Fachschaft
Mathematics and Computer Science
at Karlsruhe Institute of Technology

Study Programme Information Computer Science Master

winter semester 2026/27

General information about your studies

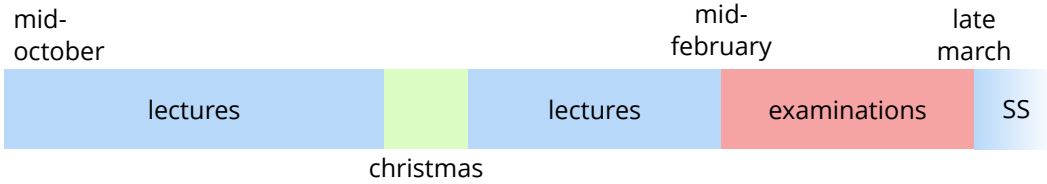
- you take **modules** to complete your studies
- pass the module by **examination**
  - there are written ond oral exams
  - also: practical courses, seminars, thesis
- every module has a fixed amount of **credit points** (ECTS):
  - you need 120 credit points for your masters degree
  - planned to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

How to choose your modules

- for structure of your studies: refer to the **module handbook** (Modulhandbuch)
  - All possible modules are listed there
  - You can see which modules are mandatory and which optional modules are possible in which part of your studies
  - https://www.informatik.kit.edu/english/formulare.php#block1933
- Not all modules are offered every semester (the contrary is the case)
- for the availability of modules in the upcoming semester: check the **course catalogue** (Vorlesungsverzeichnis)
  - https://campus.studium.kit.edu/english/events/catalog.php#!campus/all/fields.asp?group=Vorlesungsverzeichnis

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 christmas: two weeks winter 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”			Electrical Engineering, Mathematics, Economics, Law	HoC, FORUM, language centre
2	seminars, practical courses				
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 “Stammodule” 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 “Stammodule”!
    (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 “Stammodule”.
    (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 leat 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
- Intenet 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-enrolment
- **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 enrolment
  - sometimes needed by your health insurance

Re-Enrolment

- you have to actively re-enroll every semester
  - inform KIT that you wish to continue your studies
  - click the feedback button and transfer the money
  - you'll receive a reminder via email

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

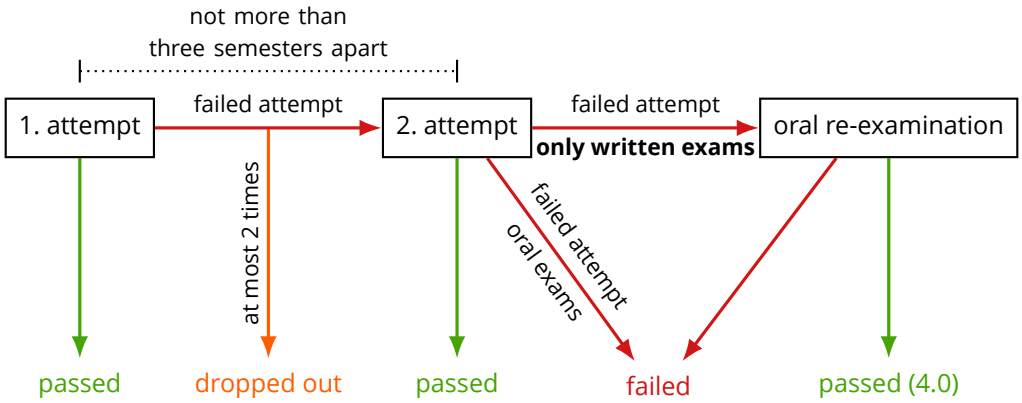
Exams: Signing up, Writing and Inspection

- you have to sign up in advance in the campus system
  - preferably as soon as possible
  - for oral examniations: 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 commitee.
  - 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

Student Advisory Services (ZSB)

- Responsible for all students at KIT
- Counselling when you lost your entitlement to examination.
  - Alternative courses of study/alternatives to studying
  - Is Computer Science the right degree programme for me?
  - What alternative degree programmes are available?
  - Technical college?

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)

Psychological Help

- Nightline Karlsruhe (maybe only in German)
  - listening service from students for students
  - anonymous, free of charge, Wednesday and Sunday evening
- Psychological Help (PBS) of the Studierendenwerk Karlsruhe
  - they do also the cafeterias and the student dormitories
  - 1500 students annually
  - professional help
  - free of charge (paid with parts of your semester fee)
- https://www.ifss.kit.edu/student-health-lab/english/147.php

Social Assistance

- Offers from the AStA
  - social counselling
  - emergency financial aid
    - awards money to students in financial emergencies
  - free tables
    - free cafeteria food for students in financially difficult situations
  - emergency accomodation
  - https://www.asta-kit.de/en/asta/referate/soziales-0
- Beratungswerk (counselling centre) of the Studierendenwerk
  - in the dining hall at Adenauerring
  - https://www.sw-ka.de/en/beratung/beratungswerk/beratungswerk/

Questions?

Join the active Fachschaft

- representation of students interests (e.g. in university commitees)
- 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 (“Sprechstunde”)
- “Semesterauftakttreffen” (SAT, semester kick-off meeting) on Tuesday, 03.11.2026 at 7 PM at the computer science building
- “Fachschaftsrat” (FSR) on Wednesday, 11.11.2026 at 5:30 PM

Events for Internationals

Internationals Q&A on Wednesday, 21.10.2026 at 1:30 PM
InformatiKOM, seminar room 2&3

Internationals Karaoke on Tuesday, 27.10.2026 at 7 PM
AKK

Good luck with your studies!