

M.Sc. Computer Science

M.Sc. Computational Modeling and
Simulation

Onboarding Winter Semester 2026/27



Table of contents

01

Welcome to the
University

Enrollment, arrival, tutoring
program and first steps

02

Tutoring Programs

Presentation of your faculty
and study program(s) tutors

03

Welcome to the Faculty of
Computer Science

Introduction to the faculty
and the study programs

04

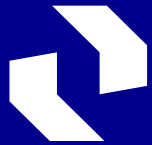
Practical Pointer for
Living in Dresden

Useful tips for everyday life
in Dresden

05

Studying at TU Dresden

Study culture and course
organization



Technische
Universität
Dresden

Welcome to TU Dresden

Welcome@TU Dresden **student handbook:**

Helpful information for starting your
studies at TU Dresden.



Enrollment and Arrival

Enrollment and Arrival – International Office

International Office

- provides counseling and administrative support for international applicants and students at TU Dresden.
- assists with study-related formalities such as semester re-registration, leave of absence, changes of study program, and de-registration.

Contact

- TEL +49-351-46342000
- ✉ studium.international@tu-dresden.de

Office Hours

- Tuesdays and Thursdays
- 1 – 3 p.m.

Visiting address

- Fritz-Foerster-Bau, Mommsenstraße 6



Enrollment and Arrival

If you have not completed your enrollment yet, please follow the instructions and read the information documents available in your [SELMA account](#).

Information on admission

- checklist for the beginning of your studies
- information on Health Insurance

Information on enrollment

- instructions for enrollment incl. form Student Registration
- e-mail: immatrikulation.international@tu-dresden.de

Important:

- submission of enrollment documents by September 30, 2026, in case of delayed issuance of visa until October 15, 2026
- Documents submitted after this date cannot be accepted!



source: tu-dresden.de

Enrollment and Arrival

With your enrollment you can already activate and use:

- login/user account of the selma student portal
- e-mail address

As soon as you are enrolled, you received information by e-mail regarding:

- login selma student portal
- student ID card, confirmation of enrollment
- start of studies, introductory events
- International Tutoring Program

Upon your arrival in Dresden you will need to:

- pick up student ID card in person at Service-Center-Studies (SCS) = enrollment completed
- get the student handbook: WELCOME@TU DRESDEN



Enrollment and Arrival – Late Arrival

Late Arrival

If your visa is delayed, late arrival is currently allowed until the end of the first month of the semester. For the winter semester, this means until October 31.

Later arrivals cannot be accepted, as too many lectures, courses, and possibly examinations will have been missed.

If you cannot arrive in time, we will send you an e-mail with the instructions how to proceed:

- You will need to postpone the start of your studies by one semester (CS) or two semesters (CMS)
- Cancel your current enrollment and request a refund of the semester contribution

Reapply for the summer semester 2027 or winter semester 2027/28

Important:

Reapplication is done via the TU Dresden application portal (not via uni-assist).

For more information, please check the [FAQ section](#) "How can I reapply?"

Tutoring Programs

Enrollment and Arrival – Tutoring Program

International Tutors of [the International Tutoring Program](#) at the faculty

Tutors = senior students will support you in finding first orientation

Tutors will help you with the organization of your studies, show how to use the TUD's online portals, explain study and examination regulations, how to organize a timetable and more.

Save the date:

- Welcome Meeting and first tutorial incl. guided tour of the campus and your faculty

Friday, October 2, 1:00 - 2:30 pm, Room [BEY/O138/H](#)

If you miss the welcome meeting, you may join the program later.

International tutors for Computer Sciences:

Reza Oveisi

Nithyasree Areti

Laura Walter

Béla Richarts

e-mail: tutor-inf@tu-dresden.de



source: tu-dresden.de

Enrollment and Arrival – Tutoring Program

CS tutors of the STIK Tutoring Programm support you throughout your studies in your study program with study organization, academic courses, assistance with non-university matters (ex. administrative appointments), organization of leisure activities (ex. excursions, „cheer-up“ meetings).

- CMS and CS tutors of the STIK Tutoring Programm :

- Niki Majidifard
- Afshin Zanganeh
- Bartosz Pachniewski

CMS & CS -STIK Community
WhatsApp group



- Join the [CMS & CS -STIK Community” group on WhatsApp](#)



Welcome to

The Faculty of Computer Science

APB Andrea-Pfitzmann-Bau
Nöthnitzerstr. 46

Contacts at the Faculty

Student Affairs Team

Send your request in a targeted and course-related manner here: <https://tu-dresden.de/ing/informatik/studium/beratung/kontakt>

Please check FAQs first:

<https://tu-dresden.de/ing/informatik/studium/faq>

CS and CMS Tutors

Contact your program tutors or write your question in the WhatsApp group for your peers to answer

CMS & CS -STIK Community
WhatsApp group



The Study Program

M. Sc. Computational Modeling and Simulation



M. Sc. Computational Modeling and Simulation

- CMS is an interdisciplinary, research-oriented master's program combining computational modeling, simulation, computer science, mathematics, and different application areas.
- The main language of instruction is **English**.
- CMS students specialize in one of the following tracks:
 - Computational Life Science
 - Computational Mathematics
 - Visual Computing
 - Computational Modeling in Energy Economics
 - Computational Engineering
 - Applied Artificial Intelligence
 - Computational Environmental Science and Engineering

Check the study plan and module catalogue for your specific track before selecting your courses.

For more information check [here](#).

How is the program structured?

The CMS program comprises **120 credits** and is normally completed in four semesters.

- **Core Foundations**

Three COR modules covering fundamental methods in computational modeling and simulation.

- **Track-Specific Specialization**

A combination of basic, advanced, and application-oriented modules from your selected track. Some tracks also include a team project.

- **Interdisciplinary Skills**

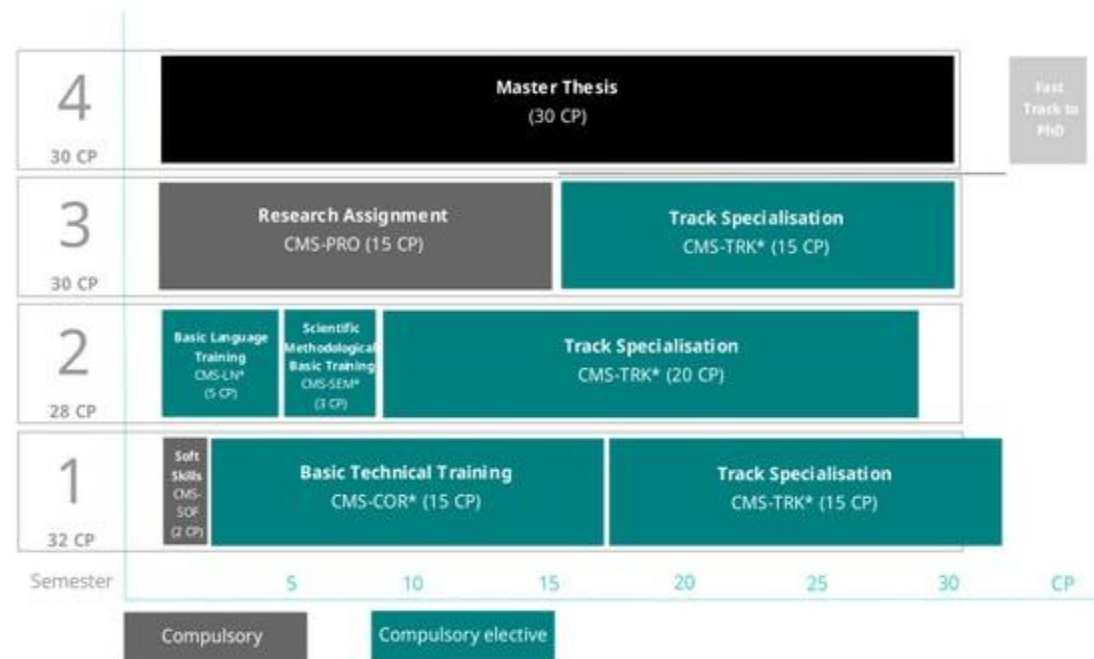
Soft Skills, a language course, and a scientific methodology seminar.

- **Research Project**

An independent research project conducted in cooperation with a research group.

- **Master's Thesis**

An independent scientific thesis completed during the final semester.



What should you do first?

- Check the study plan for **your track**.
- Check the current course catalogue and select courses for your modules based on availability and your study plan.
- Register for your modules in SELMA.
- Check whether your selected courses require additional registration in OPAL or through the respective course website.
- Pay attention to all registration deadlines.
- Contact your mentor if you need help selecting modules or planning your studies.



The Study Program

M. Sc. Computer Science



MSc. Computer Science - Choose Between Two Tracks

	1st Semester	2nd Semester	3rd Semester	4th Semester
Open Track	Area of Specialization I	Area of Specialization III	Research Project	Master Thesis
	Area of Specialization I	Area of Specialization III		
	Area of Specialization II	Supplement	Supplement	
	Area of Specialization II	Supplement	Supplement	
	Supplement	General Qualifications	Supplement	

	1st Semester	2nd Semester	3rd Semester	4th Semester
Distributed Systems	Distributed Systems	Network and Distributed Systems Security	Research Project	Master Thesis
	Systems Engineering	Advanced Operating Systems		
	Scalable Data Management	Elective	Elective	
	Design Patterns and Frameworks	Elective	Elective	
	Elective	Elective	Elective	

Option A → Open Track

> 30 Credit Points pro Semester is expected

> one block is ~6 Credit Points

> 1 SWS (Semesterwochenstunde) is ~1.5 Credit Points, useful when planning what modules to choose for semester!

Option B → DSE Track

- More information is available [here](#).

MSc. Computer Science – Open Track

- Think of 3 out of 8 specializations (**since it's open, you don't have to commit to it at the start of your studies**)
- choose supplement modules from a large catalogue (including modules of the specializations and non-CS modules)
- The module “INF-25-Ma-ERS Exploration of a Research Subject”, which helps to prepare students for writing their final thesis.

	1st Semester	2nd Semester	3rd Semester	4th Semester
Open Track	Area of Specialization I	Area of Specialization III	Research Project	Master Thesis
	Area of Specialization I	Area of Specialization III		
	Area of Specialization II	Supplement	Supplement	
	Area of Specialization II	Supplement	Supplement	
	Supplement	General Qualifications	Supplement	

Area of Specialization Theoretical Computer Science and Symbolic Artificial Intelligence	✓
Area of Specialization Software Technology and Programming Languages	✓
Area of Specialization Secure Computing	✓
Area of Specialization Systems Architecture	✓
Area of Specialization Cyber-Physical Systems	✓
Area of Specialization Visual Computing and Machine Learning	✓
Area of Specialization Human-Computer Interaction und Interactive Media	✓
Area of Specialization Computer Engineering and High Performance Computing	✓

MSc. Computer Science – DSE Track

- The structure is more pre-defined.
- In addition to the compulsory modules, there is a selection of track-specific compulsory elective modules from which you can choose modules worth **36 credit points**:

	1st Semester	2nd Semester	3rd Semester	4th Semester
Distributed Systems	Distributed Systems	Network and Distributed Systems Security	Research Project	Master Thesis
	Systems Engineering	Advanced Operating Systems		
	Scalable Data Management	Elective	Elective	
	Design Patterns and Frameworks	Elective	Elective	
	Elective	Elective	Elective	

For more information check [here](#).

MSc. Computer Science – DSE Electives

1 IoT Communication,
2 Advanced Computer Networks,
3 Self-Adaptive Software and Robotics,
4 Operating-System Construction,
5 Cooperative Mobile Systems,
6 Vehicular Networking,
7 Component-Based Software Engineering,
8 Internet and Web Applications,
9 Wireless Sensor Networks,
10 Foundations of Concurrent and Distributed Systems,
11 Concurrent and Distributed Systems Lab,
12 Software Fault Tolerance,
13 Confidential Computing,
14 Design and Programming of Embedded Multicore Architectures,
15 Resilient Systems,
16 Microkernel Construction,
17 Decentralized Systems,
18 Microkernel-Based Operating Systems,
19 Future-Proof Software Systems,
20 Internet Measurements,
21 Engineering Adaptive Mobile Applications,
22 Prediction and Estimation Techniques,
23 Software Fault Tolerance Lab,
24 Hardware Modeling and Simulation,
25 Model-Driven Software Development in Technical Spaces,
26 Requirements and Test Management
27

MSc. Computer Science – Most Important Links

0. Obligatory Reading – FAQs

<https://tu-dresden.de/ing/informatik/studium/examination-office/faqs>

1. Last WinterSemester Course Catalog (good for reference)

<https://wwwdek.inf.tu-dresden.de/mole-web/catalogs/wise2526/index/courses/en>

2. This 2026/2027 Winter Semester Course Catalog will be published in the beginning of the semester

<https://semester.dekanat.inf.tu-dresden.de>

3. Main Student Portal for Modules Registrations, Exam Registrations and Documents

<https://selma.tu-dresden.de>

4. Main Studying Platform where Contents of Courses are to be accessed:

<https://bildungsportal.sachsen.de/opal/home>

MSc. Computer Science – Most Important Links

Join our CMS & CS Group
to ask questions and get in
touch with other students :)

Contact with CS Tutor
Bartosz Pachniewski

via WhatsApp →

... or for more complex inquiries please use
tutor.cs@tu-dresden.de

CMS & CS -STIK Community

WhatsApp group





Technische
Universität
Dresden

Welcome & Introduction Event

Welcome & Introduction Event

ESE Week October 5-11, 2026

During the week you will learn about:

- Contact persons
- Key facts about the faculty
- Structure of the study program
- Module overview
- Timetable organization
- Examination regulations
- Other study-related information

Additional offers by [the Student Council](#) (time and place tbc)

- Introduction to OPAL and SELMA
- Game night
- City tour

Welcome to the Beautiful City of
Dresden



Practical Pointers

Practical Pointers for Living in Dresden

Weather

Winters in Germany can be cold, so bring warm clothing. In summer, some days can be hot, and buildings usually do not have air conditioning.



Practical Pointers for Living in Dresden

Getting Around

Your **semester ticket includes the Deutschlandticket**, which allows you to use local public transport across Germany such as regional trains (RE, RB), trams, buses, and metros. ICE, IC, and EC long-distance trains are not included.

- Activate your digital ticket on your phone: [Digital ticket activation](#)
- Dresden public transport network map: [DVB network map](#)
- Public transport in Dresden : [DVB](#) 
- Trains and connections across Germany: [DB](#) 



Practical Pointers for Living in Dresden

Getting around - Bikes and E-Scooters

Another convenient way to get around Dresden is by using shared bikes and e-scooters, which are widely available across the city and can be easily rented through mobile apps.

- TU Dresden students can use Mobibikes (DVB bike sharing) and receive free minutes per day after registering with their university email address.
- More information about Mobibikes and registration can be found [here](#).



Practical Pointers for Living in Dresden

Internet

Universities provide **eduroam**, a secure Wi-Fi network available at many universities and research institutions worldwide. At TU Dresden, you can connect using your ZIH login credentials.

- To setup use this [website](#)



Everyday Life

Most supermarkets and shops are closed on Sundays.

Plan your shopping accordingly.



AI-generated

How to Settle In

How to Settle In – Formalities

After arrival (within 2 weeks)

Register your address at the City of Dresden (Bürgeramt)

Required for EU and non-EU citizens

- Appointment or open office hours
 - Open office hours:
Tuesday and Thursday
1:00 – 4:00 p.m.
- More information [here](#)

Residence Permit

Apply for or extend your residence permit at the Foreigners' Authority (Ausländerbehörde).

- Apply about 3 months before your visa/residence permit expires
- First contact the authority by email and send the required documents
 - E-mail: auslaenderbehoerde@dresden.de
- More information [here](#)

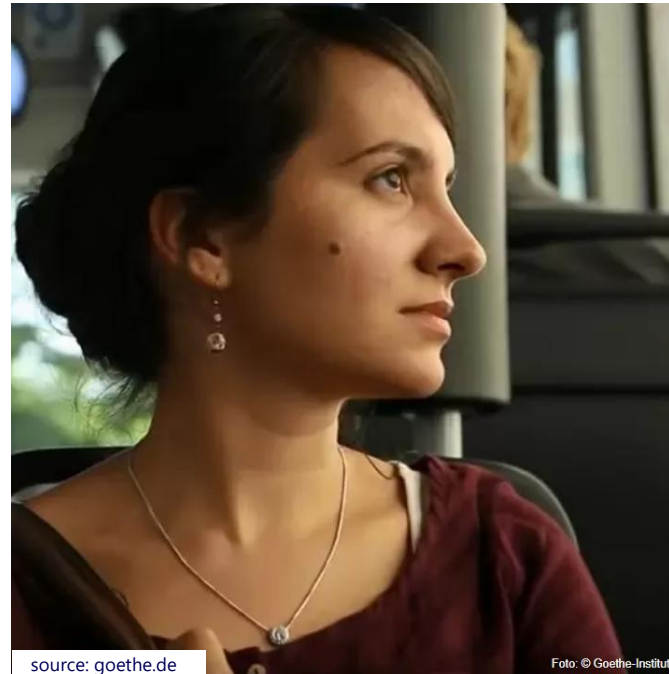
How to Settle In – Understanding Everyday Life

To help you settle in during your first weeks in Germany, the Goethe-Institut provides short videos and practical information about daily life.

Topics include:

- Using public transportation
- Looking for accommodation
- Visiting a doctor
- Job search and workplace culture
- Mobile phone contracts
- Making new friends

Find the videos and information [here](#)



Im Bus



Beim Arzt



Auf Arbeitssuche



Unterwegs auf der Straße



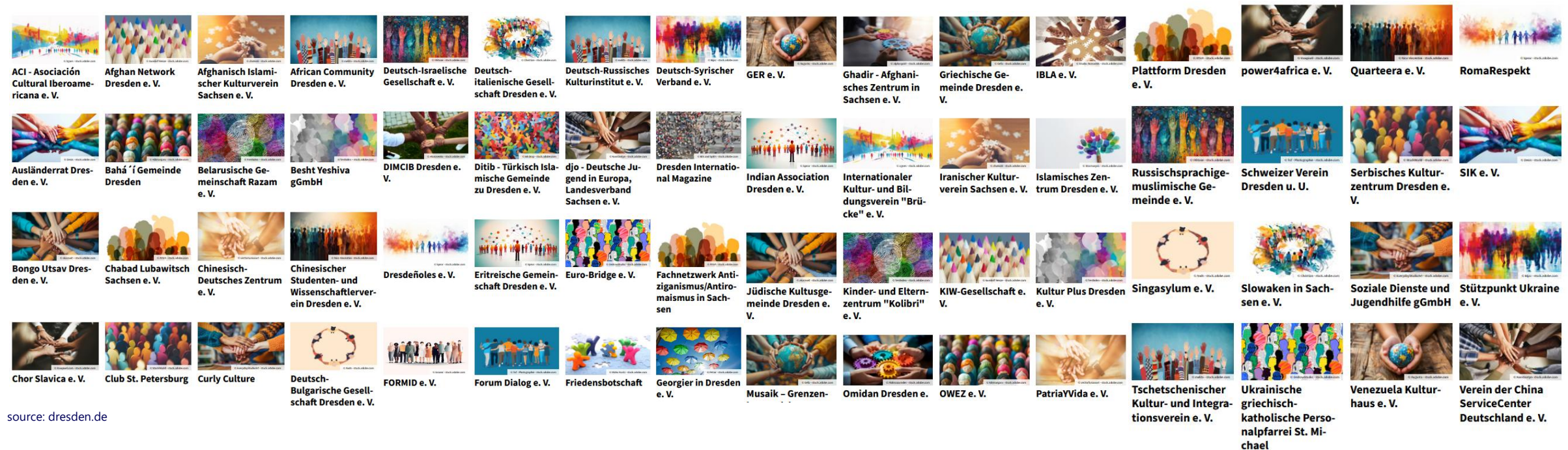
Bei der Arbeit



Neue Freunde

How to Settle In – Migrant Organizations in Dresden

Dresden offers many international and cultural organizations that support newcomers and help students connect with local communities.



source: dresden.de

Find an overview of migrant organizations in Dresden [here](#).

Housing and Studentenwerk

Housing in Dresden

Plan your accommodation **before arriving in Dresden**, as housing can be limited at the beginning of the semester.

Student dormitories (Studentenwohnheime) are managed by **Studentenwerk Dresden**, the main provider of student housing for TU Dresden students.

Information about student dormitories, application procedures, and other housing options is available in [this link](#).



Studentenwerk

Studentenwerk Dresden supports students of TU Dresden in many aspects of student life and provides important social and economic services.

Main Services

- Student housing (Studentenwohnheime)
- Cafeterias and dining halls (Mensa)
- Support services for international students

Find an overview of Studentenwerk services in the [brochure](#).



Learn more:

- Visit the [Studentenwerk Dresden website](#).
- Check the [checklist for preparing your stay in Dresden](#) (provided by Studentenwerk Dresden).

Health Insurance

Health Insurance in Germany

Health insurance is mandatory for all students in Germany. It gives you access to the German health care system. To enroll at TU Dresden, students must register with a German statutory health insurance provider. The insurance provider will then send the required electronic notification to the university for enrollment.

To help international students understand the system and the necessary steps, **Techniker Krankenkasse (TK)** offers free online information sessions.

- During these sessions you will learn about:
 - How to receive the M10 notification for university enrollment
 - Health insurance regulations for EU and non-EU students
 - The German health care system and covered services
- More information and registration [here](#).

SLUB and Libraries in Dresden

SLUB and Libraries in Dresden

SLUB – Saxon State and University Library Dresden

is the main library for TU Dresden students and one of the largest academic libraries in Germany.

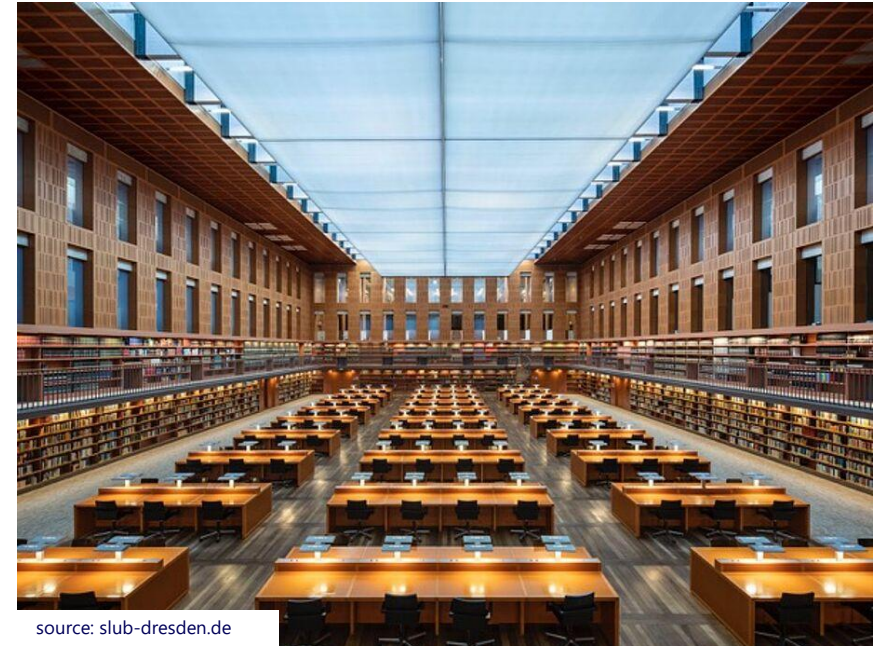
Students can use SLUB to:

- Study in quiet study spaces or group rooms
- Access books, journals, and online academic resources
- Use computers, printers, and scanning services

In addition to SLUB, Dresden also has a network of public libraries (Städtische Bibliotheken Dresden) located across the city. These libraries provide study spaces, books, media resources, and community events.

SLUB: <https://www.slub-dresden.de>

City libraries: <https://www.bibo-dresden.de>



source: slub-dresden.de



source: ekz.de

Studying at TU Dresden

Study Culture at TU Dresden

- Many courses include self-study in addition to lectures and tutorials.
- If you face difficulties during your studies, don't hesitate to ask for help early. Support programs such as [PASST](#)?! – Partnership for Successful Studies are available.
- Most exams allow [up to three attempts](#) to pass.
- AI tools (such as ChatGPT) may support learning, but they cannot replace your own exam performance. Find TUD's recommendation for the use of AI [here](#).
- Copyright is important. Violations can have serious consequences.
- Check and use your TUD Mail address!
 - Find the service [here](#).



Course Management

OPAL – Learning Platform

OPAL (Online Platform for Academic Learning and Teaching) is the central learning platform of TU Dresden and other Saxon.



[Link to OPAL](#)

Selma – Student Portal

Selma stands for student self-management.

Register for courses
and examinations

View results



Access study documents
and certificates

Check personal study
information

You receive access after enrollment.

[Link to Selma](#)

Exam Registration



1

Registration for Courses
(content)

→ Information,
materials, deadlines,
communication

2

Registration for
Courses (formal)

→ Otherwise you will
not be able to
take exams

3

Registration for Exams

→ Otherwise you will
not be able to
take exams

If the deadline is missed for the selma course or module, a registration for the exam is not possible!

Part-Time Jobs for Students

Part-Time Jobs

- Working during the 1st semester is not recommended, as you should focus on your full-time studies.
- German language skills can improve your chances of finding a job.
- The university or faculty cannot arrange jobs for students.
- Some students work as Student Assistants (HiWi) at the university. Later in your studies, you may find Werkstudent positions in companies.
- The Career Service at TU Dresden offers workshops and support for international students.
 - Find more [here](#).
- Follow [German work regulations](#) for students.



source: mystipendium.de

Intercultural Differences at University Level

Intercultural Differences – What to Expect in Germany

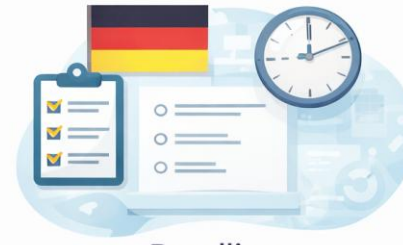
Equality – the same rules apply to all students

Punctuality – being on time is important

Be active – participate in class and communicate with professors



Equality



Deadlines



Active



Punctuality



German language

Deadlines are taken seriously

Rules matter - university processes are usually rule-based

German language – helpful for daily life and part-time jobs

AI-generated

Thank you for your attention!

Do you have any questions?

Have a great start of your studies!