

Welcome to the Department of Computer Science at the University of Freiburg!

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Martina Nopper

Academic Advisor for Computer Science

The Departmental Academic Advising for Computer Science

- Martina Nopper (Dipl.Inf.)
 - Mail: studienberatung@informatik.uni-freiburg.de
 - Phone: +49 761 203 8169
 - Office: Building 101 02 013a (same as Ms. Epe)
(→ hallway „Prüfungsamt“)

- Consulting hours:
 - Monday + Wednesday 2 p.m. – 4 p.m.
 - Tuesday + Thursday 10 a.m. – 12 noon

What am I doing here?

I would like to show you...

- where you are
- how to organize your study /
build your own study plan
*(keeping in mind the upcoming change of
exam regulations in summer semester 2020)*
- some administrative stuff
- (limited to a bare minimum) some important
rules regarding exams
- where you can get information and help

The Faculty of Engineering

- Or “TF” for short
(from the German name “Technische Fakultät”)
- Founded in 1995,
faculty number 11 of the University of Freiburg
- 3 Departments:
 - **Computer Science**
 - Microsystems Engineering
 - Sustainable Systems Engineering
- About 50 professors & group leaders
(and still growing...),
more than 450 employees,
more than 1900 students
- Facilities:
computer pools, WiFi, robotics labs,
tele-teaching facilities, own engineering library...



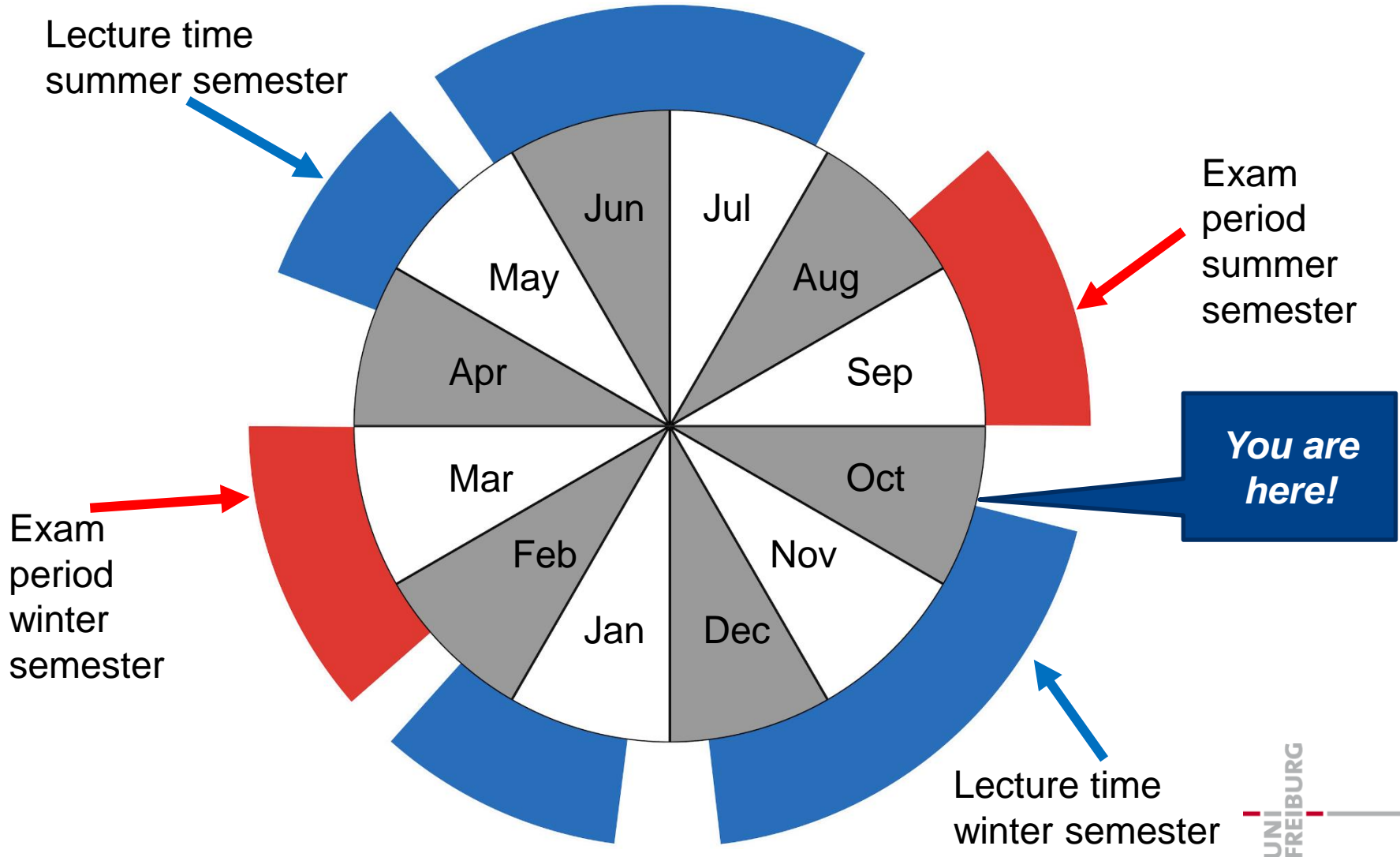
Chairs

- Algorithms
- Computer Architecture / OS /Embedded
- Software / Programming
- AI / Robotics ...
- Computer vision / graphics
- Network / communication
- Data bases
- Gender studies in STEM
- Backofen, Bast, Kuhn
- Becker, Scholl, tba
- Podelski, Thiemann
- Nebel, Burgard, Hutter, Boedecker
- Brox, Teschner
- Schindelhauer, Schneider
- tba
- Kaiser

Master programs:

- **Master program Computer Science / Informatik**
- Master program Embedded Systems Engineering (ESE)
(offered together with the Department of Microsystems Engineering)

Periods of time in University year



Module types/Courses in the Computer Science program

- **Module Components**
 - Lectures – German: Vorlesung (V)
 - Exercises – German: Übung (Ü)
 - Lab courses – German: Praktische Übung/Praktikum (PrÜ/Pr)
 - Seminars – German: Seminar (S)
 - Projects – German: Projekt (*also* Pr)
- **Pass/fail assessments (“Studienleistungen”)**
 - Exercises, reports, mid-term exams...
 - Are not part of your final grade, but may be part of a module (for example the exercise sheets)
 - Are not always graded (maybe only “pass” or “fail”) but if so, the mark is shown in the transcript
- **Graded assessments (“Prüfungsleistungen”)**
 - Written or oral exams, reports, presentations...
 - Are always graded and count into the final grade

Some practical advice regarding courses

- **Lectures** and **exercises** belong together even though they are mentioned separately in the course catalog
→ you have to register for both!
- **Seminars** can be held weekly or as a compact course („Blockseminar“ → sometimes no time given in course catalogue or only for first meeting)
- **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

Upcoming: Change of exam regulations in Summer semester 2020!

- You are the last students enrolled in the exam regulations in the version from 2011
- Starting summer semester 2020, there'll be a new version of the exam regulations
- All students will be transferred into the new regulations, unless they contradict formally till June 30th 2020!
(You will receive a formal letter on this topic.)
- *So keep the new version in mind while planning this semester/year!*

Current Syllabus

(PO version 2011)

Mandatory Area

- 3 Lectures + Exercises: (18 ECTS (6 each))
 - 1 Key course in Core area in Computer Science
 - 1 Specialization course in Advanced Computer Science
 - 1 in one of these (up to you, in which)
- 1 Lab course (6 ECTS)
- 1 Master project (16 ECTS)
- 1 Thesis (30 ECTS)

Elective Area

- 4 Lectures + Exercises from the Specialization courses in your chosen Specialization area (24 ECTS (6 each))
- 1 Seminar from your chosen Specialization area (4 ECTS)
- 1 Seminar (no matter which area) (4 ECTS)
- Application area (18 ECTS)

Key courses

Key course	Semester	Related specialization area
Software Engineering / Softwaretechnik (<i>tba</i>)	Summer	Cyber-Physical Systems
Computer Architecture / Rechnerarchitektur (<i>tba</i>)	Summer	Cyber-Physical Systems
Foundations of Artificial Intelligence / Grundlagen der Künstlichen Intelligenz (<i>tba</i>)	Summer	Cognitive Technical Systems
Image Processing and Computer Graphics / Bildverarbeitung und Computergrafik (<i>in English</i>)	Winter	Cognitive Technical Systems
Algorithm Theory / Algorithmentheorie (<i>in English</i>)	Winter	Information Systems
Databases and Information Systems / Datenbanken und Informationssysteme (<i>in German</i>)	Winter	Information Systems

Specialization areas – general topics

- **Cognitive Technical Systems**
 - robotics and autonomous intelligent systems
 - artificial intelligence and machine learning
 - computer vision and graphics
- **Cyber-Physical Systems**
 - verification and analysis of hard- and software systems
 - software development and programming languages
 - embedded systems
- **Information Systems**
 - theoretical and applied algorithms
 - networks and distributed systems
 - data management and communication
 - bioinformatics

Outlook: Syllabus PO version 2020

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

Individually designed area:
(„Individuelle Studiengestaltung“)
(18 ECTS)

- Application courses
(12 ECTS)
- **Either** more application
courses (6 ECTS)
- **Or** another lecture in
Computer Science (6 ECTS)

Specialization in

- either Artificial Intelligence (AI)
- or Cyber-Physical Systems (CPS)

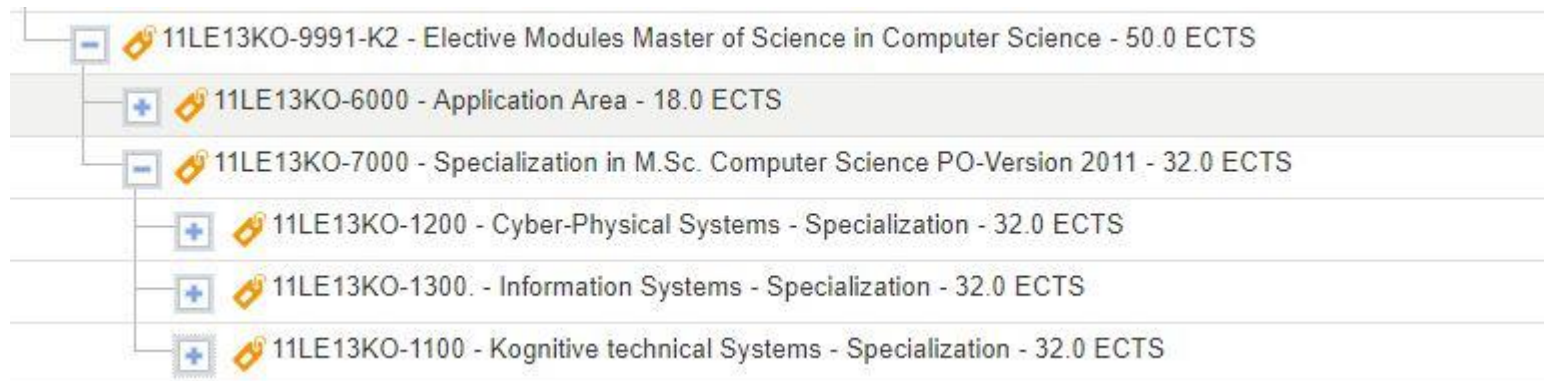
At least the following courses have to be from this area:

- 4 Lectures + Exercises (24 ECTS (6 each))
- 1 Study project (18 ECTS)
- 1 Thesis (30 ECTS)

- **Mandatory part:**

[-]	10000 - Informatik, M.Sc., PO 2011
[-]	11LE13KT-9000-88/079/0/2011 - Master of Science/M.Sc. - 120.0 ECTS
[-]	11LE13KO-9991 - ECTS-Punktekonto Master of Science in Informatik (PO-Version 2011) - 120.0 ECTS
[-]	11LE13KO-9991-K1 - Mandatory Modules M.Sc. Informatik (PO-Version 2011) - 70.0 ECTS
[+]	11LE13MO-8700-MSc - Master Module - 30.0 ECTS
[-]	11LE13KO-2000 - Core areas in Computer Science - 6.0 ECTS
[+]	11LE13MO-2010 - Algorithmentheorie / Algorithms Theory - 6.0 ECTS
[+]	11LE13MO-2050 - Bildverarbeitung und Computergraphik / Image Processing and Computer Graphics - 6.0 ECTS
[+]	11LE13MO-2060 - Datenbanken und Informationssysteme / Data Bases and Information Systems - 6.0 ECTS
[+]	11LE13MO-2040 - Grundlagen der Künstlichen Intelligenz / Foundations of Artificial Intelligence - 6.0 ECTS
[+]	11LE13MO-2020 - Rechnerarchitektur / Computer Architecture - 6.0 ECTS
[+]	11LE13MO-2030 - Softwaretechnik / Software Engineering - 6.0 ECTS
[+]	11LE13MO-7140 - Master project - 16.0 ECTS
[+]	11LE13MO-7110 - Laboratory - 6.0 ECTS
[-]	11LE13KO-2100 - Advanced Computer Science - 6.0 ECTS
[+]	11LE13MO-7001-P1 - Anerkanntes Spezialisierungsmodul Prüfung...1
[+]	11LE13MO-1309 - Bioinformatik I / Bioinformatics I - 6.0 ECTS
[+]	11LE13MO-1310 - Bioinformatik II / Bioinformatics II - 6.0 ECTS
[+]	11LE13MO-1208 - Compilerbau / Compiler Construction - 6.0 ECTS (2 of 2)
[+]	11LE13MO-1123 - Computer Vision - 6.0 ECTS

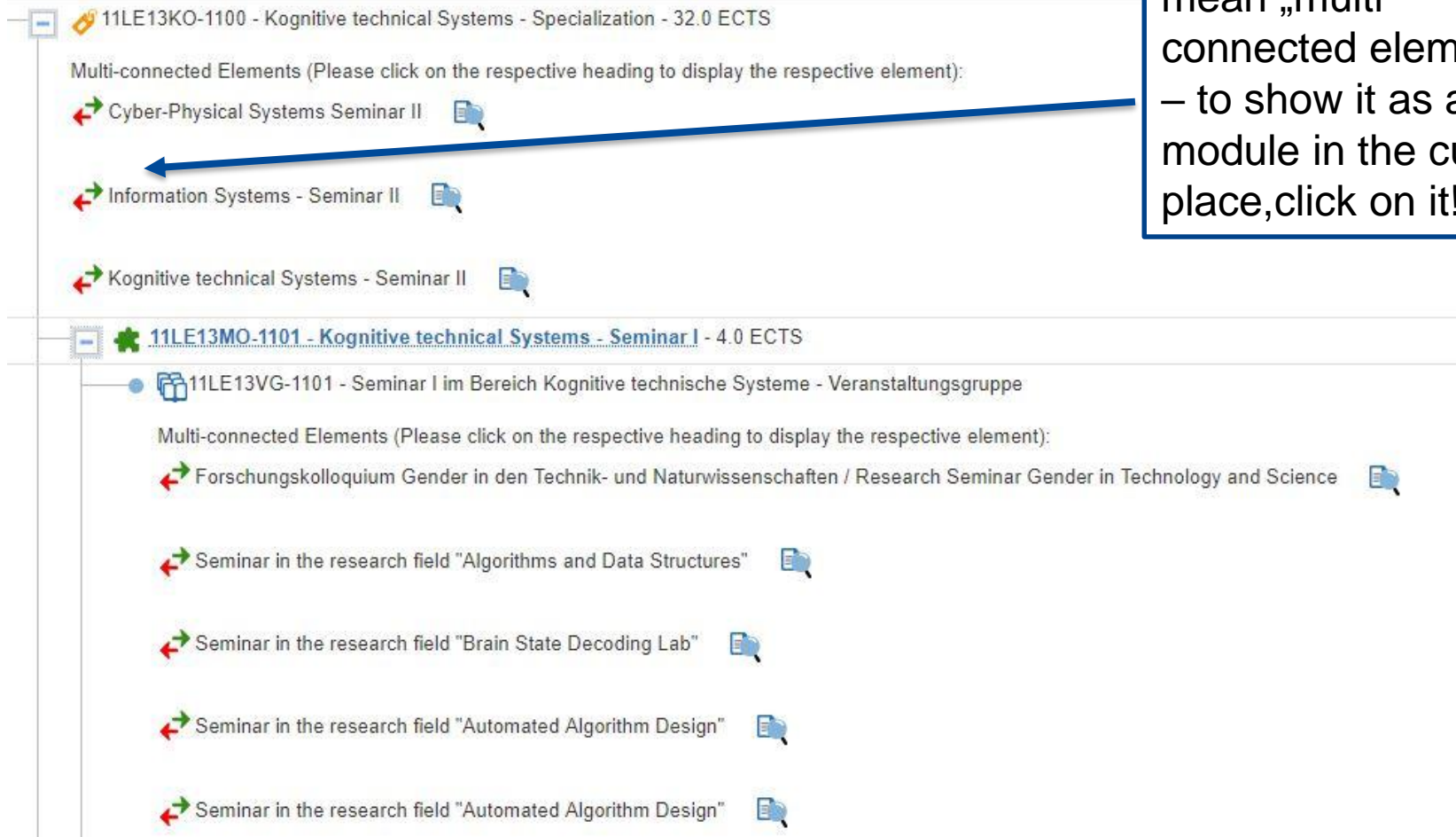
- Elective part:



View in Study planer (HISinOne)

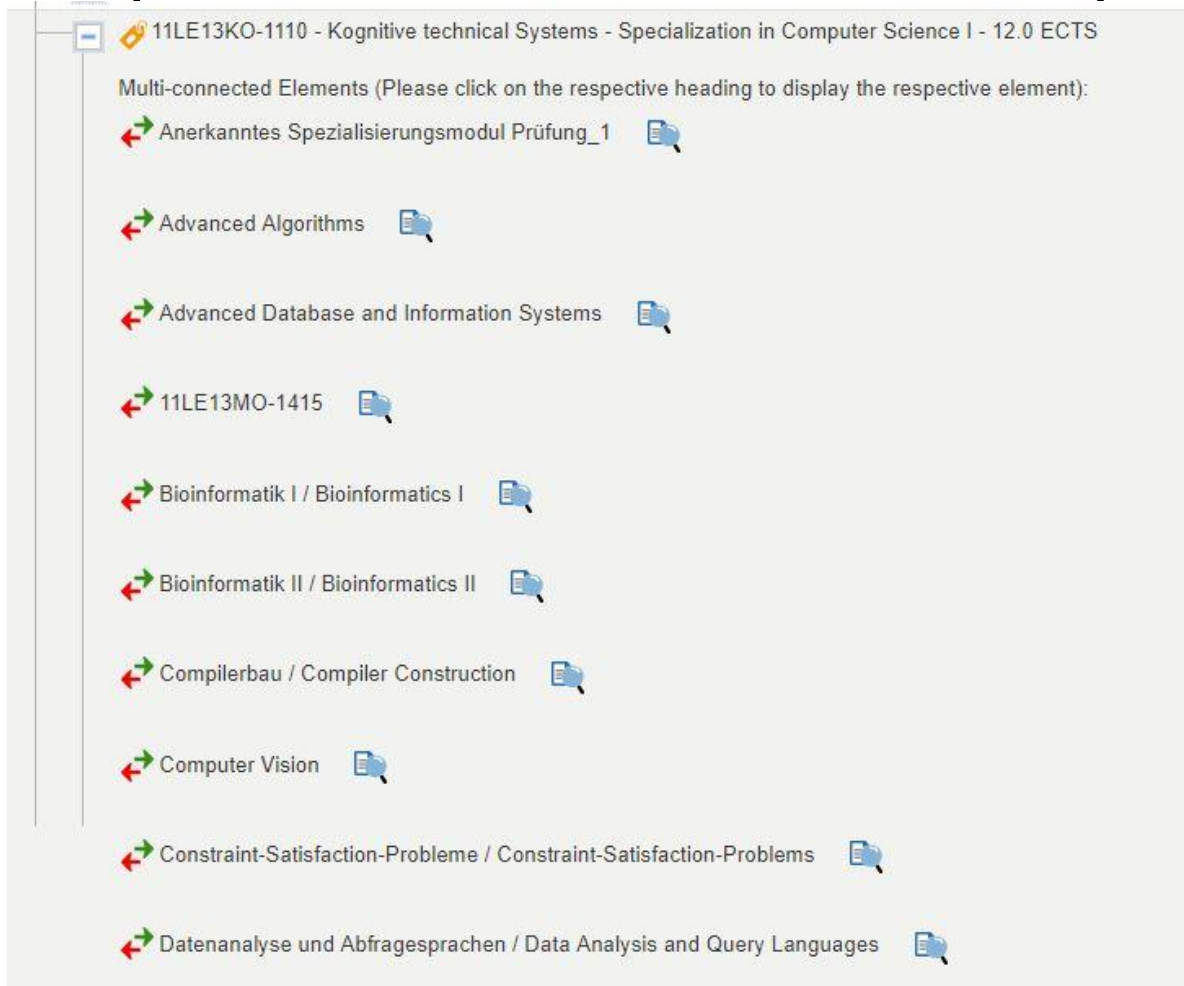
■ Seminars:

Green-red arrows mean „multi connected element“ – to show it as a full module in the current place, click on it!













The screenshot displays the HISinOne study planner interface. It shows two main sections for seminars. The first section is titled "11LE13KO-1100 - Kognitive technical Systems - Specialization - 32.0 ECTS" and includes a sub-heading "Multi-connected Elements (Please click on the respective heading to display the respective element):". Below this, three seminar entries are listed, each with a green-red double-headed arrow icon and a document icon: "Cyber-Physical Systems Seminar II", "Information Systems - Seminar II", and "Kognitive technical Systems - Seminar II". A blue arrow points from the explanatory text box to the first seminar entry. The second section is titled "11LE13MO-1101 - Kognitive technical Systems - Seminar I - 4.0 ECTS" and includes a sub-heading "Multi-connected Elements (Please click on the respective heading to display the respective element):". Below this, five seminar entries are listed, each with a green-red double-headed arrow icon and a document icon: "Forschungskolloquium Gender in den Technik- und Naturwissenschaften / Research Seminar Gender in Technology and Science", "Seminar in the research field 'Algorithms and Data Structures'", "Seminar in the research field 'Brain State Decoding Lab'", "Seminar in the research field 'Automated Algorithm Design'", and "Seminar in the research field 'Automated Algorithm Design'".

■ Specialization in C.S. I – example:




11LE13KO-1110 - Kognitive technical Systems - Specialization in Computer Science I - 12.0 ECTS

Multi-connected Elements (Please click on the respective heading to display the respective element):

- ← → Anerkanntes Spezialisierungsmodul Prüfung_1 
- ← → Advanced Algorithms 
- ← → Advanced Database and Information Systems 
- ← → 11LE13MO-1415 
- ← → Bioinformatik I / Bioinformatics I 
- ← → Bioinformatik II / Bioinformatics II 
- ← → Compilerbau / Compiler Construction 
- ← → Computer Vision 
- ← → Constraint-Satisfaction-Probleme / Constraint-Satisfaction-Problems 
- ← → Datenanalyse und Abfragesprachen / Data Analysis and Query Languages 


- Specialization in C.S. I (and II) – example:

↔ Soziale Robotik / Social Robotics 

↔ Spieltheorie / Game Theory 

↔ Statistische Mustererkennung / Statistical Pattern Recognition 


↔ Verteilte Systeme / Distributed Systems 

↔ Machine Learning for Automated Algorithm Design 

+  [11LE13MO-1008 - Dynamische Epistemische Logik / Dynamic Epistemic Logic](#) - 6.0 ECTS


+  [11LE13MO-1330 - Gender in den Technik-, Natur- und Medizinwissenschaften / Lecture Series Gender in Technology, Science and Medicine](#) - 6.0 ECTS


+  [11LE68MO-4403 - Model Predictive Control](#) - 6.0 ECTS

●  11LE13KO-1120 - Kognitive technical Systems - Specialization in Computer Science II - 12.0 ECTS

Multi-connected Elements (Please click on the respective heading to display the respective element):

↔ Anerkanntes Spezialisierungsmodul Prüfung_1 

↔ Advanced Database and Information Systems 

↔ 11LE13MO-1415 

↔ Bioinformatik I / Bioinformatics I 

Application areas

You have to choose one area.
Currently, you cannot mix them.
This will change in the new PO version!

Inside your chosen application area,
(at least) **18 ECTS** have to be completed.

List of areas and courses inside them can be found here:

<https://www.tf.uni-freiburg.de/en/studies-and-teaching/module-handbooks>

→ Master Informatik / Computer Science

→ list of application areas M.Sc. Computer Science PO
2011 (PDF)

Application areas

List of areas:

- Archeology (German only)
- **Bioinformatics** (in English, no previous knowledge required)
- Cognitive Sciences (mostly in German, few English courses available)
- **Economics** (mostly in English, usually no previous knowledge required)
- Environmental Natural Sciences (German only)
- Mathematics (German only)
- Medicine (German only)
- **Microsystems Engineering** (in English, no previous knowledge required)
- **Neuroscience** (in English, no previous knowledge required; *complicated to incorporate into Computer Science schedule!*)
- Physics (German only)
- Political science (German only)
- **Psychology** (German only; only 3 students per year allowed)

For these two areas: Obligatory registration with study advisor necessary

General Rules and Recommendations

- Most courses are offered every other semester (i.e. once a year); some can be held irregularly; should be mentioned in the module handbook (see HISinOne)
- Usually no dependences in the order of courses
 - Nevertheless, check with lecturers for appropriate combinations or order of courses
- Be aware that you might need to change your original study plan
- Before you start with your [Master Project](#), please check out the procedure of finding one, registering it etc.
- It is recommended that the Master's Thesis fits your specialization area

Conditional admission – What does this mean for me?

- Conditions have to be fulfilled **in addition** to the normal Master's curriculum
→ likely to extend the time you need to graduate
- You have to complete the required modules by the end of the second semester.
They should be your top priorities!
- You will be **automatically registered for these courses**, but have to **register for the exams yourself**
→ Registration for these exams have to be done via PDF form:
<https://www.tf.uni-freiburg.de/de/studium-lehre/a-bis-z-studium/dokumente/Examregistration.pdf>

Conditional admission – What does this mean for me?

- It is not sufficient to take the exam, you have to attend the course.
- If the lecturer requires any exercises or mid-term exams for admission to the final exam, you also have to fulfill these requirements.
- Exams required for conditional admission can only be repeated once.
- If a conditional course collides with one of your mandatory or elective courses, the **conditional course** should always have **higher priority!**

Plagiarism / intellectual honesty

- Plagiarism is:
 - Using someone else's texts, pictures, reports, data, solutions, whatever....
 - ... without giving the **source**
- Sources include:
 - Books, the internet, colleagues, ...
- To make it clear:
 - Plagiarism is illegal!
- The simple „if...then“ loops:
 - If you plagiarize...(once)
 - ... then you fail
 - If you plagiarize repeatedly (twice)
 - ... then your academic career is over.
- Intellectual honesty is important!

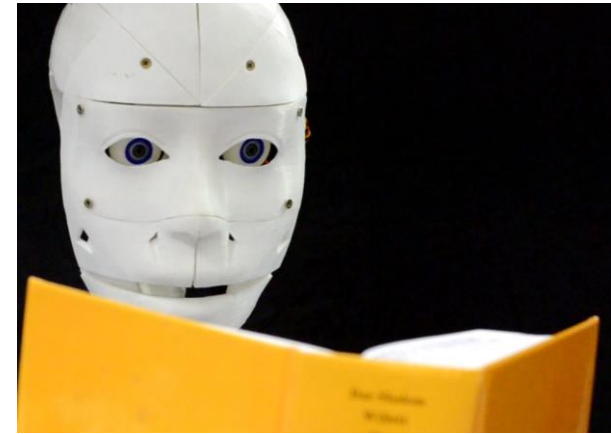


Image Source: TF

Tips for your first week

- **Read the official exam regulations!**
(= *terms and conditions of your study program*)
- Study the online course catalog
(*What is offered now? What belongs to which specialization area?*)
- Check out a few more courses than you intend to complete
- Most prerequisites stated in the course catalog are recommendations, they are not mandatory
- Please note: The first exercise/tutorial might take place **after** the first lecture only; check with lecturer, if unsure
- Register (via HISinOne) for the courses you want to take as soon as possible
- For **Seminars** there is a special registration period:
21st till 30th of October
- Information on dates for course registration:
<https://www.tf.uni-freiburg.de/en/studies-and-teaching/calendar-dates>
→ Booking deadlines for Bachelor and Master courses

Registering for/ booking of courses

- Have a look at the course catalogue:
<https://campus.uni-freiburg.de>
 - Studies offered
 - Show university course catalog
 - Technische Fakultät
 - Master of Science (M.Sc.)
 - Informatik, PO 2011
- For information on handling the Campus-Management-System see
<https://www.tf.uni-freiburg.de/en/studies-and-teaching/teaching/course-booking>
or use the extensive wiki of HISinOne → Help → Guide for students
- If you have questions or made a mistake while registering:
Contact us!
(Ms. Moses in the Dean's office: moses@tf.uni-freiburg.de or myself)
(*Screenshots might be helpful for us!*)

What to do if you forgot to register/book a course

- If you forgot to register for a course (or decide very late you would like to try it):
 - Go to the lecturer and ask if there are still places available and if it generally makes sense to start late
 - For lectures, you can register yourself till the end of the lecture time, but the lecturer might also add you manually in the HISinOne system
 - The examination office **can't** help you here!
- **Registration for an exam in HISinOne is difficult if you did not register for the course!**

Examination rules and regulations

- There will be an official introduction on exam rules etc. from the examination office team in a few weeks time:

Tuesday, November 12th, 1:00 – 2:00 p.m.
Lecture Hall 101 00 036

- *You will be reminded via mail!*
(As will happen with other important information here at the faculty, so make sure your contact data in myAccount or HISinOne is correct!)
- **Please attend the meeting! It's important!**
- *Today, I'll keep it short and only mention the minimum...*

Registration for exams

- 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

PO version 2011

- Number of tries are limited:
 - **Every** exam can be tried **2 times**
 - **Three exams** for courses in the required or elective modules can be tried **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** !
- You **cannot** substitute a course you already took an exam in with another one!
- **No** grade improvement!

How to proceed if you failed an exam

PO version 2020

- Number of tries are limited:
 - Every exam can be tried 2 times
 - **Two exams** for courses in the required or elective modules can be tried 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** !
- You **can** substitute **one course** you already took an exam in with another one!
- You can try to improve **one** grade you got during the first year of your studies

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 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)

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>
- information about exams etc.:
<https://www.tf.uni-freiburg.de/en/studies-and-teaching/a-to-z-study-faq>
- study plans, syllabus, academic rules:
<https://www.tf.uni-freiburg.de/en/studies-and-teaching/module-handbooks>

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 you may contact
lizenzen@rz.uni-freiburg.de

Problems with your studies?

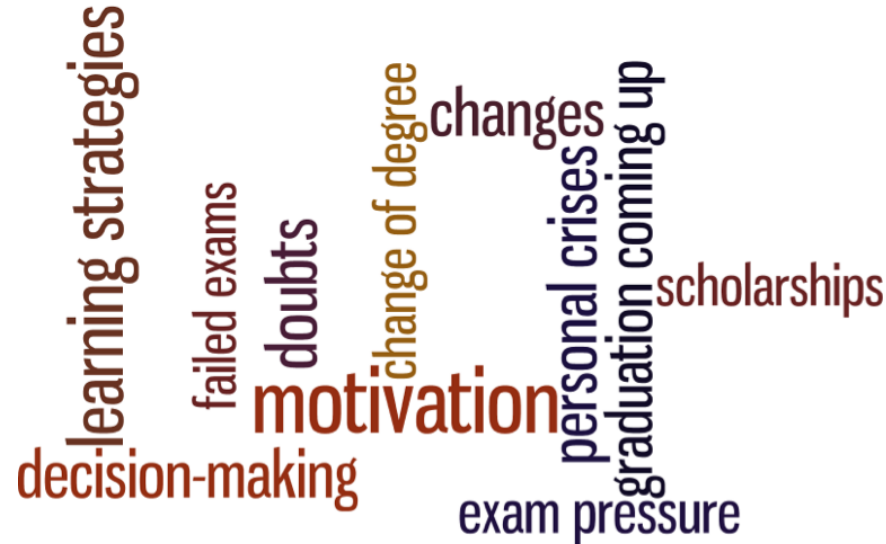
- If you have any questions or problems:
Act immediately and do not procrastinate!
- Contacts & info sources:
 - Official information sources by university, faculty and study program (legal texts, websites)
 - academic advising
 - Lecturers / assistants /mentors (face-to-face or via e-mail)
 - Fachschaft TF (student committee here at the faculty)
 - Information centers like the Student Service Center, Office of Student Services etc.
 - fellow students

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

Persons offering help and information

Function	Person
Program Coordinator	Ms. Ursula Epe
Study / Academic Advisor	Ms. Martina Nopper
Examination Office	Ms. Susanne Stork Ms. Anne-Julchen Müller
Dean of Studies (Computer Science)	Prof. Dr. Hannah Bast
Librarians	Ms. Susanne Hauser and colleagues

Advising@Service Center Studium



International Admissions and Services (IAS) and Central Academic Advising (ZSB) at Service Center Studium is your first resort for all information and advice concerning your studies

at Sedanstr. 6 (b/n library and theatre)



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



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

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