Master of Science Embedded Systems Engineering

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 explanations about administrative stuff
3. Some important rules regarding exams
4. Where you can get information and help

PART 1
SYLLABUS / STUDY PLAN

The Master program ESE is…

- generally an international study program
  - Most courses are offered in English
  - But some elective courses in German only

- a mixture of compulsory courses (to build a common ground for the students) and electives

- flexible: The study plan provides the frame, which you fill up with courses
  ($\rightarrow$ when you do them is up to you)

- Customizable: A big variety of elective courses in Concentration areas and Personal Profile allow for individual specialization

Upcoming: New exam regulations with even more flexible syllabus

- New version of exam regulations with new syllabus starting in winter semester 2021/22

- Don't get too set on the current curriculum, as we expect you to switch to the new version

- Details will follow this semester
  (Examples for study plans, English translation of exam regulation, information on the procedure to switch to new curriculum etc.)

- Important to know now: Every course you take now will still exist in the new regulations

Module types/Courses in the ESE program

- **Module Components / Courses**

  - Lectures – German: Vorlesung (V)

  - Exercises – German: Übung (Ü)

  - Lab courses – German: Praktikum /
    Praktische Übung (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

Structure of the study program (when starting in summer term)

Module / Area	Semester	ECTS credits
Kursvorlesung Informatik („advanced lecture")	1 or 2	6
Kurs- or Spezialvorlesung Informatik	1 or 2	6
Assembly and Packaging Technology (English) / Aufbau- und Verbindungstechnik (German)	1 / 2	5
Sensorik und Aktorik (German) / Sensors (English)	2	5
Cyber Physical Systems – Discrete Models	2	6
Microelectronics	2	5
Modelling and system identification	2	6
Concentrations area 1	1, 2 or 3	At least 15
Concentrations area 2	1, 2 or 3	At least 15
Personal Profile	1, 2 or 3	At least 15
Master thesis + Presentation	4	27 + 3
Overall		120

At least 51 overall

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Mandatory Courses

5 specific courses

- CPS – Discrete Models
- Sensors
- Assembly and Packaging Technology
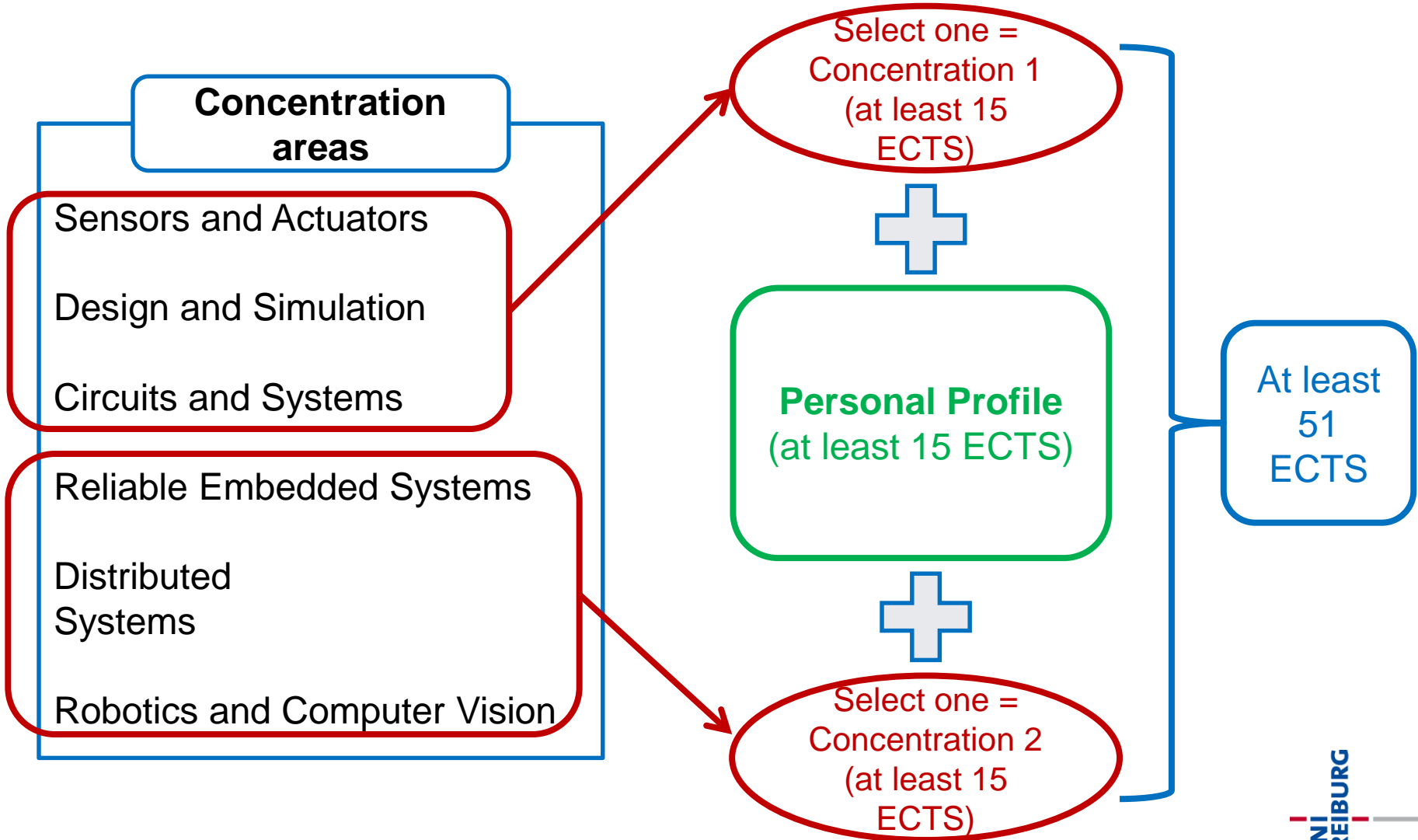- Micro electronics
- Modelling and system identification

Plus

- **1 advanced lecture** *("Kursvorlesungen")* in CS
- **1** advanced lecture *or* **Specialization course** in CS

- Big selection of specialization courses from CS
- Lots of them and the courses from MSE can be found in one or the other concentrations area
- All of them can also be chosen in your personal profile
- Keep this in mind when registering for a course in HISinOne

Regarding the elective areas: a general overview

Concentration areas

Sensors and Actuators

Design and Simulation

Circuits and Systems

Reliable Embedded Systems

Distributed Systems

Robotics and Computer Vision

Select one = Concentration 1 (at least 15 ECTS)

➕

Personal Profile (at least 15 ECTS)

➕

Select one = Concentration 2 (at least 15 ECTS)

At least 51 ECTS

Concentrations and Personal Profile: Which and how many courses to choose?

- Choose two concentration areas (one from each group) and do courses >= 15 credits
- In your Personal Profile select courses >= 15 credits from all **lectures, seminars or lab courses** from the Master's programs for

  *Please note: **Not** from the SSE program!*

  - MSE / MST
  - Computer Science

  @ the Faculty of Engineering
- You may take as many courses as you need to fullfill the constraints, but no more (additional)!
- You may take at most 2 seminars overall; the number of lab courses is not limited
- Study Project (from Computer Science, 18 ECTS) only available in Personal Profile
- There is a video tutorial explaining the booking procedure for seminars. Please check that out if you have questions about this topic.

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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!
(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; but some are…
  Just read what is said in the description!

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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.

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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 ESE - 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 register/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 / 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/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 limited:
  - 2 attempts for every exam / graded assessment (if needed)
  - In the new regulations, **2 oral or written exams** can be attempted **3 times**
- You are registered automatically for the repetitison(s) and **cannot sign off** !
- Repetition exam will take place in the next semester.
- In the new regulations, you can substitute 1 course you failed the exam / graded assessment with another one (but it has to be done after the first attempt)

Improvement of a grade

- In the upcoming new regulations, you can improve the grade of 1 exam overall, that you did in your first year

- This rule applies only to written or oral (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

- *Not all study programs have this option!*

Missing an exam: unexcused or authorized withdrawels

- 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 ($\rightarrow$ doctor's note, 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
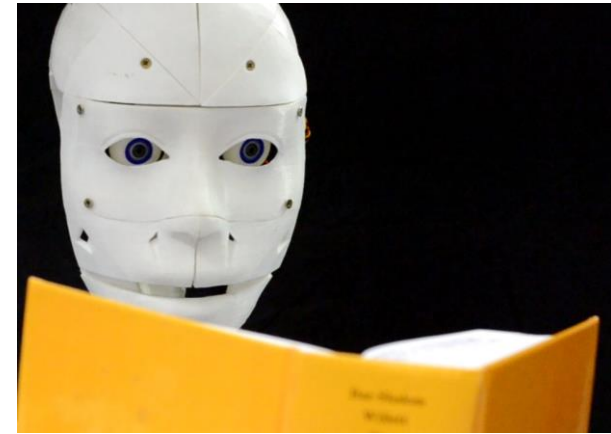- Intellectual honesty is important!

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!*

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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 - 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
  - Mentors
  - 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

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

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

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