

M.Sc. Informatik / Computer Science

Department of Computer Science
Faculty of Engineering
University of Freiburg

Albert-Ludwigs-Universität Freiburg



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Who am I?



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

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



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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 (*a*lso 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: General structure



42 ECTS
(7 lectures)

Advanced Lectures
(1 or 2) +
Specialization
Courses
(6 or 5)

12 ECTS

2 Seminars + 1 Lab Course

18 ECTS

Study project

18 ECTS

Customized Course Selection

12 ECTS
from courses offered
outside CS

6 ECTS
▪ also from courses offered outside CS
▪ or 1 language course
▪ or 1 additional CS lecture

30 ECTS Master Thesis + Colloquium (defense)

For optional specialization in AI or CPS:
At least 24 ECTS from according lectures + Study project + Master Thesis in related topic

Optional specialization



- In **Artificial Intelligence** with topics like
 - robotics and autonomous intelligent systems
 - artificial intelligence and machine learning
 - computer vision and graphics
- In **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
(will be updated on Friday,
April 22)*

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
- Biere, Scholl, Zimmerling
- Podelski, Thiemann
- Hutter, Boedecker, Valada, Grabocka, Ragni, tba (successor Burgard)
- 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 all of them. For those subjects not available for booking in the study planner, you'll have to organize things like registering for the courses and exams on your own (by contacting the lecturers, for example).

- See full list on program website:

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

→ Curriculum

Master thesis



- 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 email to the examination office (subject: registration for conditional course exam XY, with your matriculation number etc.)
- **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 regarding 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)

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



- 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/information-for-new-students-summer-semester>
- 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.