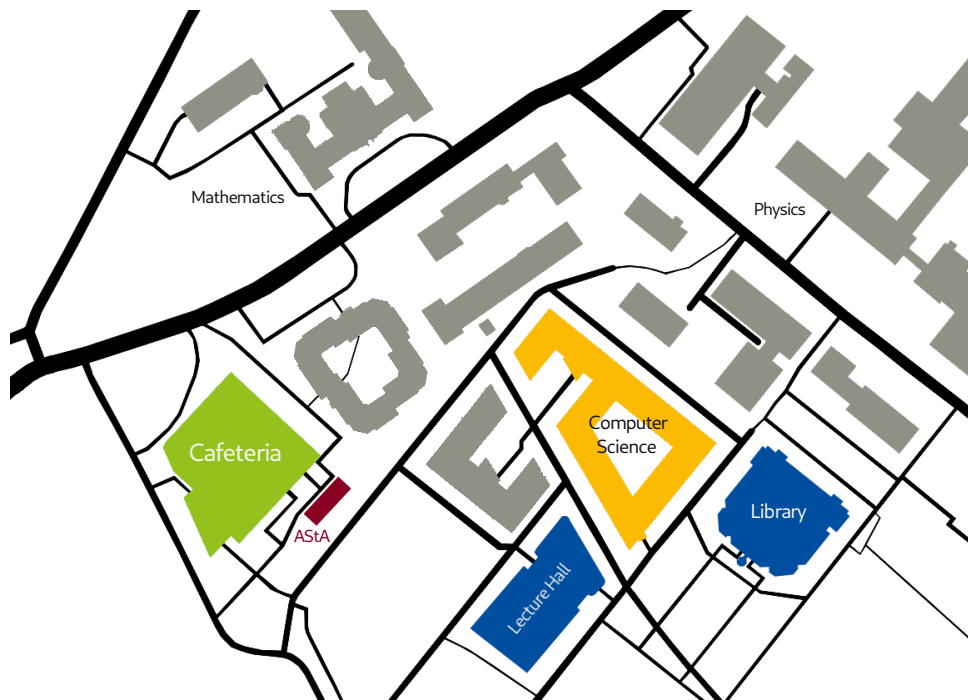
**Gidis-Mailingliste:** <https://tinyurl.com/gidis-ml>

**Gidis-Discord-Channel:** <https://tinyurl.com/gidis-discord>

**Gidis-Instagram:** <https://tinyurl.com/gidis-insta>

**Equalender:** <https://tinyurl.com/equalendar>

## Campus Poppelsdorf



Map Design Bettina Esser 2024, Map data from OpenStreetMap (Published under ODbL)

# The Institute of Computer Science

If you study the master Computer Science or Cyber Security, then apart from the lecture hall building the Institute of Computer Science is the building in which most of your study events will take place. In addition to seminar rooms it contains the offices of professors, PhD students, the (technical) administration for computer science and much more. The Institute of Computer Science is organized in six departments. Each of them is led by a professor and has a rough research focus. Within each department there are smaller research groups, each again led by a professor and more specialized on a particular part of the field (see table below).

If you are studying in the Master of Computer Science program, in order to start a Master Thesis you will have to find a supervisor from the research

group that is most closely related to your topic. It is good to familiarize yourself with the different research groups early on, so you can try to focus your choice of lectures, seminars and labs on the department that you are the most interested in.

Sometimes there is the chance to be hired as a student assistant (WHF, wissenschaftliche Hilfskraft) by a department of the institute, usually as tutor for exercise groups or as programmer. The payment is usually ~15 Euro per hour, which is not as much as for most other programmer jobs, in exchange your workplace is close by, and you gain practical experience related to your studies. Besides the employer will be more considerate about your studies, so you can adjust work hours to your lecture schedule.

## Departments & Research Groups

<b>Informatik I</b> Computational Analytics	Prof. Dr. Petra Mutzel	Computational Analytics
	Prof. Dr. Estella Suarez	High Performace Computing
<b>Informatik II</b> Visual Computing	Prof. Dr. Reinhard Klein	Computergraphics
	Prof. Dr. Matthias B. Hullin	Digital Material Appearance
	Prof. Dr. Thomas Schultz	Visualization and Medical Image Analysis
	Prof. Dr. Florian Bernard	Learning and Optimization for Visual Computing
	Juniorprofessorin Dr. Zorah Lähner	Geometrie in Machine Learning
<b>Informatik III</b> Information Systems and Artificial Intelligence	Prof. Dr. Stefan Wrobel	ML AI Lab
	Prof. Dr. Jürgen Gall	Computer Vision
	Prof. Dr. Elena Demidova	Data Science & Intelligent Systems
	Prof. Dr. Rainer Manthey	Intelligent Databases
	Prof. Dr. Christian Bauckhage	ML AI Lab
<b>Informatik IV</b> Security and Networked Systems	Prof. Dr. Peter Martini	Communication Systems
	Prof. Dr. Michael Meier	IT Security
	Prof. Dr. Matthew Smith	Behavioural Security
	Prof. Dr. Frank Kurth	Audio Signal Processing
	Prof. Dr. Christoph Strelen	Operating Systems & Stochastic Modelling
	Priv.-Doz. Dr. Wolfgang Koch	Sensor Data & Information Fusion
	Priv.-Doz. Dr. Volker Steinhage	Intelligent Vision Systems
<b>Informatik V</b> Algorithms and Complexity	Prof. Dr. Heiko Röglin	Analysis of Algorithms Beyond the Worst Case & Cluster Analysis
	Prof. Dr. Anne Driemel	Prof. Dr. Anne Driemel Algorithmic Geometry
	Prof. Dr. Thomas Kesselheim	Algorithmic Game Theory & Optimization under Uncertainty
<b>Informatik VI</b> Intelligente Systeme und Robotik	Prof. Dr. Sven Behnke	Autonomous Intelligent Systems
	Prof. Dr. Maren Bennewitz	Humanoid Robots
	Juniorprofessor Dr. Herrmann Blum	Robot Perception and Learning
	Dr. Dieter Engbring	Didaktik der Informatik

# Course of Study

In your masters degree you will have four different kinds of modules. Those modules are lectures, seminars, labs and your master thesis.

### Lectures

Lectures usually take place in an auditorium. Smaller lectures may also be given in seminar rooms.

They usually work like this: The lecturer stands in the front and talks. The students mostly listen, but may (and should!) ask questions at any time. This is important, because if you can not follow what the lecturer is telling you, listening is rather pointless. Don't worry about embarrassing yourself: Chances are that if you don't understand it, there most probably are other students who don't understand it as well, but are too shy to ask.

The lectures also prepare you for the exercise sheets. Usually you have an exercise sheet in each lecture every week, though some lectures might have larger ones every other week or even fewer. They are accompanied by exercise groups, which also will usually be held weekly. Regular attendance in both the lectures and the exercises is highly recommended, though there are no mandatory attendance rules for either.

In most lectures you have to earn at least 50 % of the points of the exercises in order to be admitted to the exams. The exact conditions are published by the examination office before the beginning of the semester and can be found in the current module handbook. Many lectures also allow you to complete the exercises in groups of two or three students. Completing these exercises prepares you for the exam at the end of the semester, but it is not relevant to your grade; at most, they may give you bonus points in your exam. We usually do not hold midterm exams.

### Seminars

Seminars will advance your knowledge of scientific work. The goal is to learn how to research a specific topic, how to then write it up in a paper and give a presentation. You must have at least one seminar in your course emphasis area/main track and can at most have ten credit points of seminars. In practice, this means that you can have at most two seminars worth four credit points each, totaling eight at most.

The seminars are offered in many areas of research. You should choose one that you find interesting and where you think that you could write a masters the-

sis about. Another part of the seminar may be reviewing and critiquing other students' papers, and usually you also listen to the other students' presentations, similar to a small conference.

### Labs

Whereas the seminars teach you the theoretical aspects of scientific work, labs will teach you the practical part. Usually over the course of one semester, either alone or in a small group, you will try to implement a small project. This comprises researching related projects, deciding on what you want to do, planning the implementation, executing it and, finally, writing a paper as well as giving a presentation, similar to your seminar.

Due to implementing a project being more time-consuming than just theoretical research, each lab is worth nine credit points. You also have to have one lab in your main track and can at most have two labs, bringing you to a total of 18 credit points.

### Master's Thesis

Usually in your last semester, you start working on your master's thesis. As the high number of 30 credit points suggest, the amount of work alone is enough to fill a whole semester. Having another lecture while working on your thesis may work for you, but you should really try to reduce the number of other modules besides your thesis as much as possible, so try to complete all other parts of your degree before the last semester.

During the course of your study, you will probably find out what field of research interests you the most. You should have done most of your lectures, and you also must have completed a seminar as well as a lab in this field. This also means that you usually have close contact to the work group that is most closely related to the topics that are interesting to you. In order to start a thesis, you have to find a supervisor in this work group. They will be your main contact, and working closely together with them will certainly make it easier and will probably result in a better grade.

After you have worked out the exact topic of your thesis, your supervisor will submit it to the examination office. The topic is usually accepted, giving you the day on which your time starts and, thereby,

the end date of your thesis. Now you may start your work on the thesis.

The exact procedure of your thesis will vary due to your topic, the work group and your own choices. If you have questions, you should contact your supervisor. They all have done their own theses and usually are involved in active research, so they can

tell you what they have experienced and how you should proceed.

After submitting your thesis and giving your final presentation, if you have completed all the needed modules, have 120 credit points and have passed your thesis, you are finished! You can now call yourself a Master of Science! Congratulations!

Reading all this, it may seem as if the goal, your degree, is so far out of reach. But you should not be afraid; every great change comes in small steps. And during your journey towards this goal, we will support and help you, should you ever have problems or questions!



Entrance to the Institute for Computer Sciences at Friedrich-Hirzebruch-Allee 8  
Copyright: Volker Lannert / Uni Bonn



The NAO robots of department IV in front of the institute  
Copyright: Volker Lannert / Uni Bonn

# Course of Studies: Computer Sciences

As most of you are probably already familiar with, the M.Sc. Computer Science program is composed of modules you need to pass in order to get your degree. With each module, you will earn a certain amount of credit points. In order to earn your master's degree, you will have to earn 120 credit points. Usually small lectures are worth six credit points and large lectures are worth nine. Through each lab, you will be able to receive nine credit points, seminars are worth four credit points, and your master thesis is worth 30+2 credit points.

Each credit point should be equal to 30 hours of work. This varies with each student, but it should give you a rough estimate of the time each course should take up in your schedule. The module handbook specifies how much of this time is spent in attendance and how much time you spend on your own.

Each semester, you are encouraged to earn around 30 credit points; this way, you would earn 120 credit points in four semesters, which is the recommended time of study. Both the four semesters and the 30 credit points per semester are only recommendations. You can earn as much or little credit points as you want, but of course, earning fewer credit points than recommended will increase your study time.

Each module finishes with some form of exam. For lectures, this usually takes the form of a written or oral exam. Seminars and labs finish with a paper as well as a presentation, both of which are graded. The thesis also closes with a presentation that is worth 2 credit points; the other 30 credit points are awarded for your thesis.

Note that you are not limited to selecting exactly 120 credit points of modules. Only up to 120 credit points can count for your final grades and these modules must meet the criteria outlined below. If you have selected modules beyond 120 credit points you can send an application form to the examination office to have up to 15 credit points of additional modules be listed on your transcript, however those will not count towards your grade. Any further modules you may have selected will not appear on your transcript. Do note that once you have met the criteria for a completed masters degree your masters studies will end that semester, so you can't just go on picking new modules forever.

## Tracks

Now you know: To get your masters degree, you will need to collect 120 credit points. Your thesis and corresponding seminar will grant you 32 CP, the mandatory lab and seminar will add 9 and 4 CP. This leaves 75 CP to be made in whichever courses you find interesting. But wait! There are some rules on how to choose. The course selection of the Computer Science program is divided in four **tracks**: the Algorithmics track, the Graphic, Vision and Audio track, the Information and Communication Management track and the Intelligent Systems track. Each track offers a variety of lectures, labs and seminars that fit the topic. During your degree, you will have to choose a **main track**. At least one lab and one seminar as well as a minimum of 18 additional CP has to come from your main track. You also have to have at least 27 CP outside of your main track and in at least two of the other tracks you need to have at least 6 CP. The remaining 30 CP are free. You may also pick at most two labs and seminars as part of your masters. Note that your thesis does not have to be in your main track. You can take a look at some examples of courses of study on page 12.

## How to Study

Here at the Institute of Computer Science, you don't have to sign up for lectures to attend them. You can simply attend the first lecture and get all necessary information there. The lecturer will tell you the modalities of the lecture, such as how to enroll in exercise groups, how to access the course materials and what you have to do in order to be admitted to the exam. You can find the lectures that are held each semester by looking into the course catalog in BASIS (p. 18).

For labs and seminars, you usually have to apply before the start of the semester. Every research group handles this a bit differently, so take a look at the BASIS entry to find out how to apply. If there's no entry in BASIS, don't be afraid to ask the research group.

## Exam Application

To be able to take the exams at the end of the term, you will have to fulfill the requirements published by in the module handbook, and you have to apply for the exams on BASIS, our digital platform for course overview and exam application.

The applications are usually opened around mid-semester. You have to register for each exercise that you intend to pass. At the same time, you can also register for the first exam of every module. You can apply for as many or as few exams as you like, and you can step down from an exam until one week before without any explanations needed. Due to the nature of labs and seminars, you can only step down from them until you are assigned a topic.

Every semester, two exams are offered for every module. If you pass the first one, you can use the second one for your improvement-exam (see below), but else, you do not have to take it. If you did not pass or did not attend the first one, you can go to the second one. You can also take just the second exam, though you still have to register for the exercises. If you forget that, you cannot take the exam as your admission cannot be entered into BASIS.

It is possible to get a disadvantage compensation for written exams (e.g. for dyslexia) in the form of a time extension. You can check with the examination office if you are eligible. If you fall sick and can't take an exam, you have to get a doctor's note saying that you are unable to take the exam and hand it in within three days to the examination office. With that, you will not lose an attempt for the exam.

### You Shall (not) pass!?

You took your written exam, you have a great feeling about it, but then BASIS shows a grade you weren't expecting. Don't worry, there are things you can do. Whether you failed or pass, the first thing you should do is go to the post-exam review. There you can have a look at your exam, see where you went wrong and ask the tutors and lecturer about it. Sometimes you can even find an error in the correction and get the points that are due to you. Most of the time, the lecturer will organize a date for everyone, but if you can't make it, don't hesitate to ask for a different date. If the lecturer does not organize a central date and also does not want to schedule individually with you, you can always get your post-exam review at the examination office.

To attend a post-exam review you usually need your passport (or something comparable) and possibly also access to your digital student ID. In case you are doing the post-exam review for another student you also have to bring written and signed conforma-

tion that you are to attend the post-exam-review for that student. If you plan to send someone in your stead it is also nice to send a mail to the lecturer beforehand informing them that someone will come instead of you. In case you aren't too secure in the material it is also usually possible to bring another person with you to the review to review the exam together.

Within a post-exam review it is always good to first check if the points have been added up properly. They usually are, however on the rare occasion that some (sub)exercise was missed you could have a significantly better grade than expected. After that you can check where points were deducted and if anything is unclear to you ask what you did wrong. If you are very close to getting the next best grade it can sometimes be worth it to discuss if you lost any points unjustly.

**Failed Exam** Alright, you know where you went wrong, but the exam is still failed. If you failed the first, you can take the second exam without applying again. And even if you fail that one too: Each exam can be taken 3 times until you terminally fail it. This means that you can take each exam 3 times. And *even if* you fail something 3 times, that doesn't mean the end of the program for you. It does mean you can't pass this course anymore, but as long as there are enough other courses to finish your degree, you can continue. Even labs and seminars can be taken up to three times before terminally failing.

**Bad Grade** You passed your exam with a grade that you aren't happy with and the post-exam review brought insight, but no missing points. No problem, you can fix that! For three of the courses you pass during your first three semesters, you may be able to apply for an improvement-exam. For this to be possible you must pass the exam in the first exam period that semester. You can then apply for the second exam in that same semester and will receive the better of the two grades.

Note that you can only improve grades of written or oral exams. Labs, seminars and the thesis cannot be improved.

With this information, you should be able to get through your exams. A warning at the end: If you are caught cheating in an exam, you automatically fail it. Depending on the severity of your cheating, you might even be exmatriculated and have to pay a fine of up to 50 000 €, so don't cheat.

## Course of Studies: Examples

Since the Computer Science program doesn't have any mandatory courses and no specific order in which to take the elective courses, we present some example courses of study. They are mostly based on real courses of study from students that finished their masters (and as such are not always perfectly 120 CP), but as some modules no longer exist we had to patch things up a bit. These are by no means the "right" way to study, they should only illustrate what a degree here in Bonn could look like. Some of them aren't complete since the students are still working towards their degree.

To save some space, we abbreviated the tracks: Algorithmics → AL, Graphic, Vision and Audio → GVA, Information and Communication Management → ICM and Intelligent Systems → IS.

### Example 1: Algorithmics

IS: Technical Neural Networks  
 IS: Seminar AI Ethics  
 IS: Foundations of Data Science  
 GVA: Foundations of Audio Signal Processing  
 AL: Cryptography  
 IS: Artificial Life  
 GVA: Computer Animation  
 AL: Algorithmic Game Theory  
 AL: Discrete and Computational Geometry  
 AL: Seminar Algorithmic Game Theory  
 AL: Algorithms and Uncertainty  
 AL: Lab Advanced Algorithms  
 AL: Thesis

6 CP  
 4 CP  
 9 CP  
 6 CP  
 9 CP  
 6 CP  
 9 CP  
 9 CP  
 9 CP  
 4 CP  
 9 CP  
 9 CP  
 32 CP

### Example 3: Computer Graphic and Audio

GVA: Computational Photography  
 IS: Technical Neural Nets  
 IS: Artificial Life  
 IS: Foundations of Data Science  
 GVA: Advanced Topics in Computer Graphics 1  
 AL: Cryptography  
 GVA: Advanced Topics in Computer Graphics 2  
 GVA: Deep Learning for Visual Recognition  
 GVA: Advanced Deep Learning for Graphics  
 GVA: Lab Graphics  
 GVA: Seminar Graphics  
 GVA: Thesis

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### Example 2: Algorithmics

IS: Technical Neural Networks  
 AL: Algorithms for Data Analysis  
 ICM: Mobile Communication  
 AL: Combinatorial Optimization  
 ICM: Practical Challenges in Human Factors of Security and Privacy  
 IS: Autonomous Mobile Systems  
 AL: Binary Linear and Quadratic Optimization  
 AL: Lab Combinatorial Algorithms  
 AL: Cryptography  
 ICM: Applied Binary Exploitation  
 IS: Foundations of Data Science  
 AL: HPC modern Architectures and Trends  
 AL: Seminar Computational Analytics  
 AL: Thesis

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### Example 4: Computer Graphic and Audio

GVA: Computer Vision  
 AL: Discrete and Computational Geometry  
 GVA: Computational Photography  
 GVA: Deep learning for Visual Recognition  
 IS: Artificial Life  
 GVA: Advanced Topics in Computer Graphics I  
 IS: Foundations of Data Science  
 GVA: Video Analytics  
 GVA: Visual Data Analysis  
 GVA: Advanced Topics in Computer Graphics II  
 ICM: Introduction to Sensor Data Fusion  
 GVA: Lab Vision  
 GVA: Seminar Vision  
 GVA: Thesis

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 32 CP

### Example 5: Intelligent Systems

AL: Cryptography	
IS: Learning from Non-Standard Data	
ICM: Mobile Communication	
IS: Principles of Machine Learning	
IS: Advanced Learning Systems	
GVA: Advanced Topics in Computer Graphics I	
ICM: IT Security	
ICM: Practical Challenges in Human Factors of Security and Privacy	
ICM: Side Channel Attacks	
IS: Artificial Life	
IS: Humanoid Robotics	
GVA: Computational Photography	
IS: Seminar Humanoid Robots	
IS: Lab Sensor Data Interpretation	
IS: Technical Neural Nets	
ICM: Advanced Computer Forensics	
IS: Thesis	

### Example 7: Information an Communication Management

9 CP		
6 CP	ICM: Practical Challenges in Human Factors of Security and Privacy	6 CP
6 CP	IS: Artificial Life	6 CP
6 CP	ICM: Mobile Communication	6 CP
9 CP	ICM: IT Security	6 CP
6 CP	ICM: Malware Analysis	6 CP
6 CP	ICM: Array Signal and Multi-channel Processing	6 CP
6 CP	ICM: Applied Binary Exploitation	6 CP
6 CP	IS: Advanced Learning Systems	6 CP
6 CP	ICM: Lab IT Security	9 CP
6 CP	GVA: Advanced Topics in Computer Graphics I	9 CP
4 CP	ICM: Seminar Selected Topics in IT Security	4 CP
9 CP	GVA: Video Analytics	6 CP
6 CP	IS: Cognitive Robotics	6 CP
6 CP	AL: Algorithms for Data Analysis	6 CP
32 CP	ICM: Thesis	32 CP

### Example 6: Information an Communication Management

ICM: Foundations of Audio Signal Processing	6 CP
IS: Principles of Machine Learning	6 CP
IS: Secure Software Engineering	6 CP
ICM: Applied Binary Exploitation	6 CP
ICM: IT-Security	6 CP
ICM: Mobile Communication	6 CP
ICM: Lab IT Security	9 CP
ICM: Seminar Selected Topics in IT Security	4 CP
AL: Cryptography	9 CP
ICM: Introduction to Sensor Data Fusion	6 CP
IS: Technical Neural Nets	6 CP
IS: Advanced Methods of Information Retrieval	6 CP
AL: Introduction to High Performance Computing	6 CP
IS: Side Channel Attacks	6 CP
ICM: Thesis	32 CP



The cardboard version of the "Stanford Bunny" of department II in front of the Institute's logo

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# Course of Studies: Cyber Security

As most of you are probably already familiar with, the M.Sc. Cyber Security program is composed of modules you need to pass in order to get your degree. With each module, you will earn a certain amount of credit points. In order to earn your master's degree, you will have to earn 120 credit points. Usually small lectures are worth six credit points and large lectures are worth nine. Through each lab, you will be able to receive nine credit points, seminars are worth four credit points, and your master thesis is worth 30+2 credit points.

Each credit point should be equal to 30 hours of work. This varies with each student, but it should give you a rough estimate of the time each course should take up in your schedule. The module handbook specifies how much of this time is spent in attendance and how much time you spend on your own.

Each semester, you are encouraged to earn around 30 credit points; this way, you would earn 120 credit points in four semesters, which is the recommended time of study. Both the four semesters and the 30 credit points per semester are only recommendations. You can earn as much or little credit points as you want, but of course, earning fewer credit points than recommended will increase your study time. It happens quite frequently that students need more than four semesters to finish their degree, especially if you have a job alongside your studies.

Each module finishes with some form of exam. For lectures, this usually takes the form of a written or oral exam. Seminars and labs finish with a paper as well as a presentation, both of which are graded. The thesis also closes with a presentation that is worth 2 credit points; the other 30 credit points are awarded for your written thesis.

Note that you are not limited to selecting exactly 120 credit points of modules. Only up to 120 credit points can count for your final grades and these modules must meet the criteria outlined below. If you have selected modules beyond 120 credit points you can send an application form to the examination office to have up to 15 credit points of additional modules be listed on your transcript, however those will not count towards your grade. Any further modules you may have selected will not appear on your transcript. Do note that once you have met the criteria for a completed masters degree your masters studies will end that semester, so you can't just go on picking new modules forever.

## Compulsory and Compulsory Elective Modules

Now you know: To get your masters degree, you will need to collect 120 credit points. These are split between the Compulsory and the Compulsory Elective modules, with the compulsory elective modules splitting up into multiple groups explained later. The compulsory modules are modules that must be selected to get the masters degree while the compulsory elective modules consist of pools of lectures that you need to select a certain number of credit points from.

### Compulsory Modules

Currently the master Cyber Security has 4 (technically 5) compulsory modules that together make up 51 credit points. You must attend the lecture IT Security and complete one lab, one seminar and your masters thesis in cyber security. The masters thesis technically splits into two modules, the actual thesis for 30 credit points and the masters seminar accompanying the thesis for 2 credit points, however these two are always selected in tandem,

so we usually talk of them as one module. While you must select all of these modules to finish the master cyber security, they have no explicit internal dependencies and you may select them in any order you like. However we recommend selecting the lab and seminar before the masters thesis, as they are good ways to check out if a certain area of cyber security is the right one for your masters thesis.

### Compulsory Elective Modules

The compulsory elective modules make up the other 69 credit points of your master. They are split into three types of compulsory elective modules. For all three types there are lists of modules that you can select from.

There are the subject-bound compulsory elective modules which are again split into the subject-bound compulsory elective modules cyber security (from now on called compulsory elective modules cyber security) and the subject-bound compulsory elective modules computer science (from now on called compulsory elective modules computer science). The compulsory elective modules

cyber security allow you to further specialize into different parts of cyber security while the compulsory elective modules computer science allow you to learn more about other parts of computer science, such as computer graphics or theoretical computer science. Most subject-bound compulsory elective modules are also modules that students of the master computer science can select and most modules that are part of the master computer science can be selected as compulsory elective modules. Do look out however, for example nearly all modules in the algorithmics track of the master computer science are inaccessible to students of the master cyber security. The full list of available compulsory elective modules can be found in the module handbook. The newest version is available via the website of the examination office which can be found under [https://www.informatik.uni-bonn.de/en/studies/examination-office/examination-office?set\\_language=en](https://www.informatik.uni-bonn.de/en/studies/examination-office/examination-office?set_language=en)

The non-subject-bound compulsory elective modules allow you to select modules from outside of computer science, such as mathematics, psychology, economics, geography, photogrammetry, physics/astronomy or chemistry. These modules must be from masters studies in the respective areas, you may not select bachelor modules. The examination board may publish lists of "approved" modules, however to the best of our knowledge so far no such list has been published. Outside of such a list the examination board can allow modules on a case-by-case basis if the modules are not too close to modules of the subject-bound compulsory elective modules. So if there is a module in a different masters study that really interests you, contact the examination board if its possible to select it as part of your master cyber security.

While the compulsory elective modules offer a great deal of freedom in specializing your master your selections are still bound by certain rules on how many credit points you can and must select in certain areas.

- Subject-bound compulsory elective modules (54-69 credit points)
  - Compulsory elective modules cyber security (at least 24 credit points)
  - compulsory elective modules computer science (at least 12 credit points)
    - \* May contain at most one seminar and one lab
- Non-subject-bound compulsory elective modules (0-15 credit points)

You must select at least 54 credit points of subject bound compulsory elective modules. Of these at least 24 credit points must be compulsory elective modules cyber security and at least 12 credit points must be compulsory elective modules computer science. Within the compulsory elective modules computer science you may select up to one lab and up to one seminar. You may also select up to 15 credit points in the non-subject-bound compulsory elective modules, but you are not required to select any at all.

### How to Study

Here at the Institute of Computer Science, you don't have to sign up for lectures to attend them. You can simply attend the first lecture and get all necessary information there. The lecturer will tell you the modalities of the lecture, such as how to enroll in exercise groups, how to access the course materials and what you have to do in order to be admitted to the exam. You can find the lectures that are held each semester by looking into the course catalog in BASIS (p. 18).

For labs and seminars, you usually have to apply before the start of the semester. Every research group handles this a bit differently, so take a look at the BASIS entry to find out how to apply. If there's no entry in BASIS, don't be afraid to ask the research group.

### Exam Application

To be able to take the exams at the end of the term, you will have to fulfill the requirements published in the module handbook, and you have to apply for the exams on BASIS, our digital platform for course overview and exam application (see p. 18).

The applications are usually opened around mid-semester. You have to register for each exercise that you intend to pass. At the same time, you can also register for the first exam of every module. You can apply for as many or as few exams as you like, and you can step down from an exam until one week before without any explanations needed. Due to the nature of labs and seminars, you can only step down from them until you are assigned a topic.

Every semester, two exams are offered for every module. If you pass the first one in a compulsory elective module, you can use the second one for your improvement-exam (see below), but else, you do not have to take it. If you did not pass or did not attend the first one, you can go to the second one. You can also take just the second exam, though you still have to register for the exercises. If you forget

## Inform #2

that, you cannot take the exam as your admission cannot be entered into BASIS.

It is possible to get a disadvantage compensation for written exams (e.g. for dyslexia), usually in the form of a time extension. You can check with the examination office if you are eligible. If you fall sick and can't take an exam, you have to get a doctor's note saying that you are unable to take the exam and hand it in to the examination office within three days. With that, you will not lose an attempt for the exam.

### You Shall (not) pass!?

You took your written exam, you have a great feeling about it, but then BASIS shows a grade you weren't expecting. Don't worry, there are things you can do. Whether you failed or pass, the first thing you should do is go to the post-exam review. There you can have a look at your exam, see where you went wrong and ask the tutors and lecturer about it. Sometimes you can even find an error in the correction and get the points that are due to you. Most of the time, the lecturer will organize a date for everyone, but if you can't make it, don't hesitate to ask for a different date. If the lecturer does not organize a central date and also does not want to schedule individually with you, you can always get your post-exam review at the examination office.

To attend a post-exam review you usually need your passport (or something comparable) and possibly also access to your digital student ID. In case you are doing the post-exam review for another student you also have to bring written and signed confirmation that you are to attend the post-exam-review for that student. If you plan to send someone in your stead it is also nice to send a mail to the lecturer beforehand informing them that someone will come instead of you. In case you aren't too secure in the material it is also usually possible to bring another person with you to the review to review the exam together.

Within a post-exam review it is always good to first check if the points have been added up properly. They usually are, however on the rare occasion that some (sub)exercise was missed you could have a significantly better grade than expected. After that you can check where points were deducted and if

anything is unclear to you ask what you did wrong. If you are very close to getting the next best grade it can sometimes be worth it to discuss if you lost any points unjustly.

**Failed Exam** Alright, you know where you went wrong, but the exam is still failed. If you failed the first, you can take the second exam. And even if you fail that one too: Each exam can be taken 3 times until you terminally fail it. This means that you can take each exam 3 times.

**If you fail an exam in a compulsory module 3 times you will be expelled from the master cyber security** and will no longer be able to study a master of cyber security in Germany. The same happens if you fail your masters thesis twice. Don't worry, it is very rare that people get expelled. However if you are approaching your third attempt in any exam make sure you are prepared for it as best as you possibly can.

In contrast to this if you fail an exam in an elective compulsory module 3 times you have terminally failed that module and can not attempt the exam again. However if there are still enough other modules so that you can reach the credit point requirements for each section of the elective compulsory modules you can simply continue your studies with different lectures.

**Bad Grade** You passed your exam in an elective compulsory module with a grade that you aren't happy with and the post-exam review brought insight, but no missing points. No problem, you can fix that! For three of the courses you pass during your first three semesters, you may be able to apply for an improvement-exam. For this to be possible you must pass the exam in the first exam period that semester. You can then apply for the second exam in that same semester and will receive the better of the two grades.

Note that you can only improve grades of written or oral exams. Labs, seminars and the thesis cannot be improved.

With this information, you should be able to get through your exams. A warning at the end: If you are caught cheating in an exam, you automatically fail it. Depending on the severity of your cheating, you might even be expelled and have to pay a fine of up to 50 000 €, so don't cheat.

# Master of Life Science Informatics

The M.Sc. Life Science Informatics is affiliated with the Bonn-Aachen International Center for Information Technology. Life Science Informatics is offered jointly by the University of Bonn and RWTH Aachen in cooperation with the Fraunhofer Institutes at Sankt Augustin near Bonn. The program combines the natural sciences with computer science and is taught in English.

## Lectures

There is a catalog of compulsory subjects that must be completed. From a selection of elective subjects, it must also be possible to accumulate a certain number of credit points over the entire course of study. Unlike other degree programs, the university provides a timetable for each semester, which includes the suggested division of subjects.

### 1. Semester

Mathematics for Life Scientists*	3 CP
Computer Science for Life Scientists*	9 CP
Bioinformatics I	3 CP
Biological Databases	6 CP
Biology and Chemistry for Life Scientists*	7 CP
LSI Tutorial (lab, optional)	6 CP
Optional Courses from the Module Catalog	* CP

\*For students with a degree in Computer Science, "Mathematics for Life Scientists" and "Computer Science for Life Scientists" are optional subjects. For students with a degree in Life Sciences, "Biology and Chemistry for Life Scientists" is an optional subject. You may replace the modules optional for you with other modules from the module catalog.

The LSI Tutorial is a programming tutorial that is meant to help students with a background in natural sciences to improve their programming skills. It starts at a very basic level and accompanies the Computer Science Lecture.

### 2. Semester

Visual Computing in the Life Sciences	6 CP
Molecular Modeling and Drug Design	6 CP
Biomedical Data Science and AI	6 CP
Programming Lab I	8 CP
Scientific Presentation I	4 CP

### 3. Semester

Programming Lab II	8 CP
Chemoinformatics	7 CP
Optional Courses from the Module Catalog	17 CP

### 4. Semester

Master thesis	30 CP
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Another difference to other degrees lies in the administration of the course. Most lectures aren't available on e-campus and the registration for exams and lectures is done paper-based. Information is provided by the LSI exam office in time, so don't worry about that!

Due to the small group size, the mentoring is much more intensive than in degrees with 100 or 150 students!

The program's website provides a lot of information regarding the study course and administrative information as well (<https://www.b-it-center.de/b-it-programmes/msc-in-life-science-informatics/description>).



Entrance to B-IT Center at  
Friedrich-Hirzebruch-Allee 6

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# BASIS – Planer for your studies

BASIS (<https://www.basis.uni-bonn.de>) is a website that is important for all students. It does not only include the course overview, but is also used to apply for exams and view the results. Let's take a closer look at it!

To log in to BASIS, you use your Uni-ID and the associated password. On page 19 we explain where you can find them and how you can activate them.

You might want to switch the language to english (if it isn't already) by clicking the Great Britain flag on the upper right.

The institute has provided a short guide on how to register for the exams. You can find it under <https://www.informatik.uni-bonn.de/en/for-students/registering-exams-in-basis>.

### Overview of functions

After signing in, you will be taken to "My Functions". Most of them are self-explanatory. Nonetheless, here is a quick explanation:

**Course Schedule** A link to your schedule that is automatically generated from the courses you pre-select.

**My Degree program curricula** A schedule that shows all courses that are available to you in the current semester.

**Registration/Unregistration of Lectures** Here you can apply for courses where the number of participants is limited. At computer science we have a different system for this, so you will probably not need it.

**My courses** An overview of the courses you have taken.

**Registration data (PDF)** Generates a pdf file with the courses you have taken so far. Most computer science lectures, however, do not use this system.

**Examination registration and withdrawal** Later in the semester you will have to register for exams through this panel. The exact date for application varies from semester to semester and can

be found at <https://www.informatik.uni-bonn.de/en/for-students>. It is also announced via e-mail. You can also step down from the exam here without giving a specific reason up until one week before the exam. After that you can only step down if you have a sick note from your doctor.

**Information on registered examinations** A list of all exams you signed up for, as well as the status of your application. You should check this after registering for your exams to see if everything worked, and also at the end of the lecture period to make sure you were admitted to all of your exams. If something seems off, talk to your lecturer or the examination office.

**Transcript of Records** After the exams you will find your score with all exam attempts and their results here. In addition to that, you can view your credit points and grade average. If needed you can export these into a pdf file.

### How to build your own schedule

To get information concerning courses available for the next semester, go to the term picker in the top right of BASIS. Choose the upcoming semester, then go to the Course Overview → Course Catalog → Informatik, Life Science Informatics und Media Informatics and navigate to your respective program → Life Science Informatics OR Master Computer Science (→ [your track]). There you will find a list with all available modules for that semester.

BASIS has a built-in tool to create your schedule, but it does not work very well, so we usually advise to use pen and paper or digital spreadsheets instead.

### Questions regarding BASIS

If you have questions regarding BASIS, you can of course always ask us, the student body. In many cases, we will however refer you to the technical support for BASIS at [info-hrz@uni-bonn.de](mailto:info-hrz@uni-bonn.de) or the BASIS coordinator of Computer Science at [pos@informatik.uni-bonn.de](mailto:pos@informatik.uni-bonn.de), so you can also contact them directly.

## HISinOne – Studienservice

A lot of paperwork for your studies can be done via [studien-service.uni-bonn.de](https://studien-service.uni-bonn.de). As soon as you are logged in (and have switched to english in the upper left corner), click on the green box labeled "Study Service".

**Personal data** Your matriculation number and other data are shown here.

**My degree program(s)** Here you can see, for which program(s) you are currently enrolled and in which semester.

**Contact data** If you ever move houses, you can change your address here. Then all mail from the student registry, especially your student id with the semester ticket will be sent to the new one.

**Bills and payments** Here you can look up the semester fee height and deadline for the upcoming

term and the uni's bank data and check whether your payment has been received.

**Notices and certificates** Here you can download your certificates of enrollment for the current and past semesters.

### Applications

If you are looking to switch to a different program or add a second one, you can apply for admissions via HISinOne by clicking the red box labeled "Application" on the home page.

#### Confusion about Accounts

When you applied for your current masters program, you have already used HISinOne and created an account for it. This was your *applicant account*, it can no longer be used for managing your studies. Please use your *student account* instead. On page 19 we explain to you how to find and activate it.

## Tools and IT-Services

### Two different accounts

All students get a general account from the university, the **Uni-ID**. It will be your login for all centralized services, like BASIS (see page 18) and eCampus (see below). With this account you can manage your studies in general.

#### Account activation

After enrollment, you can download your credentials in the application system. They will look a bit like this: "s23xabcd" and a random initial password. To activate this account you have to enter them at *GOsa*<sup>2</sup> (<https://gosa.gosa.uni-bonn.de>). There you will also be able to change your password and to enter a private mail address for quick password reset in the future.

On top of that, you get a **CS account**, which is needed for VPN (see below) and computer pools (also called CIP-Pools, see next page).

To apply for one you have to follow the instructions here <https://gsg.informatik.uni-bonn.de/doku.php?id=en:accounts:students:manage>.

With this account you get access to a few services specific to computer science.

### Your E-Mail-address

Your uni-account comes with an e-mail account. The address is *s23xabcd@uni-bonn.de* with your uni-ID respectively. We suggest checking this inbox frequently, as you will receive official information from the uni there.

To read your mail in a browser go to <https://mail.uni-bonn.de/>. You can also add it to clients like Thunderbird. For this, please make sure your client does not save login-data in a cloud (see [https://www.hrz.uni-bonn.de/en/news/abruf-durch-unzulaessige-e-mail-clients-gesperrt?set\\_language=e](https://www.hrz.uni-bonn.de/en/news/abruf-durch-unzulaessige-e-mail-clients-gesperrt?set_language=e) for further info).

By the way: If you do not like your Uni-ID, you can set up to two aliases in *GOsa*<sup>2</sup>. All e-mails to those aliases will be delivered to your inbox as well.

### eCampus

The university hosts a central eLearning platform called eCampus, where lecturers can upload all relevant data for their courses, including slides, exercise sheets, etc. Often you will even hand in your finished exercises through uploads to the eCampus system.

Many CS lecturers prefer using their own homepage instead. You will then be able to either find a link to their page in the eCampus course or it will be provided during the first lecture. **Important:** For many of those sites, slide downloads will be password secured. Be sure to either take note of that password during the first lecture or get it from fellow students at the beginning of the semester.

### TVS - exercise assigning system

A lot of lecturers at CS use TVS, a system that helps assigning students to exercise groups. At <https://tvs.cs.uni-bonn.de> you can register using your matriculation number and then pick your preferences for the exercise timeslots (separately for each course). The system will automatically create a distribution, meeting as many preferences as it can, while making sure you won't get the same time slot for two different courses. In some courses you might be able to form small groups in advance that share the same preferences and will be assigned together. This way you can assure you and your study group will be in the same exercise group.

### Internet access: WLAN here, WLAN there

One of the most frequent questions is: How can I access the web on campus?

First you will of course need a WLAN (or Wi-Fi) connection. Depending on exact location, the networks have different names: bonnet, bonnet-stw, eduroam, eduroam-stw, eduroam-cs and eduroam-math are few of the common ones.

Some of these are open, unencrypted access points, which everyone is allowed to connect to. However, this does not automatically give you an internet connection. For that, you will need a VPN client. (see next section)

An exception to that are the eduroam networks. These are encrypted with WPA Enterprise. To connect to them you have to log in with your uni account, but do not need a VPN client. (see page 22)

### VPN

At the uni Bonn you need VPN (Virtual Private Network) for two different things:

- Accessing the internet via WLAN
- Accessing the universitys intranet from home

What makes it a bit confusing is that the uni and the CS institute are (again) using two different VPN systems. In most cases it should not matter which of the two you are using, unless trying to access information specifically for CS only. If you are having trouble with the VPN for web access we recommend trying the eduroam WLAN (see page 22) instead.

**CS-VPN:** The institute of computer science uses the open source system OpenVPN. To access the institute's intranet via OpenVPN, you require a profile, or certificate, which can be requested and downloaded via the b-it / IoCS User Management Interface. To authenticate, you will need to use your CS username and password. The GSG website offers step-by-step instructions for different OS here: <https://gsg.informatik.uni-bonn.de/doku.php?id=de:vpn>

**Uni-VPN:** The uni uses a system by Cisco, on which there are various opinions. Some students connect through it without any problems, while others experience frequent errors and suddenly lost connections. Another issue is that there is no Cisco client available for some systems.

The website of the HRZ (link box below) offers client downloads for Windows, Mac OS and Linux. There you will also find detailed tutorials for each OS. Once the client is installed, enter either <https://unibn-vpn.uni-bonn.de> if you want to access the intranet from home or <https://unibn-wlan.uni-bonn.de> if you want to use it for WLAN access.

### SSH Tunnel

When you don't need a full VPN, but only want to access a few intranet services real quick, you might find SSH (Secure Shell) useful. SSH is a usually text-based tool with which you can execute command line expressions on an external server instead of your own computer.

For that, you will need your CS account. To set it up, we recommend the tutorials from the GSG: <https://gsg.informatik.uni-bonn.de/doku.php?id=en:ssh>

## Computer pools

The institute for computer science has a bunch of CIP-Pools. Accessible for students are two Windows pools and two Linux pools in the basement of the computer science building (see map, page 36). To log in to the computers there, use your CS account.

To enter the CIP-Pools you will need a code to type in at the door.

### door code

Found out the code through asking or dark magic?  
Take notes here!

The pools also offer a scanner and printer. Per month, you get 50 pages of print credit added to your balance. If you don't use them all they stack for the next month, up to a maximum of 300 pages. As an alternative you can print at the libraries, paying with your mensa card.

Besides the pools at the CS building, the libraries offer some public computer workstations as well, you can log into those using your Uni-ID.

## Books and journals online

The Institute has a subscription for the IEEE Computer Society Digital Library and ACM Digital Library, that can be retrieved online. This can be useful when you are required to read academic articles for seminars.

On top of that, the ULB library has a couple more subscriptions from the computer science field. Those are often also available in digital form.

Please note that the access is IP secured and you have to either be on campus or use a VPN (see previous page).

### Weblinks

- ❶ <https://ecampus.uni-bonn.de>
- ❷ <https://tvs.cs.uni-bonn.de>
- ❸ <https://mail.uni-bonn.de>
- ❹ <https://www.hrz.uni-bonn.de/en>
- ❺ <https://gsg.cs.uni-bonn.de/>

### Useful Tools

**IDE** There are a lot different IDEs and opinions on IDEs. There is no real right or wrong here and the choice highly depends on the programming language and project at hand. Nonetheless, here are a few recommendations:

For Python you might choose the Community Edition of *PyCharm* ([www.jetbrains.com/idea/](http://www.jetbrains.com/idea/)) by JetBrains (open source). JetBrains also offers a bunch of other IDEs for different programming languages.

If you are searching for a more lightweight solution, you should take a look at *Visual Studio Code* ([code.visualstudio.com/](http://code.visualstudio.com/)) or the variant without Telemetry, *VsCodium* ([github.com/VSCodium/vscodium](https://github.com/VSCodium/vscodium)). This editor offers a large library of extensions, which can be added as required and in this way provides support for almost every programming language.

**LaTeX** is a well known typesetting engine, an alternative to Microsoft Word or LibreOffice Writer. LaTeX is especially popular for writing academic documents, as it is very versatile and provides a good formula editing system. Most students will encounter it sooner or later, so it might be worthwhile checking it out, e.g. with [urloverleaf.com](http://urloverleaf.com). By the way: This magazine was also made using LaTeX.

**GNU/Linux** is used a lot at university, so it's good for Windows users to familiarize themselves with the system. A good start is the distribution Ubuntu, which is especially suitable for beginners. This is also the one used in the Linux pools. Those who want keep using mainly Windows or Mac can set up a Virtual Machine instead, e.g. with *Virtual Box* ([www.virtualbox.org/](http://www.virtualbox.org/)).

**Git** Git (e.g. via [github](https://github.com), [gitlab](https://gitlab.com) or [gitea](https://gitea.io)) is commonly used for working together on coding projects, including version control. For beginners we recommend [ohmygit.org/](https://ohmygit.org/) and the various "git cheat-sheets" on the web.

# eduroam



## eduroam

(Education Roaming) is an originally a European, now world-wide initiative. Eduroam gives staff and students of participating universities and organisations internet access via WLAN at all of these facilities, using their personal username and password or a personal X.509-user-certificate from a valid PKI.

### Where can I use it?

You can connect to the eduroam WLAN access points at all participating facilities. Those usually have the network name (ESSID) "eduroam" or contain that word and a specification, like eduroam-cs at the CS building or eduroam-stw for those hosted by the student administration.

### How does it work?

First, you should go to [cat.eduroam.org](http://cat.eduroam.org). There, choose the university of Bonn as your organisation and download the configuration relevant for your OS. This site also has some instructions, but we will also go over them on this page.

You will need your Uni-ID for this. Refer to page 19 to find and activate it.

**Android** From the PlayStore (or as .apk) install the app getEduroam (Android 8 and higher) or EduroamCAT (Android 7 and lower). In the app, choose Universität Bonn, then enter your Uni-ID and password.

**Apple Devices** Download the configuration file and confirm. In settings, search for something called "Profiles" or "VPN and certificates". Install the eduroam certificate and enter your Uni-ID (with @uni-bonn.de at the end) and password *five times in a row*.

**Windows** Download the configuration tool and open it. Enter your Uni-ID and password. On first connection, Windows Security might prompt you to enter a user and password again, for that use your Windows user and password, not your Uni-ID.

**Linux** Download the eduroam python script. Open a Terminal and enter this command:  
\$ python3 PfadWoDasCATLiegt/eduroam-linux-Universitat\_Bonn.py

Enter your Uni-Id and password when prompted.

**Caution!** Some Linux systems throw an error, saying they are missing wpasupplicant. *Do not proceed* in this case or your password will be saved unencrypted! Instead, go to the IT-Helpdesk (see below), they have a different script with a workaround.

**Alternative: Manual Setup** If the above tools fail, you can set up eduroam manually. This is not a recommended method though.

For this, you need the matching CA certificate. You can download it here:  
<https://pki.pca.dfn.de/eduroam-ca/pub/cacert/chain.pem>

In your network manager just copy the parameters below. You might have to change eduroam to eduroam-cs (CS building), eduroam-stw (cafeteria) oder eduroam-math (maths center).

SSID	eduroam
Security	WPA2 Enterprise
EAP-Method	TTLS
Phase 2 Authent.	PAP
Certificate	chain.pem
Anonymous Identity	anonymous@uni-bonn.de
Identity	<Uni-ID>@uni-bonn.de
Password	matching your Uni-ID
Domain	hrz.uni-bonn.de

### What if it doesn't work?

In case that you are having trouble setting up your eduroam access, you can find more detailed instructions and useful tips on the HRZ website: <https://www.hrz.uni-bonn.de/en/all-services/internet-network-access/wifi-eduroam-reinstallation>

If it still does not work, come by the student body office or contact the IT-Helpdesk. The latter is open monday through friday 8 a.m. to 6 p.m. and can be called at 0228 73 2751, e-mailed at [info-hrz@uni-bonn.de](mailto:info-hrz@uni-bonn.de) or you can go directly to Wegelerstraße 6.

For the eduroam-cs (CS building) you might need to download a different certificate. It's called GEANT OV RSA CA 4 and can be downloaded on the website of the GSG.

# sciebo - the campus cloud



## University Cloud Storage

Sciebo (from SCIENCE and BOx) is a non-commercial cloud storage service (similar to Dropbox or Google Drive) for research, studying and teaching. It is operated by universities and receives funds from the NRW government, with an operators guarantee that there is no commercial interests. With locations in NRW exclusively, sciebo is subject to the strict German directives on data protection and data security.

Every student and staff member of the participating universities receives 30 GB storage space. You can share your data with other sciebo users or via a link with external people.

## Create a sciebo account

To create a sciebo account, go to [sciebo.de](https://sciebo.de) and register by picking "Universität Bonn" as your organisation, log in with your uni-ID (s12xabcd, see page 19) and matching password once. Then choose a sciebo password. This can (and should) differ from the one for your Uni-ID. From now on you can log into sciebo with that new password, using <your Uni-ID>@uni-bonn.de as your username.

The account has to be renewed every year. You will receive an e-mail asking you to confirm you still study at Uni Bonn.


## Using sciebo

There are multiple ways to use sciebo:

**Webinterface** The easiest way to use sciebo is via your browser. Sciebo offers a web interface, which can be found at [uni-bonn.sciebo.de](https://uni-bonn.sciebo.de). Just log in with the account you just created.

**sciebo via a client** For many operating systems you can download a sciebo client. Because sciebo is based on ownCloud, all ownCloud clients will work for sciebo as well and might offer more features than sciebo clients. In addition to that, sciebo can be embedded as a network drive via WebDAV.

## Sharing files or folders with others

If you are using sciebo in a browser you can go to fileview and click on the symbol . There's two options: Either you share the file with a specific Uni-ID (the other person must have a sciebo account) or via a link. In the latter case the other person does not need a sciebo account, everyone with the link will be able to access the file(s). Don't worry though, you can put a password and/or expiry date on the link.

## Editing documents in browser

When using sciebo in browser you can edit documents, presentations or spreadsheets from Microsoft Office or Libre Office directly in browser. In theory you can also work simultaneously with other users in this way, but the features are rather minimalistic. For projects where you need to work in real-time with you fellow students on a file we recommend using products specialized for that instead, the sciebo editor is just not technologically mature enough yet.

### Weblinks

- ❗ <https://sciebo.de/en/index.html>
- ❗ <https://www.sciebo.de/en/help/>
- ❗ <https://www.sciebo.de/en/help/index.html>
- ❗ <https://uni-bonn.sciebo.de/>

# Administration

### First Steps

A great place to start is the AStA website. It provides you with a lot of useful information, such as the AStA-BAföG brochure, a scholarship guide, and, if you are financially strapped, short loans.

If you have any questions, you can contact the AStA via e-mail, phone or social media. They also do consultations in person in their container offices next to the cafeteria. The current opening hours of e.g. the social department or international students departments are announced on the website as well.

For international students, there is also the International Office of Uni Bonn, which provides counseling related to studies and stay in Bonn.

### BAföG

Everyone who thinks they might be entitled to receive educational support under the Federal Training Assistance Act, or Bafög for short, should submit an application to the Bafög office as soon as possible. Bafög is a financial support from the government for students, of which, however, half must be paid back after the completion of studies. If you are from the EU or from Norway, Iceland, Switzerland or Liechtenstein, you can always apply for Bafög. If you are from some other country, there are very special regulations regarding Bafög entitlement. Therefore, it is best to ask the Studierendenwerk directly! If you are not sure, you should simply ask and just apply. Better to be safe than sorry. If you are entitled to Bafög, you should in theory receive money starting from the month of application, but it usually takes time to process an application. But once accepted, you will get your money retroactively.

So: Submit an informal application or Form 1 of the application forms in time, and the application will be considered to have been submitted. The forms are available at the AStA, as well as at the Bafög office. An informal application could look like this: "I hereby submit an application for educational funding as of dd.mm.yy. I will submit the required documents within the next two months. I was born on ... I have been/will be studying since/as of ... at the University of Bonn in the Department of Computer Science. Please send me the required documents immediately."

Payments are usually made at the end of each month for the next. The amount you receive is 50 percent an interest-free loan, the other half

you get as a grant. The maximum duration of the grant is based on the expected period of study (4 semesters/2 years with our Master's programs), although there are exceptions to this rule. These can include, for example, study visits abroad or committee activities such as student council work. The continuation of payments after the fourth semester is linked to performance records and other requirements. It is therefore worthwhile to get informed.

For further questions, you can contact the Bafög office or the Bafög advice service of the AStA. There is also a Bafög calculator on the internet, which you can use to calculate how much you might receive: <https://www.bafog-rechner.de/Rechner/>

If you receive Bafög, you can also relieve yourself financially by applying for exemption from broadcasting fees.

### Scholarships

If you demonstrate above-average performance, you can apply for a scholarship. A scholarship means financial and idealistic support as well as being part of a network.

The Federal Ministry of Education and Research promotes 13 scholarships for the gifted. Each scholarship is different: different backgrounds (political, religious, independent), different goals, different requirements. But financially, they all offer the same thing: As a scholarship holder, you receive a monthly tuition allowance of 300 euros, and, if you are eligible for Bafög, the Bafög rate on top of that. In addition, there is a wide range of seminars, events and other activities on various topics, which are definitely worthwhile and, if you were to pay for them yourself, would cost a lot of money. These vary between scholarships, so be sure to compare and see which suits you best.

To get a scholarship, you have to apply and participate in a selection meeting. Here you score points mainly with your achievements, but also with voluntary and political commitment. Even if you think you won't get it - try anyway, it's worth it.

### Residence Permit

If you are not from the EU, you must apply for a residence permit after your arrival in Germany. This should be done as soon as possible, but in any case within the period of validity of your visa, so that you do not run the risk of suddenly being in Germany il-

legally. You can apply for a residence permit at the foreigners' office in the city where you live.

At many foreigners' offices, it is necessary to book an appointment online. Attention: It is possible that an interpreter has to be brought along for the personal appointment. If you do not speak German, you could take a German-speaking fellow student with you, for example.

## Registration in Bonn

As soon as you have found a room, a visit to one of the citizens' registration offices is mandatory. You should have registered or re-registered there no later than two weeks after moving in. Here you also have to decide whether you want to register your main residence or secondary residence in Bonn. In most cases, the place of study is considered the main residence by the Residents' Registration Office, since students usually spend more time there than, for example, with their parents (if they live in Germany). However, if your main residence is not too far away from Bonn and you state that you spend the weekends and semester breaks there, you should not have any problems with the registration of Bonn as a secondary residence. But beware: In Bonn there is now a tax on secondary residences, so research the costs in advance.

## Welcome gifts

If you don't care where you are registered, you will be rewarded by the city if you choose Bonn as your main residence with a book of vouchers for e.g. theatres, museums and the swimming pool. These are only valid in your first year though. In addition, there is the possibility for students who are financed by BAföG to apply for the so-called Bonn identity card. This also offers some benefits. Applications can be made at the Social Welfare Office in Beuel, in the old Duisdorf Town Hall and in the Bad Godesberg Town Hall. For some students, however, registering their primary residence in Bonn can lead to the loss of a child allowance for their parents, depending on their income. So it is best to ask around before you make a final decision. By the way, when registering your residence, you can specify that your data may not be passed on to political parties (for example, if you do not want to receive mail from a party you do not like).

## Health Insurance

To study in Germany, you must have health insurance. Note that in Germany there are public and private health insurance companies. Examples of public health insurance companies are

AOK, BARMER, DAK, HEK, KKH and IKK, but there are many more. Membership can often be applied for online. If you are from the EU, you can get an EHIC European Health Insurance Card from your health insurance company in your home country, with which you can register with a German health insurance company, which will then provide an insurance certificate for the university. Make sure that your health insurance covers all treatment costs in Germany; a health insurance with a limitation of the treatment costs or the obligation to pay benefits will not be recognized in Germany. There are also contracts with the following countries regarding the recognition of the home country health insurance: currently Bosnia and Herzegovina, Northern Macedonia, Montenegro, Serbia, Tunisia, and Turkey. If you come from a country with which there is no social security agreement, you must be insured with a German health insurance company. With all the different regulations, it is normal to be confused at first. Don't worry and when in doubt, just ask your insurance company!

## Language Courses

The Language Center of the University offers language courses in German for foreign students. Registration is done online. If you want to take part you have to be quick: Especially the spots in beginners' courses are usually booked up very quickly.

## Let's go!

If you want to or have to work while studying, you should read up on things like social security obligations or the maximum income limit for continuing to receive child benefits (see AStA's social info).

So good luck in the jungle of regulations, and don't panic there are a lot of people and places that will be happy to help you.

### Weblinks

- ❶ <https://www.asta-bonn.de/AStA>
- ❷ <https://www.studierendenwerk-bonn.de/en/financing/>
- ❸ <https://www.uni-bonn.de/en/studying/international-students>
- ❹ <https://www.uni-bonn.de/en/university/organisation-and-institutions/university-administration/international-office>

# Accommodation in Bonn

For most, the words apartment search will sound daunting at first, but - don't panic, there are plenty of ways to find a cozy and affordable apartment.

### You want to live in a dorm room?

On the one hand, you can apply for a place in one of the currently 29 dormitories of the Studierendenwerk. It is best to collect information about the respective dormitories, because the apartments (ahem, rooms) and their facilities differ greatly: For example, there are rooms with their own "kitchen" and "bathroom" (these are the apartments) or those in which you have to share one with other students. The location is also important. Tannenbusch or Bad Godesberg are not recommended for everyone, as those parts of Bonn have a reputation to be "rougher" neighbourhoods.

Meanwhile, all dormitories in Bonn are directly connected to the university network via fiber optic leased line and thus also to the Internet. However, in order to use the WLAN in the dormitories, you will need your own router. Information about the individual dormitories as well as the application forms can be found on the homepage of the Studierendenwerk.

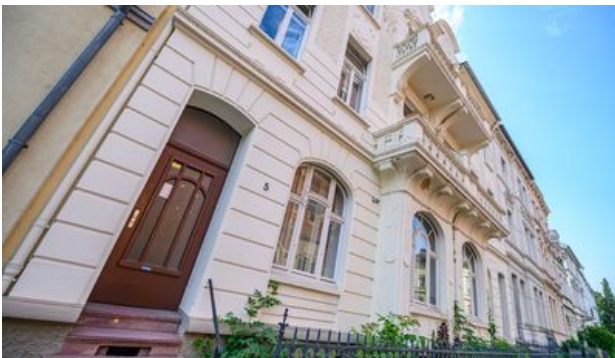


Foto: Studierendenwerk Bonn

After your application, you will hopefully soon receive an offer of an apartment. If not, it may be worthwhile to check with the student union, as the lease might have gone missing. This has all happened before. While your request is being processed, you will receive an email every month asking you to confirm that you are still looking for a place in the dormitory. If you do not do this, your request will not be considered further.

### Offers from the city, university and AStA

"Zimmer frei?!" is a joint campaign by the AStA, the universities, the city of Bonn, the Rhein-Sieg district and a number of partner institu-

tions to draw attention to the problematic housing situation of students. On the Internet portal [www.zimmerfrei-bonn.de](http://www.zimmerfrei-bonn.de), students and housing providers are brought together. Here you can find private housing offers and information on finding housing in Bonn.

A short-term accommodation option for those looking for housing is offered by the "Sofa frei?!" project of the AStA. Here you can stay with other students for a few days, according to the principle of couchsurfing, while you are looking for your own apartment, or offer a place to sleep to people who are looking for an apartment. Offers can be posted and accessed at [www.sofafrei-bonn.de](http://www.sofafrei-bonn.de).

Further offers can be found in the university handbook of the AStA.



Foto: Studierendenwerk Bonn

### The free housing market

Experience shows that the situation on the housing market becomes much more difficult shortly before the start of the semester. Therefore, you should start looking for an apartment as early as possible. If you pay the rent a month earlier, it's peanuts compared to what you might pay for a more expensive room rented late. When the start of lectures is approaching, it can also be worthwhile to take a small or expensive room first, rather than not get one at all. Usually you should find a suitable opportunity by Christmas at the latest.

For those who want to try their luck on the free housing market, here are some more places to go: Mondays, Wednesdays and Fridays the Annonce, the General-Anzeiger, the Bonner Anzeigenblatt (Wednesdays and Saturdays), WG-Gesucht, the Schnüss with WG offers and of course the

countless notice boards in the refectories, cafeterias, institutes and in the main building. eBay Kleinanzeigen also has a section for rental requests and offers, but be careful with sketchy offers here.



Foto: Studierendenwerk Bonn

The Studierendenwerk also offers a free room service. Either you call them (see address section) or you browse through their folders for suitable rooms or apartments. Foreign students who will probably

be studying in Germany for a longer period of time are best advised to contact the International Office.

Some things to watch out for: In Germany, renting with furniture or even a kitchen is not the default. If you do not want to bring your own, look for the keyword "möbliert". One common trick here is the kitchen. A lot of the time, there is a kitchen owned by the person renting before you that you can have at a usually overpriced rate. The idea is that among multiple applicants, the person willing to pay for that gets the apartment. Always assess the kitchen quality carefully and ask if you may rent without taking the kitchen.

### Weblinks

- ❗ <https://www.wg-gesucht.de/en/>
- ❗ <https://www.studierendenwerk-bonn.de/en/accommodation/>
- ❗ [https://housinganywhere.com/?utm\\_source=StudentenWG](https://housinganywhere.com/?utm_source=StudentenWG)

## Free time

### Experience culture

As a student of the University of Bonn you automatically have the **Kulturticket** of the AStA. With it you can go to theatres and musicals for only 3, to many of Bonn's museums for free and for 2,50 to events of the Literaturhaus. Just show your student card at the box office! <https://asta-bonn.de/de/referate/referat-fuer-kultur-und-studentische-initiativen/kulturticket-1>

### Create culture

There are a bunch of self-governed cultural groups at uni Bonn and a lot of them will be happy to welcome you as their member. How about, for example making music with the university orchestra, jazz choir or the big band, or playing theatre with the Bonn University Shakespeare Company? For rhetoric artists, the university also has its own debating club!

<https://www.uni-bonn.de/de/universitaet/unileben/forum-musik/ensembles> <https://busc.de/> <https://debattierclub-bonn.de/>

### Being outside

Bonn offers many opportunities to be out in nature. Whether you like spending a relaxing afternoon in the Hofgarten, jogging through the Rhine meadows in the morning or taking a hike up to the Drachenfels.

<https://hikingsocietybonn.wordpress.com/>  
<https://www.radius.uni-bonn.de/>

### Univerity Sports

The university sport offers students both the Halle5 gym and a wide range of courses in and around Bonn. Whether athletics, team sports, martial arts or dance, here you'll find over 90 different sports at low student rates.

<https://www.sport.uni-bonn.de/>

# Student Transit Ticket

### Important Notes

To use your semester ticket, you need the Uni Bonn App **and** your **valid** photo ID card or passport! If you don't carry both, your ticket is invalid. It's a personalised ticket.

The Uni Bonn App also contains your transit ticket for Germany. It is valid in the whole country and much cheaper than if you would buy one by yourself, due to all students receiving one. It still makes up most of your social dues. Even if you do not intend to use it, you have to pay for it, but in case you have trouble paying for it or due to special circumstances, you may be eligible for a refund.

### Weblinks

! [www.asta-bonn.de/Studiticket](http://www.asta-bonn.de/Studiticket)

ing station and over the course of 20 minutes starting at the planned departure time nothing can get you to your planned destination (the next hop, so only direct connections count), you can either get the costs of a taxi or of a long-distance train refunded. You have to pay in advance and can then hand in an application for the refund within two weeks. The applications must contain a receipt, so keep that in mind. Additional information as well as the forms are available here (in German): <https://www.mobil.nrw/service/mobigarantie.html>.

### What can I do with it?

In general, you can use all trains, trams, subways and busses in Germany. **Exempt** are long-distance trains of the categories ICE (InterCity-Express), IC (InterCity), EC (EuroCity), FLX (Flix-Train) or Thalys, for example. You also may not use the first class, not even by paying an additional fee.

### What is the mobility guarantee (“Mobilitätsgarantie”)?

In public transit in NRW you have the mobility guarantee. This means that, if you are at your start-

### Nextbike

You might have noticed the blue bicycles with a QR-code on them. These are rental bikes from Nextbike! The University of Bonn has a contract with them: If you register in the App with or deposit your ...@uni-bonn.de mail (and verify it) you get 30min per day (distributable over multiple sessions) in Bonn for free. After that you pay 1 per 30min (up to 8 per day).

**Careful:** You have to return the bikes in the preassigned areas, else you will be charged a 20+ service fee. More information can be found on their homepage <https://www.nextbike.de/bonn/en/>.

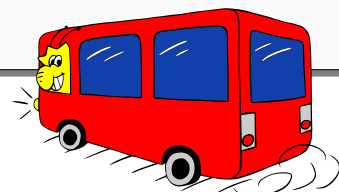
### Riding Busses as a Computer Scientist 101

Most of your lectures and exercises will take place on the Campus Poppelsdorf.

At the station “Kaufmannstr.”, lines 604 to 607 stop, at the station “Am Botanischen Garten” lines 601, 602 and 603 stop. All seven lines are main lines that run every 20 minutes (later every 30 minutes). Into the city, they all go via the central station (Bonn Hauptbahnhof/Bonn Hbf); out of the city, they split up.

At the station “Nußallee” you can take line 632, that also stops at both other stations. This (like all bus lines in Bonn that start with 63·) is a tangential line that does not stop at the central station. It only runs every half hour, but it connects the Campus Poppelsdorf with the Campus Endenich.

After 00:00 (12 a.m.), night busses run till 2 a.m. on weekdays or the whole night on weekends and public holidays; the N2 at the station “Kaufmannstr.” and N5 at “Am Botanischen Garten”.



## Bars and culinary delights

Now that we have brought you closer to everything you need to know about studying, there is another list for you. This one is special, though because it only deals with your physical well-being.

No matter whether you have a nice meal with your partner, partying through the night or going through the pubs with friends, here you will find the most important pubs, clubs and culinary places in Bonn.

By and large, most of the spots focus on two areas: the "old town" (Altstadt) and the city center.

### "Old Town" (Altstadt)

Bonn's old town shines with its charm through old, small streets, old, small houses and of course old, small pubs. The best way to find something suitable here: Just try it out! The pubs are all so close to each other that nothing stands in the way of stumbling happily from pub to pub.

A good way to start exploring is by begin a tour at the intersection Maxstraße-Breite Straße. Right at the corner lies the **Kult Kiosk** that offers a nice place to meet up. You can then continue to work your way through either along Maxstraße or Breite Straße and you will find a bunch of bars to the left and right. The following is a small selection that by no means claims to be complete and does not have to be perfect for everyone - but it does offer a good overview of the old town.

The **Babel** is a small pub on Breite Straße, deep in the heart of the old town. Typical for pubs they offer Kölsch, Pils, wheat beer and a football table. Similar pubs near to this one are the **Embassy**, which offers spicy Mexikaner shots as well as Tequila, and the **Steinbeck**, a good place to try out different Whiskeys and Rums.

The **Pinte** is, like the Babel, a small pub. In addition to the usual stuff there are different polish beers and Schnapps here. Not generously spacious, but pretty cozy.

The **Flynn's Inn** is a small Irish pub on Wolfstrasse. In addition to Irish beer (Guinness and co.) there is a *huge* selection of Whiskeys from Ireland, Scotland and England.

Another notable Irish pub is the **Dubliner**. This pubs specialty are regular events like live-music. Also, very popular are karaoke nights on Saturdays and Sundays. One of its highlights is the **Dop-**

**pelmittwoch** (double Wednesdays) with pub quiz as well as karaoke until very late at night.

One popular venue for international students is the **BillaBonn** which offers good beer, cheap cocktails, many tables as well as a lot of space in front of the pub. At the same intersection lies the **Tresor**, offering Metal/Hardrock/Alternative music as well as Caribbean cocktails at **Coco Mango**.

For all music fans, instead of going to the **Tresor**, the nearby **Musiktruhe** and **Stachel** could be a good place to visit. While the Musiktruhe shines with CD-Rock, Darts and Pool, the Stachel offers basement charme, sitting on bricks, listening to loud music and ordering extremely cheap drink specials. Old school!

The **Frittebud** is the best place to go for food in the old town (and generally a very good one for all of Bonn). They offer burgers (also vegetarian), Currywurst, different salads and of course french fries. Right next to it lies the more left-leaning/alternative **Bla** which has regular events ranging from Live Punk to Stand-up comedy.

### City Center

As soon as you step out of the small, narrow streets of the old town, the locations also get bigger, more ornate and - how could it be otherwise - more expensive. However, the prices in Bonn are consistently relatively mild, especially compared to huge party strongholds like Cologne.

The **Tacos** is a Mexican cocktail bar near Berthavon-Suttner-Platz. Accordingly, there is Mexican food - burritos, tacos, nachos, quesadillas - and cocktails. You should be careful between 10pm and 11pm - there is neither the happy hour that takes place all day before, where all cocktails only cost half, nor the jumbo hour that starts afterwards, from which the big cocktails cost half.

There is also an Irish pub in the city center, the **James Joyce**. It is centrally located near the Kaufhof and has the usual Irish pub repertoire. Much like the Dubliner, the James Joyce is also known for its very long opening hours.

**Pendel and Cartoon** are two shops on Friedensplatz that offer *everything*. The menu and drinks menu is so large that it is difficult to highlight individual items, and the quality is consistently good. Only thing is that the waiting time for the waiters to come by can be a bit longer every now and then.

Another notable venue at Friedensplatz is the **Sudhaus**. It offers traditional local rhineland cuisine as well as a weekly modern menu. The portions are quite large, the price moderate and there are always changing vegetarian options.

Also near the Friedensplatz is the **Bönnsch** - a classic brewery that brews its own beer: the eponymous Bönnsch. The brewing method is similar to a Kölsch, but the taste is clearly distinct - it's without a doubt worth trying. The food is also typical rhineland brewery stuff, but vegetarians can also find something here.

The place to go if you're hungry at night, when the Frittebud has long since closed, **Calador**. By now it has two branches, one at the central station and one at Friedensplatz, it offers cheap and fast pizza. If you are a pizza snob though: don't come here. Calador pizza kills hunger and prevents hangover, that's about it.

If you'd like a proper pizza or other Italian food, the **Tusculo** offers a wide and, above all, delicious selection. The Tusculo also has several locations, the largest is the Tusculo Münsterblick near the eponymous minster.

Of course, there are also great opportunities to go out beside these two hot -spots, and as I said, the best way is to simply get active here and try out for yourself what you like and where. This list should get you started anyway.

### Clubs

Bonn's club scene is, politely said, quite meek and unbelievably shrunk even further during the Covid pandemic. The already mentioned **Dubliner** offers a nice atmosphere often late into the night. If you like latin-dances, the **tanzbar** at Oxfordstraße is your place to visit. Actual clubs like the **Carpe noctem** (short **Carpe**) plays a wide range of music and often has free welcome shots as well as drink specials. The popular club duo around here is the **N8schicht** and **N8lounge**, whose floors are connected to each other with a door. Especially the proximity to Frittebud and the wide range of genres make this worth a visit.

If you're looking for the real deal nightlife, you sadly must go to Cologne.

### Joners' insider tips

If you're looking for good food during daytime and the Mensa is already closed or offers its infamous and devoid of spices **cauliflower curry**, here is a short list of personal recommendations. Some of these are quite near the computer science institute, so give them a try:

**Chinese:** Tak Kee (Hong Kong), LeDu (Sichuan, only place for good hot pot!), Dim Sum (Canton).

**Indian:** Mogul, Namaste, Royal India.

**Vietnamese:** Hoi An, Cay Tre.

**Korean:** Eller-Asia Shop (Only lunch!)

**Mexican:** Café Especial, Tacos, Sausalitos.

**Burgers:** Atawich, Bonnanza.

**Italian:** Tuscolo, Nennillo.

**Polish:** Restauracja Polonia.

**Döner:** Agora bei Schatzi, Sefa, Serhat.

**German brewery cuisine:** Salvator, Bönnsch.

## Weird Germany

### Weird idioms and words

#### "Kannst du das Fenster auf Kippe stellen?"

Tilt Windows. In Germany, you can put your Window on "kippe". "Kippe" means tilt in colloquial German and is quite widely spread throughout the country.

**"I have a shooting this weekend."** Don't run calling 110. (911's German cousin) It's not what you think! A shoot for film or photo is called a shooting.

**Handy** It's not what you think! It's just a cell-phone/smartphone. Germans tend to forget that this word is German.

**Mobbing** It's not particularly a crowd of people, the mafia or an angry crowd. In German, this means bullying.

**Mail** Don't go running to the next post-office when you are asked to send something by mail. Germans seem to have found E-Mail to be too long of a word and just say mail.

**Toast or not toast?** If someone offers you a toast, it doesn't have to mean that your bread was toasted. White bread that is usually used to make a toast is also called toast when not toasted. In Addition if a German wants bread it's very likely they don't want white bread because they have humongous varieties of breads.

**tab water** You can drink the tab water throughout Germany and save money. It has a good to very good quality. Even most sold bottled water is tab water from a specific region.

**waste sorting** Germans take recycling seriously. Here are some basic guidelines: we have four main garbage bins

- the blue bins ("Papiermüll") for clean paper
- the yellow bins ("Plastikmüll") for plastic, metal and packaging with the green recycling dot
- the green bins ("Biomüll") for anything vegetable, egg shells, flowers. But no meat or fish and no cooked food
- the grey bins ("Restmüll") for the rest of the household waste.

You can get more details here: <https://www.bonnorange.de/en/service/private-individuals/waste-bins-and-the-like/overview>.

**"Wie geht es dir?"** If you ask a German "Wie geht es dir?" (How are you?), it's likely they tell you how they are really. For us it's not just a phrase.

**Pfand** Most plastic and glass bottles are returnable bottles. You pay 8 or 25 Cents for them but you get this money back when you return them to a store.



### While out and about

**How to tip:** Well, there is no set percentage for this in Germany. While 10% is the nice usual, but you are not obliged to pay this. Waiters wages don't depend on tips here, they are just a way of showing appreciation for good service.

**When out with Germans,** it is usual that everyone will pay their own drinks and food. A waiter will usually ask whether you want to split the bill or not („Zusammen oder getrennt?“) and will give you individual bills. Sometimes even on dates. Be clear on your invite so there is no misunderstanding.

**refill** In Germany, you won't get a free refill for your drinks. The sold tab water is also not really tab, but bottled water and not on the house.

**Why is your bartender scribbling on your beer-mat?:** When a barkeeper has a full house in a pub, they sometimes draw lines on beer mats to keep count on how many drinks you have already had. They usually also keep track with a computer program, but better safe than sorry.

**Set the scene:** You are out drinking with your German friends. You get your drinks and want to clink glasses saying cheers, but your companions seem to stare at you? Well, Germans consider it to be bad luck not to look into each other's eyes when

## Inform #2

clinking glasses. Germans also find this weird, but do it nevertheless.

**Going by public transportation:** In most cases you don't have to show you ticket upon entering, only when inspectors or the driver ask for it. In small towns or during less busy hours, like at night, you might be expected to show it upon entering though. Rule of Thumb: if the (bus)driver opens only the front door, have your ticket ready. ( more info: ??)

### Bonus Round - The Rhineland Special

People in the Rhineland become "Jeck" (weird, crazy) for a few weeks every year. This is due to the "Karneval" (carnival). The so declared fifth season starts on November 11th at 11 past 11 o'clock (on 11.11. at 11:11). That's when you will see your first "Jacks" running around. The real big celebration starts on "Weiberfastnacht" (Women's Shrove-tide) which is usually the Thursday, and peaks on

"Rosenmontag" (Rose Monday), the Monday before Ash Wednesday.

Be aware that you may be greeted with "Alaaf", asked for a "Bützchen/Bützje" meaning kisses (which you can decline), encounter highly intoxicated people in weird costumes and parades called "Karnevalszüge" where people throw candy and small flower bundles (called "StrüSSche") to the masses. If you don't want to partake, go on vacation, stay inside or just watch the masses from the sideline for fun. There will usually be information available online and in newspapers on when and where the parades and big events are going on, so you can easily find or avoid them, but there will also be stray groups in streets and pubs.

Whether you like Karneval or not, this is the best time to find cheap costumes and strange decorative items in stores all around you and - most importantly - try the seasonal baked goods (e.g. "Berliner" with different fillings).

## Dictionary

Your courses are held in English, and usually all offices can communicate in English as well. Still, you will encounter information that is only available in German, whether that may be due to someone forgetting to translate it, not having the knowledge or resources to do that or because they might not even think about it. Therefore, it still might be useful to know a little bit of German.

### Language Courses

The university offers a few language courses for international students, but they are, like all language courses, much sought after. If you are able to get into one of these courses, you will be able to get the A1 certificate for German by completing the course and the exam at the end. The admission time for these courses however usually is well before the beginning of the semester, therefore you can not sign up for it in your first semester.

If you cannot get into one of these courses, the university also has a partnership with Rosetta Stone. You can get free access to this language learning platform by registering with your university email using the steps explained here: <https://hbza0-c1.sprachen-online.eu/form>

### Ä, Ö, Ü and ß

You probably have noticed one of the four letters above. The first three are called umlauts (from German Umlaut), the last is called Eszett (SZ) or scharfes S. If you do not have these on your keyboard, you can transcribe them, using the following rules:

Ä → Ae

ä → ae

Ö → Oe

ö → oe

Ü → Ue

ü → ue

ß → ss

This may lead to ambiguities (especially around ß and ss), but usually it is clear from the context. There also exists a capital ß, though it is only used for completely capitalised text as the ß never starts a word. .

### Small dictionary of university words

If you ever have trouble understanding something, you can ask us. To get you started, however, we thought it might be helpful to know a few words that you will encounter during your time at the university.

Additionally we provide our own glossary (with common abbreviations to german university words), which is available here: <https://www.fachschaft.info/en/studienbeginn/hochschulwoerterbuch/>

## Dictionary

**ASTa** Allgemeiner Studierendenausschuss (general student's committee) 4.

**BASIS** Bonner aktuelles Studieninformationssystem, the course catalog and student management system of the University of Bonn 18.

**CIP-Pool** Computer Pools 19.

**computer science** Informatik.

**course catalog** Vorlesungsverzeichnis 18.

**credit point** Leistungspunkt 10.

**doctor's note** Attest (für Prüfungsunfähigkeit) 10.

**ECTS** European Credit Transfer System 8, 10 17.

**examination office** Prüfungsamt 10.

**FSR** Fachschaftsrat (student council) 4.

**FSV** Fachschaftsvertretung (student association representatives) 4.

**GSG** Gemeinsame Systemgruppe (shared system group), the technical administration of the institute of computer science 19.

**HRZ** Hochschulrechenzentrum (university computing centre), the technical administration of the university 19.

**improvement exam** Verbesserungsversuch 10.

**lecturer** Dozent (male), Dozentin (female), Dozenten/Dozierende (pl. all).

**library** Bibliothek.

**MNL** Abteilungsbibliothek für Medizin, Naturwissenschaften und Landbau der Universitäts- und Landesbibliothek Bonn (department library for medicine, science and agriculture of the university and state library Bonn), the department of the library that is on Campus Poppelsdorf and holds most of the books for computer science.

**NRW** Nordrhein-Westfalen (Northrhine-Westphalia), the state the university is inside. Germany is split into 16 states which have some autonomy, NRW is the largest by population.

**post-exam review** Klausureinsicht 10.

**registrars office** Studierendensekretariat.

**SP** Studierendenparlament (student parliament) 4.

**student body** Fachschaft 4.

**ULB** Universitäts- und Landesbibliothek Bonn (university and state library Bonn), the main library of the university.

**VRS** Verkehrsverbund Rhein-Sieg (transit network Rhine-Sieg), the local transit authority around Bonn 28.

**WG** Wohngemeinschaft (flat share) 26.

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**We want your help!** If you find errors or missing information, or if you have any suggestions on how to improve this magazine, we would be very happy to receive your email to [inform@fachschaft.info](mailto:inform@fachschaft.info)!

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Redaktion Inform  
c/o Fachschaft Informatik  
Friedrich-Hirzebruch-Allee 5  
53115 Bonn  
+49 228 73-4317  
[inform@fachschaft.info](mailto:inform@fachschaft.info)  
<https://www.fachschaft.info>

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## Studi-Pausenexpress

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### Für wen?

☐ Beschäftigte    ☒ Studierende

### Was?

☒ Übungen für Mobilisation, Kräftigung, Dehnung & Entspannung

### Wo?

☒ Während einer Vorlesung    ☒ Vor einer Vorlesung    ☒ Nach einer Vorlesung

### Dauer?

☒ 5-7Min.    ☐ 10-12Min.    ☐ 15Min.

allgemeiner deutscher  
hochschulsportverband

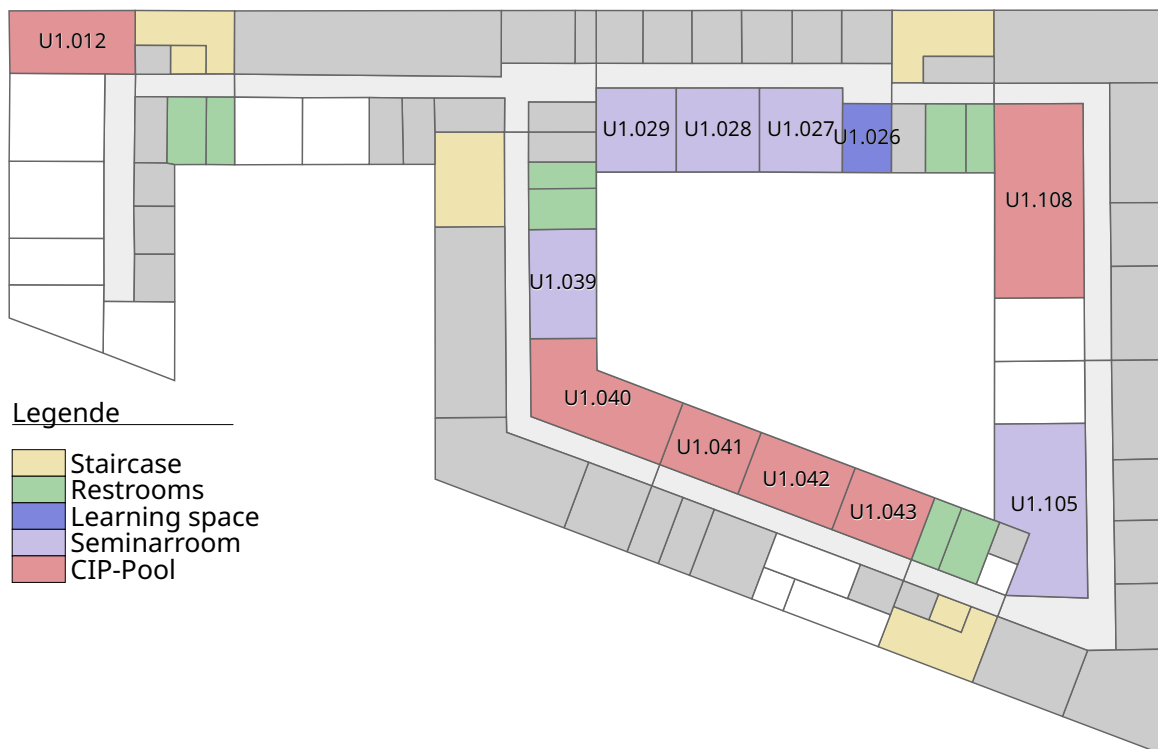


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