

M.Sc. Informatik / Computer Science

Department of Computer Science
Faculty of Engineering
University of Freiburg

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Who am I?



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I'll show you...



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

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.

Vocabulary you should know... part 1



Modules = building blocks of the syllabus

- Consist of various elements (different symbols/icons in study planner)
- Credits are given for complete module, no „partial credits“

Courses in the ESE program:

- Lectures – Vorlesung (V)
- Exercises – Übung (Ü)
- Lab courses – Praktikum / Praktische Übung (Pr)
- Seminars – Seminar (S)
- Projects – Projekt (*also* Pr)

Vocabulary you should know... part 2



Graded assessments or pass/fail:

- Coursework or pass/fail assessments (“Studienleistungen”, SL)
 - Part of module or final assessment
 - May be graded, or only “pass” or “fail”
 - Not part of the final grade
 - No negative consequences if failed (apart from having to repeat → “time penalty”)
- Graded assessments /Exams (“Prüfungsleistungen”, PL)
 - Always graded
 - Always counts into the final grade
 - Strict rules/regulations and very limited number of attempts

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...



- **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

*Course lists as PDFs on
program website →
Curriculum*

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

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

Master thesis



Exam regulations 2021

- Master thesis (27 ECTS) graded
- Colloquium (= Presentation / Defense) (3 ECTS) graded
- Admission to thesis:
at least **72 ECTS** credits plus Study project
(plus conditional courses from admission, if applicable)
- Duration: 6 months



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 or PDF)
- Overlapping courses...
With the amount of courses and the flexible curriculum, this just happens.
Basically: Deal with it!
(Meaning: Choose one course for this semester, do the other one in year)
- Be aware that you might need to adapt your original study plan

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; well, 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>
- Follow instructions from [short demonstration here](#)
- If you have questions or made a mistake while booking: **Contact** Ms. Moses in the Dean's office: moses@tf.uni-freiburg.de or myself
(Screenshots are really helpful)

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!*

Rules for Examinations

More details will be offered by the examination office team in a presentation in a few weeks.

You'll receive an invitation e-mail in time...

Registration for exams / graded assessments (PL)



- 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/examinations>
- **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 limited:
 - 2 attempts for every exam / graded assessment (if needed)
 - **2 oral or written exams** for CS lectures can be attempted **3 times**
(This rule does not include lab courses, seminars or the project!)
- You are registered automatically for the repetition(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 the exam / graded assessment with another one (but it has to be done after the **first** failed attempt)

Improvement of a grade



- Repeating an exam that you have passed, to improve your mark, is possible in **one** module you did in your first year of studies here
- This rule applies only to written or oral for lectures + exercises (not other kinds like homework or presentations).
- You have to take the „repetition“ exam **directly in the following semester**
- The examination with the better grade will be considered official

Missing an exam: unexcused or authorized withdrawals



- If you do not attend an exam that you registered for, it counts as **failed**, unless you have a **valid excuse**.
- Valid excuses can be
 - Due to illness
→ Doctor's note required, 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)
 - Currently: Special circumstances due to the Coronavirus 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!



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 an acceptable 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/embedded-systems-engineering/m-sc-embedded-systems-engineering>
- Information for new students
<https://www.tf.uni-freiburg.de/en/studies-and-teaching/a-to-z-study-faq/freshers-info>
- A to Z – Study FAQ
<https://www.tf.uni-freiburg.de/en/studies-and-teaching/a-to-z-study-faq>

Problems with your studies?



- If you have any questions or problems:
Act immediately and do not wait for the problem to disappear miraculously!
- Contacts & information sources:
 - Official information sources by university, faculty and study program
 - Study advisors (Contact information for advisory services at TF: <https://www.tf.uni-freiburg.de/en/study-programs/counseling>)
 - 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...

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



- Use 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 a new mail and address it (correctly) yourself
- If it is urgent, please indicate this in the subject line - our responses to mails not classified as urgent can take quite a while and we try to prioritize.