



Fachschaft

Mathematics and Computer Science

at Karlsruhe Institute of Technology

Study Programme Information Computer Science Master

summer semester 2025

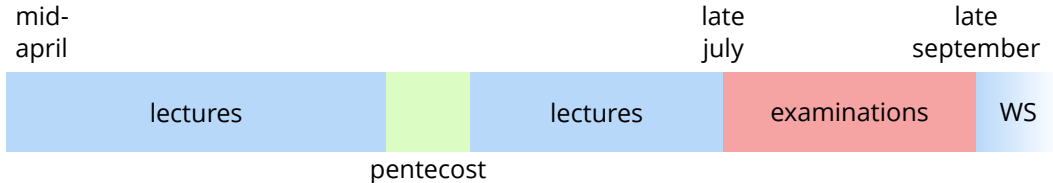
General information about your studies

- you take **modules** to complete your studies
- pass the module by **examination**
 - there are written and oral exams
 - also: practical courses, seminars, thesis
- every module has a fixed amount of **credit points** (ECTS):
 - you need **120 credit points** for your masters degree
 - planned to be completed within 4 semesters (30 ECTS/semester)
- grades: **1.0**, **1.3**, **1.7**, **2.0**, ..., **4.0** (passed), **5.0** (failed)



Structure of a Semester

- 3½ months of lectures
- 1½ months “lecture-free period”
 - examinations take place here, usually one exam date per module per semester
- around pentecost: one week lecture break



The masters programme



Structure of your studies

	Area of Specialization 1 (min 15 ECTS)	Area of Specialization 2 (min 15 ECTS)	Elective Studies (6–49 ECTS)	Minor Studies (9–18 ECTS)	Interdisciplinary Qualifications (2–6 ECTS)
1	4 “Stammmodule”				
2	seminars, practical courses			Electrical Engineering, Mathematics, Economics, Law	HoC, FORUM, language centre
3	elective modules of free choice				
4	Master’s thesis (30 ECTS)				

“Stammmodule”

Introduction to a subject. 4 “Stammmodule” with 6 ECTS each must be taken.

winter semester

- Telematics
- Introduction to Robotics / Robotics 1
- Computer Graphics
- Algorithms 2
- Formal Systems
- IT Security

summer semester

- Software Engineering 2
- Human Computer Interaction
- Computer Architecture
- Advanced Artificial Intelligence

Important: You may only select “Stammmodule” that you haven’t taken in your bachelors degree.



Areas of Specialization

- thematic collection of lectures, practical courses, seminars
- you choose **2 areas of specialization** each worth **min 15 ECTS**
 - must include at least **10 ECTS** worth of lectures, that are no “Stammmodule”!
(exception: Telematics → **8 ECTS**)
- you need to choose, whether you want a module to count for an area of specialization or the elective studies before the examination



Areas of Specialization: Overview

- Algorithm Engineering
- Cryptography and Security
- Data Science
- Theoretical Foundations
- Design of Embedded Systems and Computer Architectures
- Human-centred Machine Intelligence
- Robotics and Automation
- Software Engineering and Compiler Construction
- Telematics



Minor Studies

Minor studies provide knowledge in an adjacent field of study to give the students a broader education.

- **9–18 ECTS** in total
- select one of the following subjects ([Mathematics](#), [Physics](#), [Electrical Engineering](#), [Law](#), ...)
 - Other subjects or modules not listed in the module handbook can be approved by the examination board.
 - requirement: an examiner from the respective subject certifies the intended study plan as “consistent and possible”.



Further requirements

- **seminars / practical courses** (without minor studies)
 - at least **3 ECTS** worth of seminars
 - at least **6 ECTS** worth of practical courses
 - in total: **12-18 ECTS** worth of seminars or practical courses
- **4 “Stammmodule”**
 - “Stammmodule” can also be selected for the elective studies
- **2 areas of specialization**
 - **min 15 ECTS** each.
 - at least **10 ECTS** worth of lectures, that are no “Stammmodule”.
(exception: Telematics → **8 ECTS**)
- **elective courses**
 - all modules from the areas of specialization can also be elective studies
 - at least **6 ECTS**



Interdisciplinary Qualifications

Events on social topics, supplementary programmes that teach the application of specialist knowledge in everyday working life, skills training for soft skills and foreign languages.

- **2-6 ECTS** in total
- there are graded and non-graded modules, only the credit points are relevant for the degree.
- diverse selection, e.g.
 - language courses ([language centre](#), not your native language)
 - seminars on self-organisation, presentation ([HoC](#))
 - seminars on culture, politics and economy ([FORUM](#))
 - tutor training: can be taken if employed by a chair
 - special lectures, currently only "Information, Science and Responsibility – Current Ethical Challenges of IT"



Master's thesis

- **30 ECTS**
- Can be started, once
 - **60 ECTS** have been completed in the masters programme
 - where at least **15 ECTS** come from an area of specialization
- written over a period of **6 months**
 - can be extended to **9 months** by application to the examination board
 - some chairs only register the thesis after you had been working on it for some time
- must be started at least 3 months after the last examination.
- external theses (e.g. at an external company) are possible
 - requires a supervisor at KIT.



Profiles

A certificate on the special knowledge acquired in addition to the master's degree.

- Confirm a **special structure** of the Master's degree programme
 - requires no additional effort
 - additional certificate on completion
- **Important:** significantly restricts the choice of lectures.
 - only recommended if the planned choice of subjects matches the profile anyway
- studying without a profile is possible and completely **equivalent**.



Profiles: Overview

- Data-intensive computing
- Robotics
- Energy Informatics
- Artificial Intelligence
- Multi-Scale Computing Systems
- Software Engineering
- Internet and Society
- Visual Computing



German lectures

- students with sufficient language skills can take german modules as well
- up to 30 ECTS worth of modules held in German can be taken
- consult the german module handbook



Campus System

- management of the administrative processes for your studies
 - select modules
 - register and de-register for exams
 - obtain transcripts and certificates
 - re-registration
- **self-management**

Online at <https://campus.studium.kit.edu/english/index.php>



Study Plan – recommendation

- add events to favourites in the Campus System
- then: subscribe to iCal-calendar in Google, Apple, or similar
 - changes sometimes need up to 24h to propagate
- fill in gaps in your own calendar
- **Read your KIT E-Mails!**



Certificates

- [Certificate of Registration](#)
 - sometimes needed by your health insurance
- [KVV-Warrant](#)
 - free local transport in the KVV area together with KIT Card
 - valid on weekends, public holidays, and Mondays to Fridays after 6 PM

Re-registration

- you have to actively re-register every semester
 - inform KIT that you wish to continue your studies
 - click the feedback button and transfer the money
 - you'll receive a reminder per E-Mail



Written exams

- dates announced at the beginning of the semester
- registration and de-registration in the Campus System
 - de-registration in the Campus System until midnight before the exam
 - you can still de-register until just before the start of the exam on-site
- two attempts and an oral re-examination
- the second attempt is not mandatory
 - you can transfer up to two failed exams into the additional modules (“Zusatzleistungen”)



Oral exams

- you agree on a date with the examiner or their secretariat
- **also** register in the Campus System
 - de-registration is possible until 3 **working** days before the exam by E-Mail to you examiner.
 - later cancellation must be approved by the examination board (e.g. due to illness with a medical certificate)
- two attempts
- transferring failed exams into the additional modules (“Zusatzleistungen”) works the same as with written exams



Exams: Signing up, Writing and Inspection

- you have to sign up in advance in the campus system
 - preferably as soon as possible
 - for oral examinations: make an appointment with your examiner or their secretary
- the exam is failed, if you do not show up after signing up
- grades are published in the campus system
- **visit the examination inspection!**
 - sometimes whole tasks are skipped by accident

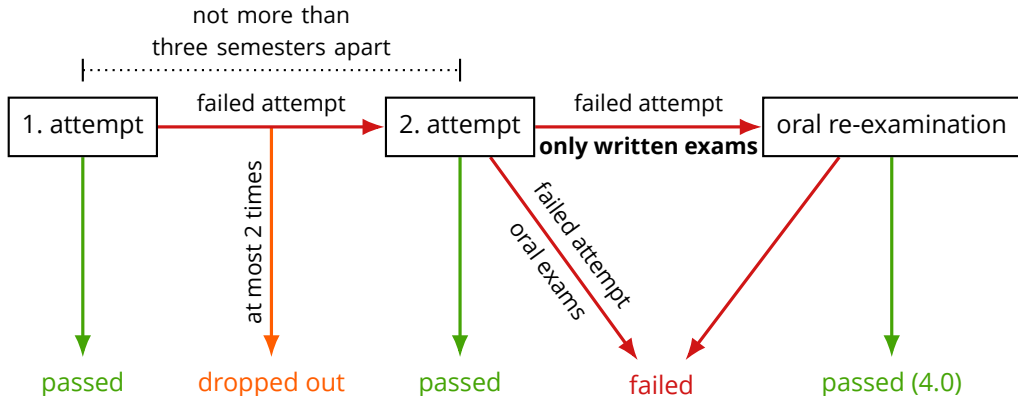


Failed examination: After the Inspection

- you have a **second** attempt (usually in the following semester)
- for **written exams** there is an “oral re-examination” after the second failed attempt
 - timely after the exam
 - the only possible grades are 4.0 (passed) or 5.0 (failed)
- otherwise: “loss of the entitlement for examination”
 - you’ll be exmatriculated
 - you can’t study similar study programs any more, event **at other universities!**
- however, there is the possibility of a **hardship case**
 - more on this later



Overview of examination attempts





**problems
during
studies**

The “hardship case”

- formally “Antrag auf Zweitwiederholung”
- if granted, provides a third attempt to examination
 - every grade is possible
 - for written exams you also get another oral re-examination
- needs to be justified
 - decision is made in the “examination board”
 - **contact the “Fachschaft” in advance!**



Maximum duration of your studies

- at most 7 semesters
- extension is possible by application to the examination board
 - must be handed in before the end of the 7. semester.
 - similar to the “hardship case”, handled by the same committee.
 - again: **contact the “Fachschaft” in advance!**

Planned duration of study

- 4 semesters. this is **not** the average duration of study
- mostly only relevant for scholarships and BAföG





Contact Persons

Informatics Study Program Services (ISS)

The Informatics Study Program Services are directly assigned to the management of the Faculty of Computer Science and is mainly responsible for administrative tasks in connection with the study programmes offered, the supervision of the examination boards and commissions as well as the central study and examination counselling.

- Provides “official” information on your Computer Science studies
- Contact for all administrative and organizational questions
 - moving modules from one credit area to another
- Mail: beratung-informatik@informatik.kit.edu
 - You should send your requests using your KIT Mail



The “Fachschaft”

- office hours
- Mail to info@fsmi.org
- Sale of old exams and protocols: <https://exams.fsmi.org>

“Fachschaft Informatik”

basement of the Computer Science building (room -124, near ATIS)

“Fachschaft Mathematik”

ground floor of the mathematics building (room 0.002)





Questions?

Join the active “Fachschaft”

- representation of students interests (e.g. in university committees)
- we organize parties and also this “O-Phase”
- counselling, old exam and protocol sale, student representation, software projects

Your path into the “Fachschaft”

- office hour
- “Semesterauftakttreffen” (SAT, semester kick-off meeting) on Tuesday, 29.04.2025 at 7 PM at the computer science building



Good luck with your studies!