Welcome to the Master of Science in Informatik / Computer Science

Department of Computer Science
Faculty of Engineering
University of Freiburg

Who am I?

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  https://www.tf.uni-freiburg.de/en/study-programs/counseling

Today I'll show you…

1. How to organize your studies
2. Some explanations about administrative stuff
3. Some important rules regarding exams
4. Where you can get information and help

It is going to be quite a bit of information,
but bear with me…

PART 1
SYLLABUS / STUDY PLAN

Very flexible syllabus…

- No predetermined schedule!
  It is **your** decision what you do when.

- It's just important that you follow the overall rules mentioned in the exam regulations

- How exactly you put your syllabus together does not really matter to us…

- In the end, you'll have to have fulfilled the requirements.

- So, none of your syllabi will look the same!

Let me explain now, how to built your own, individual syllabus / study plan.

Module types/Courses in the Computer Science program

- **Module Components / Courses**

    - Lectures – German: Vorlesung (V)

    - Exercises – German: Übung (Ü)

    - Lab courses – German: Praktische Übung/Praktikum (Pr)

    - Seminars – German: Seminar (S)

    - Projects – German: Projekt (*also* Pr)

Graded assessments or pass/fail

- **Coursework or pass/fail assessments ("Studienleistungen", SL)**
  - Exercises, reports, (mid-term) exams…
  - May be part of a module (for example the exercise sheets, then it's called coursework) or the overall assessment to complete a course successfully (=pass or fail assessment; can be an end-of-term exam, even)
    (in German both is called "Studienleistung"…)
  - May be graded, or only "pass" or "fail"
  - Not part of the final grade

- **Graded assessments / Exams ("Prüfungsleistungen", PL)**
  - Written or oral exams, reports, presentations, creation of software or demonstrators
  - Strict rules/regulations and very limited number of attempts
  - Always graded and always counts into the final grade

Syllabus overview

- 7 Lectures + Exercises overall: (42 ECTS (6 each)) (PL)
  - 1 advanced lecture *(formerly called key course)*
  - 5 specialization courses
  - 1 advanced course or specialization course (up to you, which)
- 2 Seminars (6 ECTS (3 each)) (PL)
- 1 Lab course (6 ECTS) (SL)
- 1 Study project (18 ECTS) (PL)
- 1 Thesis (30 ECTS) (PL)

Customized Course Selection: („Individuelle Studiengestaltung") (18 ECTS)

- Courses from departments outside CS („fachfremde Veranstaltungen") (12 ECTS) (SL)
- Either further course outside CS (6 ECTS) (SL)
- Or another lecture in Computer Science (6 ECTS) (PL)

→ **Master of Science in Computer Science (120 ECTS)**

Degree with Specialization in…

Course lists as PDFs on program website → Curriculum

- **Artificial Intelligence** with topics like
  - robotics and autonomous intelligent systems
  - artificial intelligence and machine learning
  - computer vision and graphics
- **Cyber-Physical Systems** with topics like
  - verification and analysis of hard- and software systems
  - software development and programming languages
  - embedded systems

Formal requirements:

- At least the following courses have to be from this area:
  - 4 Specialization courses or Advanced lectures (24 ECTS (6 each))
  - 1 Study project (18 ECTS)
  - 1 Thesis (30 ECTS)

Advanced Lectures

You have to do at least one advanced lecture, you may take two at the most (the 2nd replaces a specialization course)

7 Defined Courses:	Semester
Software Engineering / Softwaretechnik	Summer
Foundations of Artificial Intelligence / Grundlagen der Künstlichen Intelligenz	Summer
Image Processing and Computer Graphics / Bildverarbeitung und Computergrafik	Summer
Algorithm Theory / Algorithmentheorie	Winter
Databases and Information Systems / Datenbanken und Informationssysteme	Winter
Machine Learning	Winter
Computer Architecture / Rechnerarchitektur	Winter

Specialization Courses

You have to take 6 or 5 specialization courses (depending how many advanced lecture you take) → altogether it's 7
Lots of different lectures (+ exercises) to choose from:

- Algorithms / Bioinformatics
- Computer Architecture / OS /Embedded Systems
- Software / Programming
- AI / Robotics / ML

- Computer vision / graphics
- Network / communication
- Data bases
- Gender studies in STEM

- Backofen, Bast, Kuhn
- Scholl, tba, tba

- Podelski, Thiemann
- Nebel, Burgard, Hutter, Boedecker, Tangermann Valada, Grabocka, Ragni
- Brox, Teschner
- Schindelhauer, Schneider
- tba
- Kaiser

Seminars and Lab Course

You have to do 2 seminars and 1 lab course

- **Seminars** generally can be held in a weekly fashion or as a compact course („Blockseminar") for the presentations (details given in course description)

- **Seminars** and **Lab courses** may vary in topic and/or name from semester to semester, as most lecturers like to keep up-to-date with their research areas

Study Project

You have to do 1 study project

- You'll work (under a supervisor, but independently) on a current research topic in one of the workgroups / Chairs of the department

- See it as your „trial run" for the Thesis

- Has to be completed before you can register for your Thesis

- Before you start with your Study Project, please check out the procedure of finding a topic, registering the project etc.
  (Same goes for the Thesis!)

Customized Course Selection ("Individuelle Studiengestaltung")

- 18 ECTS (at least – can be slightly surpassed)

- You have to do some courses from subjects outside of Computer Science

- Only SL (pass or fail) in courses outside CS (so, it is not counted into final grade)

- You can choose to **replace** application area courses amounting to **6 ECTS with another Computer Science lecture** (advanced or specialization), but in this case, the CS course will have an **exam (PL)** and count into the final grade!

Available subjects to choose from

- Some subjects are integrated in the study planer in HISinOne, but not yet all of them

- See full list on program website:

https://www.tf.uni-freiburg.de/en/study-programs/computer-science/m-sc-computer-science
→ Curriculum

PART 2
ADMINISTRATIVE THINGS

Some practical advice, general facts and recommendations

- Most courses are offered every other semester (i.e. once a year); some can be held more irregularly; should be mentioned in the module handbook (see HISinOne)

- Overlapping courses... With the amount of courses and the flexible curriculum we offer, this just happens. Basically: Deal with it! (So: Choose one course for this semester, do the other one in year)

- Be aware that you might need to adapt your original study plan (for example, if a course is not offered as planned due to a professor being on leave)

Some practical advice, general facts and recommendations

- Usually no dependencies regarding order of courses
  - Nevertheless, check with lecturers for appropriate combinations or recommended order of courses

- Most prerequisites stated in the course catalog are recommendations, they are not mandatory; but some are…
  Just read what is said in the description!

Conditional admission – What does this mean?

- Conditions have to be fulfilled in addition to the normal Master's curriculum → likely to extend your study time

- You have to complete the required modules by the end of the second semester. They should be your top priorities! (Especially in case of course collisions/overlaps)

- You will be automatically registered for these courses, but have to register for the exams yourself
→ Registration for these exams has to be done via PDF form: https://www.tf.uni-freiburg.de/de/studium-lehre/a-bis-z-studium/dokumente/Examregistration.pdf

- Exams required for conditional admission can only be repeated once.

Advice for your next steps

- Study the course catalog / planner of studies
  (What courses are offered right now?)

- Generally, check out a few more courses than you intend to complete in the given semester

- Register (via HISinOne→ "Booking of courses") for the courses you want to take as soon as possible

- Information on dates and deadlines for course booking:
  https://www.tf.uni-freiburg.de/en/studies-and-teaching/calendar-dates
  → Booking deadlines for Bachelor and Master courses

- **Read the official exam regulations!**
  (= terms and conditions of your study program)

Registering for/ booking of courses

- Have a look at your *planner of studies*
  https://campus.uni-freiburg.de

- For information on handling the Campus-Management-System, watch the tutorial/instruction video:
  https://www.tf.uni-freiburg.de/en/studies-and-teaching/a-to-z-study-faq/information-for-new-students-summer-semester
  → Further information and tutorials
  → MSc CS - Course booking in HISinOne (English)

- If you have questions or made a mistake while booking:
  Contact us! (Ms. Moses in the Dean's office: moses@tf.uni-freiburg.de or myself)
  (Hint: Screenshots are really helpful for us!)

What to do if you forgot to book a course

Be aware:

Different course types have different deadlines!

If you forgot to book a course:

- Contact the lecturer and ask if there are still seats available and if it generally makes sense to start late

- The examination office **can't** help you with this!

- *Please note: Registration for an exam in HISinOne can be confusing if you did not book the course beforehand!*

PART 3
RULES FOR EXAMINATIONS

Registration for exams: Important!

- It's a second, independent step from booking the course. It's **not** done automatically!

- The procedure is *similar* to booking the courses. For a how-to, see https://www.tf.uni-freiburg.de/en/studies-and-teaching/a-to-z-study-faq/de-registration-of-exams

- **Deadlines** for the registration (and de-registration) for exams are also mentioned on this website.

- Without registering for an exam you are not allowed to take it, so **do not forget!**

- To make sure you are correctly registered, we recommend saving/printing the pdf of the in HISinOne → My studies → My course enrollments and exam registrations

How to proceed if you failed an exam

- Number of attempts are very limited:
  - 2 attempts for every exam / graded assessment (if needed)
  - **2 exams** (written or oral) for lectures can have a third (3rd) attempt. *This rule does **not** include lab courses, seminars or the project!*
- You are registered automatically for the repetitison(s) and **cannot sign off** !
- Repetition exam will take place in the next semester.
- You **can** substitute one Advanced lecture or Specialization course you failed with another one exactly once! (But it has to be done after the first attempt.)

Improvement of a grade

- You can try to improve exactly one (passing) grade you got during the first year of your studies.

- This rule applies only to (oral or written) exams for lectures + exercises.

- You have to take the „repetition" exam **directly in the following semester**

- The examination with the better grade will be considered official.

- *Not all study programs have this option!*

Missing an exam:
unexcused vs. authorized withdrawels

- If you do not attend an exam that you have registered for, it counts as failed, unless you have a valid excuse.

- Valid excuses might be
  - Due to illness (→ doctor's note on time,
    use form „Application for Exam Withdrawal Approval Due to Illness", see
    https://www.tf.uni-freiburg.de/en/studies-and-teaching/a-to-z-study-faq)
  - Due to emergencies in family etc.
    (please contact examination office immediately)
  - Special circumstances due to the Coronavius pandemic situation

Intellectual honesty / Plagiarism

- Plagiarism is:
  - Using someone else's texts, pictures, reports, data, solutions, whatever….
  - ... without citing the **source**
- Sources include:
  - Books, the internet, colleagues, …
- To make it clear:
  - Plagiarism is illegal!
- The simple „if...then" loop:
  - If you plagiarize (once)
    → then you fail the course
  - If you plagiarize repeatedly (twice)
    → then you are thrown out of the program and your academic career is over
- Intellectual honesty is important!

Image Source: TF

PART 4
FINDING INFORMATION
AND HELP

Students are responsible to stay informed

- We provide the necessary information through different sources:
  - Websites
  - Introductory events
  - Official documents (like exam regulations)
  - Information e-mails
    (Make sure to have access to your faculty user account and forward or use that e-mail address!)
- Students are expected to look for the information proactively
- *„I did not know!" is not accepted as a valid excuse!*

Information via Internet

Some useful links:

- Faculty of Engineering:
https://www.tf.uni-freiburg.de/en/studies-and-teaching

- calendar, dates and deadlines:
https://www.tf.uni-freiburg.de/en/studies-and-teaching/calendar-dates

- Program-Website:
https://www.tf.uni-freiburg.de/en/study-programs/computer-science/m-sc-computer-science

- Information for new students - summer semester
https://www.tf.uni-freiburg.de/en/studies-and-teaching/a-to-z-study-faq/information-for-new-students-summer-semester

Problems with your studies?

- **If you have any questions or problems:**
  Act immediately and do not wait for the problem to disappear miraculously!

- **Contacts & info sources:**
  - Official information sources by university, faculty and study program (legal texts, websites)
  - Study advisors
  - Lecturers / assistants (face-to-face or via e-mail)
  - Fachschaft TF (student committee of this faculty)
  - Information centers like the Student Service Center, Office of Student Services etc.
  - fellow students

  If you don't find the information, maybe try a search engine…

- **Contact information for advisory services at TF:**
  https://www.tf.uni-freiburg.de/en/study-programs/counseling

When writing a mail to an advisor or the examination office…

- Sensible subject

- Use a greeting / salutation – we are not chat bots…

- Sign the email with your full name; your matriculation number is usually also helpful

- Use full names of professors, supervisors or lecturers (not only the first name)

- For a new topic: Write your own new mail and address it (correctly) yourself

Advising@Service Center Studium: ZSB / IAS @ SCS

Information

Clearing / first information

- Where to go to …?
- Whom to talk to if…?
- How do I…?
- daily info desk

**Hotline
0761 / 203-4246**

Advising

…on any topic concerning your studies

- confidential
- impartial
- professional
- open and scheduled consultation hours

Workshops

Smalls groups (mostly in German), topics such as:

- Doubts / hard choices
- Dealing with (study) stress
- Time and self-management
- Masters degree or job search?

www.zsb.uni-freiburg.de   www.ias.uni-freiburg.de

Where to get software you might need for your courses?

- The Computing Center (*Rechenzentrum*) offers lots of software and licenses like MATLAB, Mathematica or LabView: https://www.rz.uni-freiburg.de/services/beschaffung/software

- For questions please contact lizenzen@rz.uni-freiburg.de