Orientation manual for new international students
MSc. Embedded Systems Engineering

September 2018
Welcome

We would like to take this opportunity to welcome you to the Faculty of Engineering at the University of Freiburg. Your decision to study Embedded Systems Engineering with us at the Faculty of Engineering means that you have chosen an innovative field being taught at a young and dynamic institution. The very fact that Freiburg’s Faculty of Engineering is relatively new, means that our 53 professors and several junior research groups exploring future-oriented fields will expose you to a broad spectrum of interesting topics which have equal significance for both R & D and the industrial sector. The way things work at a German university might be quite different from what you have been used to. For one thing, here you are expected to work independently and demonstrate a large measure of self-responsibility and initiative. That does not mean that you are alone. Our department has a large, supportive team to help you. Our goal is to assist in smoothing the way for you to complete your studies successfully with as few hitches as possible. In this brochure, we hope to provide you with an overview of the content and general framework and conditions of your course of studies in Embedded Systems Engineering. It is designed to aid you, especially at the beginning, in getting the most out of your education. Please do not hesitate to provide us with feedback about this brochure (studienkoordination@tf.uni-freiburg.de). This will help us to keep improving our efforts for the students who will follow in your footsteps. Please know that you have our best wishes for success as you delve into your studies and student life.

Prof. Dr. Oliver Paul (Dean)    Prof. Dr. Moritz Diehl (Dean of Academic Affairs)

Preface

Even though this brochure is an official Faculty publication, we have chosen to use a more informal style and placed great value on making it clear, practical and easy to use. It is supposed to be understandable and, well, different from the majority of official documents which are usually extremely formal and almost impossible to comprehend. Our aim is to give you a sort of personal advisor that can help you answer many of the questions about your studies and student life. The suggestions and tips are presented from the student perspective and we hope, come across like pieces of advice from a good friend. That is why you will find here uncomplicated and practical language designed to get to the point. We will also provide you with names and addresses of who to contact or where to go for more information. We wish you, our readers, a great start as you begin your studies and hope that this manual will be a valuable assistant and guide during your first semester.
CONTENTS:

1 Embedded Systems Engineering ................................................................. 5
  1.1 General Information ............................................................................. 5
  1.1.1 The German Higher Education System ....................................... 5
  1.1.2 University Staff ............................................................................. 5
  1.1.3 High level of freedom .................................................................... 6
  1.1.4 Culture of Discussion ..................................................................... 8
  1.1.5 Degrees .......................................................................................... 8
  1.1.5.1 Bachelor’s Degree ..................................................................... 8
  1.1.6 Course Types ............................................................................... 10
  1.1.7 Course registration ....................................................................... 10
  1.1.8 Examinations ............................................................................... 14
  1.1.9 Be informed! ................................................................................ 14
  1.2 The Curriculum .................................................................................. 17
  1.2.1 Mandatory courses ...................................................................... 17
  1.2.2 Specialization courses in Computer Science .................................. 18
  1.2.3 Elective courses (concentrations) ................................................. 18
  1.2.4 Conditional courses (Auflagen) .................................................... 19
  1.2.5 Module handbook (syllabus) and course catalog ......................... 19
  1.2.6 Master thesis ................................................................................ 20
  1.2.7 German language courses ............................................................ 21
  1.3 How studying works ......................................................................... 21
  1.3.1 Lectures ....................................................................................... 21
  1.3.2 Self-discipline and Self-tracking .................................................... 24
  1.4 The University in Everyday Life .......................................................... 25
  2.1 Preparing for your first semester ......................................................... 25
  2.1.1 Orientation days at the Faculty of Engineering ............................ 25
  2.1.2 Guided campus and university tour .............................................. 25
  2.1.3 Computer Center (RZ) Introduction .......................................... 25
  2.2 Buildings and Rooms ........................................................................ 25
  2.2.1 Faculty of Engineering .................................................................. 25
  2.2.2 Science Campus (Institutsviertel) ................................................. 26
  2.2.3 University Central Campus ......................................................... 26
  2.3 Libraries ............................................................................................. 26
  2.3.1 Library User Card ....................................................................... 26
  2.3.2 Loss of your Library User Card (same as UniCard) ....................... 26
  2.3.3 Borrowing Books ........................................................................ 27
  2.3.4 Libraries relevant for Embedded Systems Engineers .................. 27
  2.4 Computer Pools at the Faculty of Engineering ................................... 28
  2.4.1 Computer Pools in Building 082 ..................................................... 28
  2.4.2 PC Pools in Building 074 .............................................................. 30
  2.5 WLAN (WiFi) .................................................................................... 30
  2.5.1 WLAN installation ....................................................................... 30
  2.5.2 Where is WLAN available? ......................................................... 30
  2.6 Computer Center (Rechenzentrum) .................................................... 31
  2.6.1 Location and Purpose .................................................................. 31
  2.6.2 University User Account .............................................................. 31
  2.7 UniCard, Student Identity (ID) Card ................................................ 32
  2.7.1 Functions ..................................................................................... 32
  2.7.2 Receiving your UniCard ............................................................... 33
  2.7.3 UniCard Loss .............................................................................. 34
1 Embedded Systems Engineering

1.1 General Information

1.1.1 The German Higher Education System

Germany is a federal system, which means it is organized into different states, the so-called "Bundesländer". These "Bundesländer" are responsible for all matters relating to education, including universities. The result of this system is that there may be substantial differences between the "Bundesländer" in some aspects of the education system, although a general framework is set by laws at the federal level.

In terms of teaching and research, universities are quite independent and separate from the general framework and so not governed very much by laws or policies on a higher level. This means that they have a high level of freedom to decide the contents of the programs they offer and the exams the students have to take. Therefore, it is very difficult to compare similar programs, lectures and exams at different universities.

The top level of management at a university has limited power. There is almost no university wide policy about how to teach or how to conduct exams. Apart from some general regulations, such as the length or timing of exams, individual lecturers and examiners are given a lot of independence in how to conduct lectures and exams.

1.1.2 University Staff

Academic staff at the University are divided into three groups:

Professors: There are several types of professors. The main types are:
- the 'chair' (German: "Lehrstuhlinhaber") which means that he/she heads a whole institute (chair = "Lehrstuhl") and
- the 'professor' (German: "Professur") which means that he/she does not head a chair ("Lehrstuhl"), but a research group

Administratively, a professorship is usually part of a chair, but scientifically the professor, who holds a particular professorship, and the 'chair' work independently.

Permanent staff: Most of the chairs have some permanent academic staff (known in German as 'Akademischer Rat', 'Akademischer Oberrat' or 'Akademischer Direktor') who will mostly have a PhD degree. Note: There are only a few of these positions. Most of the work is done by the professors (who are employed permanently) or by non-permanent PhD students (who work temporarily at the University for between 3-5 years).

PhD students: Each chair / professorship has positions for PhD students. Sometimes it is just a small group of 3-5 students, but there may also be up to 20-30 students working at one chair, who are again divided up to subgroups
(mostly headed by a PostDoc). Most PhD students do not only work on their PhD thesis, but are also involved in other projects ('pure science' or industry related). They usually contribute to teaching or have internal duties within their institution.

Note: There are almost no employees who work just as 'lecturers' as it is the case in many other countries. Lectures are given by the professors and the permanent staff, supported by the PhD students. All people who lecture are also involved in research activities. This is the so-called "Prinzip der Einheit von Forschung und Lehre" (= "principle of the unity of research and teaching") which is a fundamental idea in the German University system. This principle is an important basis for understanding how a lot of the professors think about teaching and research.

This principle means that everyone who gives lectures should also be involved in research activities in order to remain in close contact with the most up-to-date activities going on in a particular field and to have the latest knowledge available. This is supposed to ensure that the content taught in lectures is very up-to-date.

Of course, this requires from the lecturers that they have to balance work and responsibilities in both research and teaching, which is often not easy and might result, for example, in a conflict of deadlines (dates of lectures and conferences) and involve difficult decisions on how to allocate time and work resources. Students encounter these problems, for example, in the timely organization of lectures or in the availability of lecturers for an appointment.

Use of terms: Somebody who is giving a course/lecture is referred to as a 'lecturer'. This may be a professor or a non-professor. Sometimes the use of the term 'professor' is supposed to stress that it is the Professor himself who is giving a lecture (not a non-professor), sometimes it is just used as an equivalent for 'lecturer' independent of whether somebody is a professor or not. In any case, the German use of 'lecturer' is not consistent with the British term 'lecturer' which describes a position within the British university system. The term rather describes the person who is chairing a course (this could be a PhD student, too).

1.1.3 High level of freedom

Compared to the university systems in other countries the German system provides more freedom both for the lecturers and the students. This also means more responsibility. The basic idea of the German education system is that the ability to handle autonomy and the responsibility that results from the freedom to work independently is an important part of the academic qualification which is gained during a study and which is certified with a Master’s degree. Students should not only be trained in a subject (content, methodology, etc.) but also in skills which are not related directly to a subject, so-called 'key qualifications'. These are transferable skills which are important and similar for all subjects, for example, setting priorities, developing work and study plans, balancing studies, work and life. They are trained as a part of the learning curve of one specific subject, but are actually independent of that subject.
This idea of the important ability to handle freedom and responsibility means, for example, that:

- Professors have a high level of freedom to decide about the form and the content of courses they give and exams they carry out. There is no strict curriculum which professors have to follow but they may decide very freely what to include, what to emphasize in a lecture and what not. They are open to feedback from the students, however, and most of them are prepared to take the wishes and demands of students into account, whenever possible. Therefore: Whenever students have ideas or requests relating to the content of a lecture, they should talk to the lecturers. That is absolutely common and widely accepted.

- For exams there are some general rules which have to be applied but apart from that professors may formulate questions as they want, and personal styles are quite different. Therefore, it is very important before an exam to get advice from students who already took the same or another exam with this specific professor.

- Students have some freedom to choose special topics within their study program. In MSE they may choose two concentration areas.

- Students may come to individual agreements with their professors/lecturers. This refers, for example, to reports they have to write or presentations they have to give. The individual agreement may be about length, content, deadline, form, etc.

  Note: It is very common and always acceptable to ask for an individual agreement. But: once an agreement has been made, most lecturers like to stick to it and not change it all the time; also a request which was first rejected should not be submitted again.

- Students are very free as to when and how to learn. In almost all lectures, clear recommendations are given on how to learn (for example, which books or papers to read, which material to work on, which exercises to do), but unless explicitly said, nobody will check whether students follow the recommendation or not. As long as the student’s performance in the exams is fine, nobody minds students following their own path. In particular one 'generation' of students very often gives recommendations on what to learn in a specific course to the next generation of students which are, say, at least as good as the recommendations of the lecturers. Note: If it is explicitly said that you should work or learn in a specific way, then you really should do it. As it is done only in rare cases it is even more important in these.

- Compulsory attendance. In most lectures it is not compulsory to attend. Usually it is only compulsory for laboratory or practical courses but not for other lectures. But: each lecturer has the freedom to demand regular attendance at his/her lecture. Also, it is regarded as an act of courtesy either to attend a lecture regularly or not at all, but not just from time to time.
Exception: In many cases, important organizational details are discussed in the first meeting of a course. Therefore students are expected to attend the first meeting of a course. If they cannot attend at all, they are supposed to collect the relevant information first from other students and only ask the lecturer more detailed questions.

Note: As attendance is only compulsory in a few cases, the duty to attend these must be taken even more seriously! This applies in particular to lab courses. In lab courses it is also of the utmost importance to come to each meeting very punctually and to attend every (!) session of a course, unless serious (!) reasons, like illness, make it impossible. In such cases students who are unable to attend should inform the lecturer via e-mail about their absence.

1.1.4 Culture of Discussion

Most lecturers like to have discussions in their courses and therefore want the students to be very active in the courses. Students are expected:

- to ask questions
- to discuss
- to have their own opinion
- to give an individual assessment of things
- to develop their own ideas

Hardly any lecturer will mind if a student asks something, criticizes something (in a proper way) or has a different opinion about something. If a discussion takes too much time or the course is not the right place for it, the lecturers will let the student know. If they do so, this is not to be regarded as criticism of the initiation of a discussion or the raising of a question, but as a means to proceed with the course.

1.1.5 Degrees

1.1.5.1 Bachelor’s Degree

The combination of the bachelor’s and master’s degrees replaced the old course of study leading to a diploma during the winter semester 2006/2007, and is now the standard. The bachelor’s degree work lasts six semesters and the program complies with international standards. Great emphasis is placed on preparing students for professional life and giving them career-related experience. During the entire course of study, they will participate in lectures about subjects designed to prepare them for the world of work. These include: communication, project management and business start-up. In some of the classes students are required to complete a project and/or perform practical tasks. A bachelor’s degree qualifies for entry to the business world and is also a condition for further study towards obtaining a master’s degree.
1.1.5.2 Master’s Degree

Since winter semester 2012, graduates with a bachelor’s degree in Electrical Engineering, Electronics, IT or Computer Engineering have been eligible for admission to the Master’s in Embedded Systems Engineering Program, which is taught in German and English. The Master’s Program is research oriented and provides you with the competencies you need to conduct independent, scientific research. Additionally, you will participate in lectures, seminars and labs chosen according to your specialty areas. In the second year, you will also write your master’s thesis. Having obtained your master’s degree, you are qualified to begin working towards your PhD. For more information about the master’s program, please go to: https://www.tf.uni-freiburg.de/en/study-programs/embedded-systems-engineering/m-sc-embedded-systems-engineering

1.1.6 Course Types

Your study program consists of several courses. The following course types are offered

• Lectures and Tutorials (Vorlesung und Übung)

These are the traditionally accepted and practiced methods of educating students at university. The lecturer, usually a professor, presents the subject matter to the students. Experience has shown that in lectures, knowledge normally only flows in one direction. The students on the receiving end are, however, encouraged to ask questions and seek dialogue. Tutorials provide follow-up to material covered in lectures and their content is dealt with more extensively. This occurs mostly through discussing and working through practice handouts and notes, or by calculating sample exercises. Tutorials are normally led by students in advanced semesters, PhD candidates and assistants.

Please note: Lectures and tutorials are stated as two separate courses in the course catalog. Please make sure to always register for the lecture as well as for the tutorial!

• Lab course or practical course (Praktikum)

The point of lab courses is to put the theory you have learnt into practice. Examples of this are MSE Design Laboratory I & II (MST Design Laboratory I+II). Such courses have a flexible design, and in them, groups work independently to complete an assigned task or solve a problem.

• Seminars (Seminar)

In a seminar, you have the opportunity to work through and increase your knowledge about a particular topic on your own. You then present your findings to other seminar participants.
1.1.7 Course registration

You need to register in advance for each course you wish to take. Before being able to use the online registration system for the first time you have to activate your user account (see 2.6.2). You will receive your user name and password automatically after matriculating (= enrolling) at the University.

Please make sure to enter your current e-mail address when first using the account (or forward your e-mails to the account you mainly use), because this e-mail address will be fed as your contact address into the database of the student registry and examination office.

Course registration is necessary so that your instructor knows in advance how many students wish to participate in the course and how large the room for instruction needs to be. The advantage for you is that you can make your personal study schedule in the online system and you will see right away if any time clashes occur.

As you will see on the website https://www.tf.uni-freiburg.de/en/studies-and-teaching/calendar-dates, there are always two booking periods. It is recommended that first semester students, register for their courses after having attended the orientation meeting (i.e. during the second booking period).

If you have received a conditional admission and have to take some additional courses from the undergraduate program in Embedded Systems Engineering, it is strongly recommended to focus on those courses in the first and second semester and postpone some of the others to a later semester.

Starting with your second semester, you must always register for your desired classes at least four weeks prior to the first day of class. Registration occurs online using HisinOne. You can find instructions here: https://wiki.uni-freiburg.de/campusmanagement/doku.php?id=hisinone:studieren:studienplaner

After the login click on the menu item "My studies" - "Planner of studies".

Please note: If you have booked a course and do not attend it, it will be shown in your transcript as “not completed”. This note will only be deleted after completion of the whole Master’s degree. You should therefore make sure to cancel your participation during the de-registration period.

1.1.8 Examinations

Throughout the program, you will have a lot of exams. These can be oral exams, written exams or papers. It is important to know, that in Germany, students are not only expected to reproduce the acquired theoretical knowledge in an exam. They should also be able to discuss the knowledge, to apply it and to take it to the next level. In addition, in a lot of exams you will be under time
pressure. It is therefore crucial to first get an overview over all the questions and then start with those to which you are sure to know the right solution.

1.1.8.1 Examination regulations

The examination regulations provide the framework and conditions for your education. They inform you about what course work you need to do in order to obtain your degree, which appointments and deadlines you have to keep and all other requirements you have to fulfill. Due to the fact that the examination regulations are a legal document, till now they were only provided in German. However, an unofficial English version is available on the following website: https://www.tf.uni-freiburg.de/en/study-programs/embedded-systems-engineering/m-sc-embedded-systems-engineering (under „Syllabus and examination regulations“).

1.1.8.2 Which version of the examination procedures and regulations applies to me?

For every degree, there is a different applicable version of the examination regulations. For new students in the Master’s program in Embedded Systems Engineering, the applicable version of the exam regulations is the one from 2012 (PO-Version 2012).

1.1.8.3 Examination Registration and Deregistration

Examinations are always given during a certain timeframe. In the winter semester the examinations take place in February and March. In the summer semester in August and September. You can find the exact examination dates for any given semester at the Faculty of Engineering (Technische Fakultät - TF) at:

https://www.tf.uni-freiburg.de/en/studies-and-teaching/a-to-z-study-faq/de-registration-of-exams?

In order to sit an examination, you have to register for it. Examination registration takes place online using HisinOne.

Please note: Even if the exam is not written or oral but for example a paper or a project that you have to submit, you have to register for it! This is the case if the subject is marked with one of the following icons in HisinOne: ⭐ standing for an examination which is always graded, and ✗ standing for a course work, which will be either graded or just “passed” or “failed”.

You may only register and deregister for an examination during the official registration or de-registration period. Please make sure you check the Examination Office homepage.

Please note: Registration for a course and for an examination are two different procedures. By registering for a course, you are only acknowledging your desire to participate in a particular class. If you wish to sit the examination for
that course, you must register separately for the corresponding exam.

Registration and Deregistration Procedures

Your registration for an examination is binding. It applies automatically for any necessary repeat examinations. You can only register or de-register during the official registration or de-registration period. After this deadline has passed, registering or de-registering for an examination is no longer possible. IMPORTANT: Print out the overview of the exams you have registered for as soon as you have completed the registration and put it in your bag when going to the exams. If your name should by mistake not be on the list of participants that the examiner gets, you can prove that you have registered for the exam. In that case you will be conditionally accepted to participate in the exam.

1.1.8.4. ECTS Points/Limits on Repeating Examinations

The ECTS point system is used for the bachelor’s and master’s degrees. Each course you take is assigned a certain number of ECTS points which correspond to the amount of work you must do to successfully complete it. In this system, one ECTS point is equivalent to about 30 hours of work. Included here is the time you spend preparing for class, doing homework and studying for an examination during semester breaks. If you want to complete the MSc. Program in four semesters, you should aim at obtaining approx. 30 ECTS points per semester. This adds up to a work load of 900 hours per semester (i.e. 150 hours per month or 37.5 hours per week).

Every examination may be repeated at maximum once. Exceptions to this are 3 examinations which you are permitted to repeat twice. The first repeat examination must be sat at the next possible examination date. The examination office will automatically register you for the first repeat. That means that you have to take that exam unless you are ill. Given the fact that each course is only offered once a year, this means that you do not have the possibility to attend the lecture a second time before taking the first repeat examination. You will have to prepare for the exam using the handout and/or the online lecture material. Papers, projects, reports, bachelor’s or master’s thesis can only be repeated once.

1.1.8.5 Compensation Regulations for Improving Grades

In the Master’s program in Embedded Systems Engineering you can try to improve your grade in two modules. If you want to make use of this rule, your first examination in the module must have taken place in, or prior to, the semester designated for that particular exam in the study plan.

1.1.8.6 Grades

Grades are on a scale of 1 to 5 and include interim values as a way of further differentiating the evaluation of your performance. These interim values can be either .3 points higher or lower than a value between 1 and 4 on the grading scale. This means you could receive a grade of 1.3 or 2.7, but there are no such grades as 0.7 or 4.3, 4.7, or 5.3. The individual grades mean:
1 (very good) – your performance is excellent

2 (good) – your performance is well above the average expectations

3 (satisfactory) – your performance meets average expectations

4 (sufficient) – your performance, although lacking in some areas, meets expectations sufficiently to receive a passing grade

5 (non-sufficient) – due to significant deficiencies, your performance is not sufficient to meet the expectations and your grade is a non-pass.

A grade of at least 4.0 is required in order to pass an examination. Your final grade is calculated by averaging your grades received in the partial examinations as weighted by the ECTS point system.

1.1.8.7 Illness

Should illness prevent you from appearing for an examination or if you should discontinue an examination, you are required to provide proof of the illness in accordance with the Examination Regulations. To this end, you must obtain a medical certificate which includes information from your physician sufficient for the Examination Office to decide whether the illness in question satisfies the criteria for permitting the cancellation or interruption of an exam. Making this decision is solely the responsibility of the Examination Office. A doctor’s excuse which merely states that you were incapable of working or sitting an exam is insufficient for this purpose. The medical certificate must provide a brief description of your medical condition. Therefore, it is necessary for you to release your doctor from their obligation of medical confidentiality. This does not mean your doctor must provide an exact diagnosis, but rather state how the illness affected you physically and/or mentally. This is in accordance with the Data Protection Act. The form needed for reporting your illness is called “medical certificate” and located on the Examination Office homepage under: https://www.tf.uni-freiburg.de/en/studies-and-teaching/a-to-z-study-faq/forms-examinations-offices

Print out this form before you go to your doctor. Have him/her fill out and sign it, then bring the form immediately to the Examination Office. Immediately means within three working days after the examination. For example, if the exam took place on a Friday, you must present the doctor’s excuse to the Examination Office no later than the following Wednesday.

If you start taking an exam, you thereby automatically declare that you are fit to take the exam. You should therefore consider before sitting an exam whether you are really 100% in the state to take it. If the symptoms start while you are taking the exam, (for example sickness, headaches…) please inform the examiner/supervisor immediately, submit your exam paper, leave the room and go straight to the doctor. Once you have completed the exam it is almost impossible to withdraw from it.
It is also important to know that the doctor’s consultation has to take place on
the same day of the examination. If your general practitioner should not be
available on that day, you will have to see someone else or go to the
emergency clinic (Notfallpraxis der Kassenärztlichen Vereinigung, Hugstetter
Straße 55, 79106 Freiburg, Tel: 116 117, no area code needed).

Collect and keep all your medical records such as doctor’s excuses and reports.
Such documents are helpful in case you need to have deadlines extended or for
the calculation of your credit point balance (extension).

1.1.8.8. Personal/other reasons

If you should face personal problems (for example illness/death of a family
member, separation from your boyfriend/girlfriend) during the examination
preparation or during the examination period, it is important that you
immediately contact the examination office or program coordinator or study
advisor to explain your situation. Depending on the reasons presented we will
then try to find a solution with you. If you should take an exam despite of these
problems, you will do that on your own risk. The examination regulations do
NOT provide any regulation for cases of hardship, which means that we cannot
offer you another attempt even if the reasons for your failing might be
comprehensible.

1.1.8.9 Repeat Examinations

In principle, you are allowed to repeat every examination at least once. If you
do not pass an examination (Grade 5.0), the examination office will
automatically register you for the next exam offered. Normally, the repeat
examinations are given during the examination period in the following
semester. If you do not pass the examination the second time, then you have
lost your right to continue your studies, unless you have not yet made use of
the second repeat regulation (see 1.1.8.4).

1.1.9 Be informed!

It is part of the German education philosophy that you actively look for the
information you need. Don’t expect to be spoon-fed. However, you are
welcome to ask, if you do not find the information needed on the web pages.

1.1.9.1 The internet is your main source of information

When you are looking for information about your Embedded Systems
Engineering studies, the internet is your primary source. This is where you can
find most of the information that is relevant to your needs.

1.1.9.2 Examination Office

The Examination Office is responsible for the organization and administration
of all examinations at the Faculty of Engineering.

Here you can find answers to questions about examination regulations, help
with organizing your examination schedule, advice about difficult situations in your studies and so on. The Examination Office provides general notices, important links and special information regarding the Embedded Systems Engineering programs in the internet under: https://www.tf.uni-freiburg.de/en/faculty/central-services?set_language=en

Anne-JulchenMüller, pruefungsamt@tf.uni-freiburg.de
Tel. 0761/203-8083, Bld. 101, Room 02-009
Office Hours: Monday, 2 – 4 pm, Tuesday and Thursday from 10 am – 12 pm

Susanne Stork, pruefungsamt@tf.uni-freiburg.de
Tel. 0761/203-8087, Bld. 101, Room 02-009
Office Hours: Monday, 2 - 4 pm, Tuesday and Thursday from 10 am – 12 pm

During office hours, the Examination Office cannot be reached via telephone. The best times to speak to someone in the office on the phone are Monday and Friday mornings and Tuesday and Thursday afternoons or on Wednesdays.

1.1.9.3 Student Advising

If you have questions about your studies (how to make your personal schedule, which courses to choose, combine or postpone, etc.), you should turn to Student Advising for assistance. The Student Advisors for Embedded Systems Engineering are:

Martina Nopper, studienberatung@ese.uni-freiburg.de
Tel: 0761/203-8169, Bld. 101, Room 02-013a

Dr. Frank Goldschmidtboeing, fgoldsch@imtek.uni-freiburg.de
Tel. 0761/203-7496, Bld. 102, Room 01-217

For questions about general student life (scholarships, jobs, administrative matters, etc.) please turn to

Ursula Epe, Program Coordinator at the Faculty of Engineering: studienkoordination@tf.uni-freiburg.de
Tel.: (0761) 203-8340, Bld. 101, room 02 013a

1.1.9.4 Departmental Student Committee (Fachschaft)

In addition to representing all students on the Faculty Council, the Departmental Student Committee is involved in a wide range of other activities and provides a great deal of support for first semester undergraduate students. The committee organizes for example an orientation week for undergraduate students or games and barbecue evenings for all students.

The Departmental Student Committee internet address is: http://fachschaft.tf.uni-freiburg.de/. Most of the website is in German, but there is also a page for international students in English.

Also on the student committee’s website, you can find examination reports and
copies of examinations from the previous semesters that you can use to help you prepare for your own exams: http://db.fachschaft.tf/exams/quick-search.

(Please note: Due to copyright laws, you can only download examination regulations and past exams when using an internet connection from the University Network or with a university account.)

Contacting the Departmental Student Committee:
Questions can be sent to: fs@fachschaft.informatik.uni-freiburg.de.

Meetings:
The Departmental Student Committee meets once per week in Room 00-028 in Building 051. You can find out the date and time on the website. You are welcome to attend meetings, just drop by, even if you do not want to participate actively in the Committee’s activities.

Consulting Hours:
If you have a question about your studies or a problem with a professor or instructor, you can talk about it in person with a Committee member during the weekly office hours. You can find out when the office will be open by checking the website. You can also send an email with your concerns to the address already given.

1.1.9.5 Mentors and Professors

Every ESE student will have a professor as his/her personal mentor. You will be notified by the Dean of Studies who your mentor is. It is recommended to meet your mentor at least once per semester, if necessary more often. If your mentor does not send you an invitation, please ask them for an appointment. You may discuss with your mentor all issues, which may arise during your studies. Your mentor might also be able to help you to find a student job or to study one semester abroad.

Professors and their assistants are available to recommend additional technical literature, or help you quickly find solutions to problems within their areas of expertise. So do not be shy about asking questions during a lecture or going to the office hours held by your professors and assistants. They also welcome your feedback and are concerned about your well-being. Each lab or chair has their own internet site where you can find information about the ongoing research projects, lectures and courses offered as well as the contact data and (if applicable) consulting hours. All contact data for the Microsystems Engineering professors can be found on the internet at: http://www.imtek.de/laboratories. For the Computer Science professors, you can find it at: http://www.informatik.uni-freiburg.de/divisions.

1.1.9.6 Equal Opportunity Commissioner

The Equal Opportunity Commissioners for the Faculty of Engineering are Prof. Dr. Andreas Podelski (Computer Science) and Dr. Maria Asplund (Microsystems Engineering). They represent issues of special interest to women students on numerous Faculty committees. They are also the contact person for women with questions about their studies or student life in the
University environment. You can reach Prof. Podelski and his deputy Dr. Asplund under the following addresses:

Prof. Dr. Andreas Podelski  
Department of Computer Science  
Georges-Köhler-Allee 052, Room 00-017  
79110 Freiburg  
Tel.: (0761) 203-8241  
podelski@informatik.uni-freiburg.de

Phd. Maria Asplund  
Institut für Mikrosystemtechnik  
Georges-Köhler-Allee 102, Room 00 083  
79110 Freiburg  
Tel.: (0761) 203-67375  
maria.asplund@imtek.uni-freiburg.de

The Equal Opportunity Commissioners at the Faculty of Engineering do not have a separate internet site. So here is the address for the University Equal Opportunity Commissioner: http://www.gleichstellungbuero.uni-freiburg.de/de

1.1.9.7 Faculty Internet Presence

The internet presence of the Faculty of Engineering is concerned with matters that address all students. This is the place to find information about various departmental offices (for example the Examination Office or Library), the current course catalog, industry placements and much more. The internet address is: http://www.tf.uni-freiburg.de/

1.1.9.8 Departments’ Internet Presence

The professors and their staff usually post information about the lectures they offer, master thesis topics, research areas on the department websites. The Faculty of Engineering has three departments:

- Department of Computer Science (IIF)  
- Department of Microsystems Engineering (IMTEK)  
- Department of Sustainable Engineering (INATECH)

You will find the websites of each professor/chair by clicking on “Divisions” or “Laboratories”.

1.2 The Curriculum

1.2.1 Mandatory courses

The curriculum of Embedded Systems Engineering has been designed with the winter semester being the first semester. Therefore, most of the mandatory
courses are offered in the winter semester. However, it is not a problem at all to enroll into the program in the summer semester and start it by taking elective courses.

In Embedded Systems Engineering you have five **mandatory courses**:  
- Cyber-Physical Systems - Discrete Models (winter semester / English)  
- Modelling and System Identification (winter semester / usually in English)  
- Sensorik/Aktorik (winter semester / in German) **OR** Sensors (winter semester / in English)  
- Assembly and Packaging Technology (winter semester: German, summer semester: English)  
- Microelectronics (winter semester / always in English)

In addition to these five courses, you have to choose either two **key courses** in Computer Science or one key course and one specialization course. The **key courses** offered by the Department of Computer Science are:

- Algorithm Theory (winter semester / always in English)  
- Image Processing and Computer Graphics (winter semester / always in English)  
- Databases and Information Systems (winter semester / always in German)  
- Foundations of Artificial Intelligence (summer semester, will alternate between English and German)  
- Software Engineering (summer semester, will alternate between English and German)  
- Computer Architecture (summer semester, will alternate between English and German)

1.2.2 **Specialization courses in Computer Science**

There are so many **specialization courses** offered by the Department of Computer Science, that we cannot list them here. Please have a look at the course catalog.

The **Course Catalog** (“Vorlesungsverzeichnis”) shows which courses are offered in a given semester. You will find it in HisinOne under “studies offered”, “show university course catalog”. Then select “Technische Fakultät”, “Master of Science”, “Embedded Systems Engineering PO 2012”, “Mandatory Modules”, “Specialization Modules in Computer Science”. You can look in the Course Catalog to see which courses are being offered in a given semester.

1.2.3 **Elective courses (concentrations)**

You will choose your **elective courses** from two concentration areas. One of your chosen concentration areas has to be a technical area, the other one a computer science area:
In addition, you have an area called “Personal Profile”. Here you can choose any course offered by the Faculty of Engineering at postgraduate level.

1.2.4 Conditional courses (Auflagen)

Some of you have been admitted under the condition that they successfully pass one or several extra courses by the end of the second semester. This is stated in your admission letter. If you are not sure whether you have received a conditional admission, please ask the program coordinator.

You have two attempts to pass the respective exam(s). It is therefore recommended to focus on the conditional course(s) and exam(s) and not to overload your schedule with too many other courses. If one of the conditional courses should clash with one of the mandatory courses, please take the conditional course first. You can still take the mandatory course in the third semester. The program coordinator will register you for any conditional course. However, you do have to register for the exam on your own, using the “General Registration Form” you will find on the following website: https://www.tf.uni-freiburg.de/en/studies-and-teaching/a-to-z-study-faq/forms-examinations-office

1.2.5 Module handbook (syllabus) and course catalog

To find out which courses are being offered in Embedded Systems Engineering in general (not only in the current semester), you can check out the module handbook. Here you can find a detailed description of each course offered, its course language, whether it is offered in the winter or summer semester and which books are recommended. You will find the module handbook in HisinOne.
The **Course Catalog** (“Vorlesungsverzeichnis”) shows which courses are offered in a given semester. You can find the Course Catalog online in [HisinOne](http://www.hisinone.de). Just go to “studies offered” and “show university course catalog”. Then select “Technische Fakultät”, “Master of Science”, “Embedded Systems Engineering, PO 2012”.

### 1.2.6 Master thesis

It is strongly recommended that you write your thesis about a topic that is related to one of your chosen concentration areas. The thesis has to be submitted within 6 months. Topic, assigned task and scope of the Master’s thesis are to be defined by the supervisor in such a manner that the deadline for completion of the thesis can be met.

Most supervisors will ask you to write the thesis using LaTeX. If you are not familiar with this software, you can take a LaTeX course at the computer pool. Alternatively, you may be able to use Lyx. You can find templates for LaTeX and other formats at the website of the student representation:

[http://fachschaft.tf.uni-freiburg.de/informationen/dokumentvorlagen](http://fachschaft.tf.uni-freiburg.de/informationen/dokumentvorlagen)

### 1.2.6.1 Plagiarism

Plagiarism is commonly defined as “the practice of taking someone else’s work or ideas and passing them off as one’s own” (Oxford American Dictionary, Digital Version 1.0.1, 2005).

**Important**: Papers, exams or exercise sheets in which plagiarism is detected are considered as failed.

Guidelines for avoiding plagiarism include the following:

- Cite all sources of information and ideas (a) where you use them and (b) each time you use them. However, you need not have citations for propositions that qualify as common knowledge.
- If you quote directly from a source, put it in quotation marks (or indent it if it is a long quote) and cite it immediately thereafter. It is not acceptable simply to take a quote, change a few words, and omit the quotation marks. You are still presenting the other person’s expression rather than your own.
- Write in your own voice. The paper is to be your analysis, not someone else’s. You can easily bring in the work of others by using forms such as “According to Smith…”, “The Jones study found that…”, or “Several studies have concluded that…” etc. Sometimes you can simply assert facts or findings by saying them and then following them directly with citations. Conversely, you can write about your own views or analysis by saying “In my view…”, “My analysis is that …”, “Based on my experience…” or other such forms.
- Most of the paper should be in your own words. Direct quotations rarely constitute even 10 percent of a paper, and usually much less. An exception might be when a paper requires close analysis of a fixed text, such as a statute or regulation.
- The last [or second] page of your paper should be a signed declaration
which says: I herewith declare that I have written this paper on my own
and that I have not used any other sources and materials than those
indicated. I properly cited the materials I have relied upon.

This does not only apply to your master thesis or papers you have to submit
during your studies. You also have to follow these regulations when submitting
exercise sheets or reports about lab experiments!

There is a very helpful course called “Scientific Writing and Presentation”
offered in the “Personal Profile” area. If you take this course, you will be
perfectly prepared for writing your thesis.

1.2.7 German language courses

Unfortunately, German language courses are not part of the curriculum.
Nevertheless, acquiring German language skills is strongly recommended,
especially if you want to do an internship during your studies or work in
Germany after graduating.

You can choose between two types of German language courses:
The university’s Language Center (SLI) offers German language courses at all
levels every semester. They take place in the evening from 6:00 – 8:00 p.m.
and do usually not clash with your courses. When signing up for an SLI course
you can choose between a course taking place on Monday and Wednesday or
on Tuesday and Thursday. For more information and registration, please check
out: http://www.sli.uni-freiburg.de/Deutsch-en/dkurse-en. For one semester (60
lessons) the cost is 160 Euro.

Apart from that, there is one private teacher offering German language
courses for international students at the Faculty of Engineering. In the coming
winter semester he will offer at least two different levels: A1.1 (for total
beginners) and B1.1 (for advanced users). The exact dates and cost for these
courses will be communicated in September.

1.3 How studying works

1.3.1 Lectures

In this section, we would like to give you a few tips about studying in general,
and also some suggestions about how you can study more effectively and
efficiently. With time, you will discover for yourself which study habits and
methods are best for you.

1.3.1.1 Note-taking, Professors’ Lecture Notes and Literature

The notes you take during a lecture are invaluable because you have written
down everything which seemed important to you in class. Further, it is easier
for you to later go back and find particular points in your own notes.
Sometimes, copies of notes written by your fellow students can also be helpful.
You can use them to correct any mistakes you might have made when copying things from the board (as long as your professor wrote down the information correctly in the first place). It is quite unlikely that you and your classmate would have made the exact same mistake when copying something down. Particularly in mathematics courses, it is especially important to have copied down all the figures and symbols correctly. That is why we recommend that you copy notes from one of your classmates as part of your exam preparation. If the professor has provided a copy of their own lecture notes, you can compare your notes with it. But even professors can make mistakes, so if something seems strange or unusual to you, first have a look at the textbook. If you do not find an answer here, ask the professor or their assistant. You need to pay particular attention to textbooks in cases when you have great interest in a certain subject, if your notes are unclear or you have decided to learn the material through self-study. Going through and studying textbooks might take a lot of time, because you first have to accustom yourself to the symbols and terms used by the author. Nevertheless, learning how to obtain and use information from assorted reference sources is a basic principle of scientific research.

Most professors use PowerPoint slides as instructional aides during their lectures. They normally make the slides available on the internet for downloading at least one day before the lecture takes place. You can print these slides and write down your notes directly on the copies. This has the advantage of you only having to supplement the important points which already appear on your copies.

1.3.1.2 Going to Class vs. Self-Study

Under certain circumstances, it may be necessary to learn the material being presented in a particular class by means of self-study. This is the case, for example, when two lectures are being given at the same time.

Self-study requires a lot of discipline. Always make sure you regularly copy notes from a classmate who is attending the course in person. Try and keep up, meaning learn the material as it is being presented in class. If the professor’s lectures are based closely on a book, then we suggest always reading ahead. Then at the end of the semester, you have a bit of breathing space and it is not so bad if you fall a bit behind. There are many advantages to attending the class lectures. Professors often say things which you cannot read in any book. These are often anecdotes from everyday life, or interesting comments about current topics. Of course, attending a class means you have the chance to ask the instructor questions during and after the lecture. This is also possible if you are doing self-study, it just takes more time and effort.

Recorded lectures incorporate both forms. Here, the lecture is recorded while the professor is giving it. This way, the advantages of attending the class in person and self-study are combined. If you have to miss a class for some reason, you can watch the lecture at home. This gives you more flexibility in choosing the time and place for hearing a lecture. A problem here can be that you do not attend the lecture and then fail to view it later. Please try to avoid doing this. Make a point of watching the lecture you missed before the next...
live one is given. Otherwise, it is usually quite difficult to catch up with the material you have missed. You will find the recorded lectures either in ILIAS or on a webpage whose link is given to you by the lecturer.

1.3.1.3 Tutorial Exercises

1.3.1.3.1 Why do the exercises and are they required?

Tutorials and the exercise sheets you get are designed to expand on the material covered in the lecture. Working through the exercises is the very best way to prepare for an exam. If you are mostly able to do the exercises correctly, then you should be well on the way to being prepared for the examination. Whether you have to do the exercises, or even achieve a minimum number of points in order to successfully pass the exercises, will be communicated by the lecturer in the first session. But even if the exercises should not be a mandatory requirement for successfully passing the exercise, it is strongly recommended to do them.

1.3.1.3.2 How do I work through exercises?

Always make sure you understand the question or problem that needs solving before you start working. You also need to know what form the solution needs to take. The hardest part is getting from how the problem is being posed to the solution. There is no set way of doing this. You will normally need to use your intuition and the knowledge you have acquired during the lecture.

1.3.1.3.3 How do I present the solution to the exercise?

You need to write down your solution in a way that is clear and well organized so that your tutor will be able to read and correct it without difficulty. The most important sections should be highlighted in some way (for example the solutions to mathematical problems). Your tutors, of course, will greatly appreciate it if you type your answers on a computer and print them out. If you turn in handwritten answers, it is a good idea to re-write the solutions so they are readable and understandable. In most cases, electronic exercises will be set, which means you have to create a PDF or PS file and upload it to a given portal.

1.3.1.3.4 Group work, copying and using specialized literature

It can be very useful to work on difficult exercises in a group. By doing so, you are confronted with the terminology used in the lecture and can discuss the lecture subject and themes with your classmates. However, you should only do this, if the lecturer does not insist on everyone doing the exercises by himself. Our experience has shown that it is extremely difficult to succeed in your studies without the use of study groups and the ongoing exchange of ideas and information with your fellow students. Don’t choose your study group members by sympathy or nationality only! Make sure to use the resources of fellow students coming from different academic backgrounds.

Beware of just blindly copying down the work others have done on the
exercise sheets. This is a complete waste of time. Only if you are able to follow and understand how the solution was reached, will you have learnt anything. That is why you need to work through as many exercises as possible without outside help.

Usually, the slides and professor’s notes from the lectures and your own notes should be enough to solve the exercise. It can also be helpful to do a bit of research in books, because there you can sometimes find the needed solution to the given problem, or a variation of it. This helps you solve problems more easily. You will find a list of recommended text books in the description of each course, stated in the course catalog. If not, feel free to ask the lecturer.

1.3.1.4 Examination Preparation

The exercises you receive in the tutorials are a great tool to use when preparing for your examinations. In many classes, the problems found in these exercises have about the same level of difficulty as what you will see on the examination. You will recognize this if: you have a sound knowledge of the material and are able to work through an exercise sheet on your own in about two to four hours. If you need this much time for just one exercise, you will have problems to pass the final examination. Ask around amongst your classmates to find out how much time they needed for an exercise as a way of checking your own level.

The best method for examination preparation is to study and do old exams, especially if they were prepared by the same instructor. This way you can get used to the style used for the exercises and see if you are able to solve the problems in the time assigned. In addition to the old examinations, it also makes sense to work through old exercise handouts as part of your preparation. Sometimes, not all topic areas are presented in exercise form during a particular semester. By working through exercise handouts from previous semesters, you have practice with topics which may not have been worked on in your tutorial. They can also give you extra practice in areas where you want to (or need to) do more work. Carefully read through your notes, and review the slides and professor’s notes once more. It may be that during an exam, you will have to know particular phrases and definitions in order to answer certain questions. So take this advice seriously: memorize phrases and definitions! Study sessions in small groups shortly before the examination can be very beneficial. You can learn terminology and solve problems together. Most of your classmates will already have worked intensively on learning the material, so there will be a good basis for discussing any questions or problems. It may be that you have underestimated the importance of a particular topic area. You will normally be able to see if this is so when working with a group.

You can use the internet to look for and download old examinations on the Departmental Student Representative Committee homepage at: http://db.fachschaft.tf/exams/quick-search

1.3.2 Self-discipline and Self-tracking

No one will constantly be keeping track of your work and progress. You have
the freedom to decide for yourself how you structure your studies. This is why it is very important to keep track of your progress. Set goals and make a plan for reaching them.

2 The University in Everyday Life

2.1 Preparing for your first semester

2.1.1 Orientation days at the Faculty of Engineering

In the week before the beginning of the courses, the Faculty of Engineering will offer several activities and meetings for new Master students, such as help with the administrative tasks (health insurance, residence permit), information about the study program and the organization of your studies, walkabouts of the campus. It is strongly recommended to participate in these activities.

2.1.2 Guided campus and university tour

On Friday, October 12th, some of the senior students will offer a guided tour of our campus and of some other university facilities in town. Please make sure to attend this tour. It can be very helpful.

2.1.3 Computer Center (RZ) Introduction

On the web page of the university’s Computer Center you can download a brochure describing the IT services for students. The brochure is available in German and English:

http://www.rz.uni-freiburg.de/inhalt/dokumente/pdfs/broschueren/studieng

2.2 Buildings and Rooms

2.2.1 Faculty of Engineering

One of the most important buildings is number 101. It houses the Faculty Library, the Dean’s Office, the Examination Office and the office of the study advisor and program coordinator. In addition there are tutorial rooms and two large lecture halls (101-026, 101-036). The Airport Cafeteria (Mensa, Bld. 082) is another building of central importance for the Faculty of Engineering. A large lecture hall (082-006) and the computer pools are found here. The professorships are in buildings 051, 052, 079, 080, 102, 103, 104 and 106. The Departmental Student Committee and more tutorial rooms are located in building 051. The Faculty of Engineering is directly next to the new Trade Fair Grounds. The way is clearly marked with numerous signs around the city directing visitors to the “Neue Messe”. You can travel to the Faculty using public transportation. Use tram line no. 4 to the “Messe” and get off at the last Mensa Airport PC Pools Lecture Halls Library
stop (Technische Fakultät) or take the Breisgau S-Bahn (commuter train) in the direction Breisach (get off at “Neue Messe/Universität”).

2.2.2 Science Campus (Institutsviertel)

The Science Campus is mainly interesting for undergraduate students. The most important buildings are the cafeteria, the Round Building (“Rundbau”), the Faculty of Mathematics and the Computer Center. Many lectures in mathematics are held in the “Rundbau”. In the Faculty of Mathematics Building, you will find a research library and a lending library for mathematicians and natural scientists. The Computer Center has PC Pools available for your use. The Science Campus is very close to the main train station. You can reach it walking from the main train station on the Bismarckallee direction Zähringen. The Bismarckallee merges with the Stefan-Meier-Straße, which is where the Science Campus is located.

2.2.3 University Central Campus

At the central campus, you will find the University Library, the Main Cafeteria, and the “Kollegien” buildings I to IV (KG I to IV). You can reach the central campus by taking any tram from the main train station in the direction “Bertoldsbrunnen”. Exit the tram at the Freiburg City Theatre, “Stadttheater”, just one stop away from the main train station. From the other direction, you can reach the University with any tram traveling direction “Hauptbahnhof”. Again, exit at the “Stadttheater”.

2.3 Libraries

2.3.1 Library User Card

Your UniCard serves not only as your student identity card, but also your library user’s card. The University Library (Universitätsbibliothek = UB) account number on your card is only valid after having registered online. To register, click here

1. Click on “Ausleihkonto” (right hand side)
2. Enter your university user name and password
3. Scroll down and click on „UB-Konto mit Unicard neu eröffnen“
4. Go to the library and ask them to activate your account

2.3.2 Loss of your Library User Card (same as UniCard)

If you lose your library user card (meaning UniCard that has been activated for library use), you are required to report it immediately to the lending section (tel.: (0761) 203-3920) or at the service desk in UB 1 (tel.: ’0761 203-3918 or at the Faculty library (tel.: 0761 203-8003). Your account will then be blocked because someone else could use your card to borrow books on your account. You can only apply for a new card at the Student Service Center in Sedanstraße 6. This process is explained in the section UniCard, Student Identity Card.
According to the Regulations of Use, you are liable for any misuse of your account.

2.3.3 Borrowing Books

If you are looking for a specific book or article, you should first of all search for it in the library online catalog: [http://www.ub.uni-freiburg.de/?id=opac](http://www.ub.uni-freiburg.de/?id=opac). There, you will see, if the book is available and where it is located.

**At the main library (UB) and at the Faculty of Engineering**, books may be checked out for 28 days and you can extend the lending period for another 28 days a total of three times. You may not extend the time if someone else has placed the book on reserve. If there is no copy available of the book you want to borrow, you can have it reserved for you. This means it will no longer be able to be extended and you will be informed as soon as a copy has been returned. You can check out a maximum of 100 books at any one time.

If you forget to return a book in time, you will have to pay an overdue fee (€ 1.50 per book for the first week, € 5.00 for the second week and so on). The library will inform you about this by email.

*Please handle the books with care! If you return a damaged book, you will have to pay for it.*

As a courtesy to your fellow students who also need to use the books, please always make sure to return the books on the due date or to ask the librarian for an extension.

Be sure to have a look at the [electronic media](http://www.ub.uni-freiburg.de) and learn how to use the data bank research system. This is free of charge and available through your university account.

2.3.4 Libraries relevant for Embedded Systems Engineers

Here are the four libraries which are of greatest relevance for computer science students:

- University Library (includes Text Book Collection I)
- Library at the Faculty of Engineering
- Text Book Collection II
- Library at the Faculty of Mathematics

**University Library:**

The main university library (called UB) is located at Platz der Universität 2, next to the “Stadttheater”. It is open 24/7 and offers place for self and group study. More information: [https://www.ub.uni-freiburg.de](https://www.ub.uni-freiburg.de)
Faculty of Engineering Library

This library has books available especially for computer scientists and engineers and is located directly on our campus:

Faculty of Engineering Library/ Fakultätsbibliothek der Technischen Fakultät
Georges-Köhler-Allee 101
79110 Freiburg
Tel.: (0761) 203-8003
Contact: Susanne Hauser
Email: techbib@tf.uni-freiburg.de
Website: http://www.ub.uni-freiburg.de/?id=3281

If you need any books that are not yet part of the Faculty of Engineering library collection, please feel free to contact Mrs. Hauser and ask her whether this book could be ordered.

Textbook Collection II

You can borrow books about mathematics, natural sciences and medicine from this library. The Textbook Collection II homepage provides current information, for example about opening times during the semester breaks, at: http://www3.ub.uni-freiburg.de/index.php?id=68

The Faculty of Mathematics Library

At the Faculty of Mathematics Library, you can find books from all areas of mathematics.

Faculty of Mathematics Library/Mathematisches Institut Bibliothek
Eckerstraße 1, Room 022 (Ground Floor)
79104 Freiburg
Tel.: (0761) 203-5543
Email: mathbib@ub.uni-freiburg.de

This library is open only to authorized users. To be authorized you need to contact the librarian by telephone and have your UniCard activated to allow you access. The homepage for the Faculty of Mathematics Research Library is found at: http://www.ub.uni-freiburg.de/?id=3413

2.4 Computer Pools at the Faculty of Engineering

2.4.1 Computer Pools in Building 082

2.4.1.1 Location and Purpose

The Faculty of Engineering Pool is located in the cafeteria building (Bld. 082) at the Faculty of Engineering. Pool means a collection of computers and
peripheral devices, for example printers, which are networked and all found in one room. There are several such pool rooms in Building 082 on the ground floor. There are also further, smaller pools which are used for certain lectures and lab courses in the other buildings. The purpose of the pool rooms is to provide you with a computer work station that you can use during your studies. An extensive software package is installed on the pool room computers, for example Java, Browser und email clients. You can also print out lecture visuals and professors’ notes and download at high speed. Printing costs 0.05 Euro per page (in black and white). Every student can print an amount of pages worth 6 Euro per month for free. If you print more, you will have to pay for it.

To get a user account, you need to fill out and turn in an application form. You can get this from the Pool Manager or on the internet under:

http://poolmgr.informatik.uni-freiburg.de/?id=62

This is where you can also find the next steps. When you have completed the application process, it will take about 15 to 30 minutes before you can use your account. Approximately once a year, you will receive an email asking you if you wish to extend your account. If you do not extend your account, it will be automatically blocked and then cancelled. The first place to check for your questions about system and network services is this URL: http://support.informatik.uni-freiburg.de. You can reach the Pool Managers at:

Faculty of Engineering
Building 082, Room 01-021, 79110 Freiburg
Email: poolmgr@informatik.uni-freiburg.de
Homepage: http://poolmgr.informatik.uni-freiburg.de/
or use the contact form on the homepage.

The Pool Managers are students who only work part-time. You can find their office hours here: http://poolmgr.informatik.uni-freiburg.de/?id=3

2.4.1.2 Email Address

After your account for the Faculty computer pool has been set up and successfully activated, you are reachable via email. General information about email addresses and their features can be found on the Pool Managers’ internet site.

You can find out here information about how the Faculty email addresses are compiled, which mail servers are available and how to configure your account. Your email address is: Username@tf.uni-freiburg.de. Replace the word “Username” with your name as it appears on your account. If you have an account and an email address, you will automatically be put on the mailing list “Student”. The mails which reach you over this list will keep you informed about all the latest events and activities at the Faculty. In addition, you may sign up for the mailing list “Markt”. The users on that list receive job offers, room offers or buy and sell offers. To sign up, please go to
If you do not want to check the e-mails sent to your faculty e-mail address on a regular basis, please make sure to forward them to your private e-mail account (gmail, yahoo etc.). Otherwise you will miss out on important information!

2.4.1.3 Opening Hours Computer Pools

Pool room 028: Monday to Friday from 8 am to 7 pm  
Pool room 021: Monday to Friday from 8 am to 7 pm  
Pool room 029: Monday to Friday from 8 am to 7 pm

If you have activated your UniCard in MyAccount (see chapter 2.7 UniCard), you should be able to access the Pool Rooms 021 and 029 with your UniCard from the side entrance after 7 pm and on Saturdays and Sundays. If that should not work, please go to the Dean’s Office (“Dekanat”) in building 101, 2nd floor and ask for your card to be activated.

2.4.2 PC Pools in Building 074

For Embedded Systems Engineering students, there is an additional Pool in Building 074 on the ground floor. You can use your university account here that you received via e-mail. However, there is no printer available. This pool is open Mon – Fri from 9 am to 8 pm.

2.5 WLan (WiFi)

2.5.1 WLAN installation

The WLan network used by the university is called „eduroam“. To connect, you enter the user name of your university account as follows: username@uni-freiburg.de. The password is the eduroam password you selected in MyAccount (see chapter 2.6.2). For laptops, VPN client might be necessary.

You will find detailed instructions for how to connect to our WLan here:  

2.5.2 Where is WLAN available?

As already mentioned, you can find Access Points all over the place at the Faculty of Engineering which you can use to connect to the University network. Access Points can also be found at numerous other faculties. To see an exact list of all the WLAN access points, go to the following address:  
http://www.rz.uni-freiburg.de/services/netztel/wlan-vpn/wlan-standorte
2.6 Computer Center (Rechenzentrum)

2.6.1 Location and Purpose

The university’s Computer Center is located at the Science Campus at the following address:

University of Freiburg Computer Center
Hermann-Herder-Straße 10
79104 Freiburg
Tel.: (0761) 203-4620
Email: sek@rz.uni-freiburg.de
Opening hours: https://www.rz.uni-freiburg.de/helpcenter-en/studentische_beratung_eng

The Computer Center serves many purposes. Some of them are:

2.6.1.1 Workstations

The Computer Center has PC workstations outfitted with standard software (for example Office package and graphic programs) available for students. You can use them for academic work, internet research or to check or write your emails. They can be found at the Main Computer Center. To use these computers you log in with your university user account.

2.6.1.2 WLAN

See 2.5.1

2.6.1.4 Printing Services

The Computer Center has printers available for students at the PC workstations so that you can print out your documents. At the Computer Center printing cost is paid through a separate printing account. You cannot print anything unless you have a positive balance in your printing account. You can pay into your printing account via MyAccount: https://myaccount.uni-freiburg.de.

2.6.2 University User Account

As a newly matriculated student, you should receive an e-mail and a letter with your user ID and initial password for your university account. The user ID will be the first letters of both, your first and your last name as well as a number. The password is just an initial password. You can manage your account by using the following URL: https://myaccount.uni-freiburg.de

The first time you log in, you have to take the following steps:

- Change the initial password by choosing a new one
- Choose the email address you want the university to use when they
need to contact you

- Activate your UniCard

Only after having taken these steps, your user account will be activated.

Please make sure to enter your current e-mail address in MyAccount, or have your e-mails forwarded. The e-mail address that is stated in MyAccount is automatically given to the student registry and to the examination office. If you have not received a user ID from the Computer Center, then you need to contact the Computer Center User Services at nutzerservice@rz.uni-freiburg.de. You can also go to their offices at Hermann-Herder-Straße 10 (ground floor, room 001). You should have your UniCard with you at all times anyway, but make sure you bring it with you to User Services for opening an account. You should also contact the User Services if your password or user ID is not accepted. If you should forget your password, you can create a new one through MyAccount.

With your university user account you can use Campus Management (HisinOne) for exam registration, checking exam results, printing a transcript of marks (“Leistungsübersicht”) or a confirmation of enrollment (“Studienbescheinigung”).

You need two user accounts: The university user account for using the services of the Campus Management System HisinOne and the user account from the Faculty of Engineering (see 2.4.1.2) for being able to receive information from the Faculty of Engineering and to use the computer pools at the Faculty of Engineering.

2.7 UniCard, Student Identity (ID) Card

The UniCard is a chip card that bundles many functions. It makes everyday life and administrative procedures much easier. Its most important function is to serve as your official student ID card. You should have it with you at all times so that you can take advantage of the many bonuses and discounts available to you because of being a student. The UniCard simplifies various administrative procedures for students and University employees. The UniCard simplifies various administrative procedures for students and University employees. You can use it for cashless payment in the cafeterias, to borrow books from the library, to use the copy machines and to enter certain university facilities.

The UniCard team provides you with more information about the UniCard at: http://www.studium.uni-freiburg.de/de/studierendenservices/unicard?searchterm=unicard. This is the place to go with all your questions about the UniCard.

2.7.1 Functions

The UniCard has the following functions and features:

- Forgery Safe Student ID
As explained above, your UniCard is your student ID card.

- **Cashless payment in the Cafeterias (Mensen)**

You use your UniCard to pay in the University cafeterias to get the special rates for students and to avoid cash payment. In order to pay with your UniCard, it must first be loaded, meaning it needs to have a positive balance. You can load your UniCard through use of your EC bank Card at the add-value terminals. Information about where to find add-value terminals and cashless payment can be found under the following address:


- **Library User Card**

This feature has already been explained in the Library section (chapter 2.3).

- **Entrance to Buildings and Rooms**

At the Faculty of Engineering, you can enter buildings and rooms outside of the normal opening hours by using your UniCard. (You can find out more about this in the section Computer Science and Microsystems Engineering Pool Rooms.)

- **User ID for copy machines**

At the Faculty of Engineering, you can use your UniCard at the copy machines. The copying costs will be deducted from your UniCard balance.

- **RVF Semester Ticket for Public Transportation ID Card**

If you have an RVF Semester Ticket, you always have to have your UniCard and an official ID (e.g. your passport or residence permit) with you. If you did not buy the semester ticket online, you also have to carry – in addition to the UniCard and ID – a certificate of enrolment (Studienbescheinigung). Otherwise, your semester ticket is not valid and you will have to pay a fine.

2.7.2 Receiving your UniCard

After matriculating at the University you will receive the UniCard automatically by post. The UniCard will be valid for 5 years - unless you complete your studies earlier than that (which as a Master student would be the normal case).

If you should not get the UniCard within 2-3 weeks after matriculation, please go to the UniCard service desk in Sedanstraße 6. It often happens that students do not give their complete address to the university administration when enrolling (for example, when you live in a student dorm, your address is only complete if it contains the street, house number, floor number and room number as well as the zip code and the city). Or, sometimes the student’s name is not stated on the mailbox. In these cases, the postman will return the letter to the sender.
For more information, please contact the UniCard team at:

Albert-Ludwigs University
- UniCard -
Sedanstraße 6
79098 Freiburg
Tel.: (0761) 203-8893
Email: unicard@uni-freiburg.de

You can find out the current office hour times on the internet site: http://www.studium.uni-freiburg.de/de/studierendenservices/unicard?searchterm=unicard

2.7.3 UniCard Loss

If you lose your UniCard, you should have it cancelled immediately. To cancel your UniCard, contact the UniCard Team and give them your name (last name, first name) and your matriculation number. You can reach the UniCard Team via email at: unicard@uni-freiburg.de. You can call the UniCard Team under the number (0761) 203-8893. If you have lost your card and do not reach anyone by phone, make sure to leave a message on the mail box or send an email. When the UniCard Team gets your message, your UniCard will be blocked as soon as possible in order to prevent it being misused. You should consider the balance on your card to be the same as cash you have in your wallet. This means if you lose your UniCard, the balance on the card is gone too. In order to make you a new UniCard, you will have to pay € 10.

You must also immediately inform the University Library Lending Section about the loss of your UniCard under the number: 0761/203-3920). Your library user account will also be blocked because if someone else has your account number they could use the public OLAF places to borrow books using your account.

Please note: You must report the loss of your UniCard to the library separately because there will not be an exchange of information regarding UniCard losses between the Library and the Rector’s Office.

2.7.4 Extending your Card

If you should be a student for more than 5 years (for example because you should be staying at the university for your Ph.d. you will have to exchange your UniCard against a new one after the course of 5 years.

2.8 Re-registration and administrative Fees

Every semester, you must renew your registration as a student of the University of Freiburg. This procedure is called re-registration. You will find the current demand of payment and the deadlines at http://www.studium.uni-freiburg.de/en/student-services/registration?searchterm=r%C3%Bckmeldung&set_language=en You must transfer the named amount before the re-registration period ends, otherwise,
you will be ex-matriculated. Registration for the summer semester has to be done from January 15th – February 15th, registration for the winter semester from June 1st – August 15th.

Students who received a conditional admission also have to pay the fees within the above mentioned time frame. But they cannot pay them via direct debit in Hisinone. They can only pay via bank transfer, EC card or in cash. For these students, the registration for the following semester will only become effective, once they have passed the exams of the conditional course(s). That means that they can only renew the imprint on the UniCard and print the confirmation of enrollment (Studienbescheinigung) once the conditional exams have been graded.

2.9 Cafeteria/Mensa

The cafeteria (Mensa) offers an inexpensive way for you to ensure that you have a healthy and balanced diet. The Student Union operates four cafeterias in Freiburg. They are located in the Rempartstraße, at the Science Campus, in Littenweiler and at the airport (Faculty of Engineering). The meals and snacks offered at the various cafeterias can differ. Studierendenwerk provides you with more information about the cafeterias at: https://www.swfr.de/en/freiburg

2.9.1 How things work at the cafeteria:

Before you can eat at the cafeteria, your UniCard must be activated. You also need to make sure that you have used an add-value terminal to load a sufficient balance into your account. This is how a typical visit to the cafeteria at the Faculty of Engineering works:

1. Queue up in the line.
2. Take a tray, knife, fork, spoon and napkin.
3. Have a look at the menu and decide which one of the two meals you want (one of them is always vegetarian).
4. When it’s your turn, tell the ladies who serve the food, which meal you would like (or choose one of the already served meals).
5. You pay by putting your card on the bar code scanner at the checkout. Wait until the amount has been booked (green light), and then your payment is complete.
6. After paying, you can look around for a place to sit.
7. When you have finished eating, you must take back your tray to the tray return area and separate the remaining food, the plate and the cutlery.

Some words you might need to know for your visit to the cafeteria:

<table>
<thead>
<tr>
<th>English</th>
<th>German</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetarian</td>
<td>Vegetarisch</td>
</tr>
<tr>
<td>Beef</td>
<td>Rind or Kalb</td>
</tr>
<tr>
<td>Pork</td>
<td>Schwein</td>
</tr>
<tr>
<td>Chicken</td>
<td>Huhn, Hähnchen or Hühnchen</td>
</tr>
<tr>
<td>Turkey</td>
<td>Pute</td>
</tr>
</tbody>
</table>
2.9.2 Airport Cafeteria (Mensa Flughafen)

The Airport Cafeteria is used mainly by students and staff of Computer Science, Embedded Systems, Microsystems and Sustainable Systems Engineering. Located on the premises of the Faculty of Engineering, this cafeteria is the smallest of those in Freiburg. Plans are being made to enlarge it, but realizing them will take quite some time. Until the renovation happens, the cafeteria here offers two daily specials.

Cafeteria Airport
Georges-Köhler-Allee 082
79110 Freiburg
Opening Hours During the Semester:
Mon to Thu 9 am to 3 pm
Fri 9 am to 2:30 pm
Lunch is served from:
Mon to Fri 11:30 am to 1:30 pm

A meal costs 2.75 Euro (without drinks).

You can have a look at the meal plan for the current week under the address: [http://www.swfr.de/en/food-beverages/menus/mensa-flugplatz/](http://www.swfr.de/en/food-beverages/menus/mensa-flugplatz/)


2.10 Semester Ticket

2.10.1 What is a semester ticket and where, and for how long is it valid?

The semester ticket is valid for using public transportation. It costs you € 94 per semester, and you can use it on the entire public transport network (bus, tramways, S-Bahn, local trains) in the greater Freiburg area. (RVF) This area includes:

• The city of Freiburg
• The area Landkreis Breisgau-Hochschwarzwald
• The area Landkreis Emmendingen

Students at all of Freiburg’s institutions of higher education can take advantage of this offer. The tickets are valid from October to March (winter semester) and from April to September (summer semester) and include the times between terms. When paying the semester fee to the university, every student makes a solidarity contribution of € 17 per semester which is included in the student activity fees you pay to the university. Because of the student activity fees, you may use the public transport for free from 7:30 pm to 3:00 am, even if you have not purchased a semester ticket.

Your ticket is only valid if you have your UniCard, an enrolment certificate and an ID with you when you are traveling. You must write your name and matriculation number on the ticket and also sign it, otherwise, you may have to pay a € 60 fine for “fare jumping”.

The Cafeteria for Computer Scientists and Engineers

Ride half a year on buses, trams and trains for only € 94!

UniCard:
More information about the semester ticket can be found under the following URL: https://www.rvf.de/en/fahrkarten-tarife/monatskarten-abos/semesterticket-for-students/

2.10.2 Where can I buy a semester ticket?

You can purchase a semester ticket at the following offices and agencies:

• at the “VAG-Pluspunkt” (Customer Service Center for the Freiburg Transportation Agency, Salzstraße 3, near the Bertoldsbrunnen)
• at the SBG Customer Service Center at the Central Bus Station next to the Main Train Station (ZOB)
• at all German Rail travel agencies (DB-Reisezentren)
• at VAG online shop: http://www.vag-onlineticket.de/
• at the distributors of Deutsche Bahn (German railways)

2.11 Jobs

2.11.1 HiWi Jobs

HiWi is short for Hilfswissenschaftler which is a research assistant. As a student you are technically allowed to work up to 85 hours per month as a HiWi. If you want to earn some money or if you want to gain practical experience, it is recommended to look for a HiWi job that is closely related to your studies. There are several ways how HiWi job vacancies are being posted:

• On the web pages of the different research groups of our faculty
• By e-mail to the student mailing list
• On the notice board in building 101, ground floor
• By word of mouth

If you already have experience in a certain field or if you know in which research group you would like to do your final project, it is best to just ask the respective staff members for a job. When applying for a job you should always send soft copies of your CV and transcript of marks (from Bachelor’s and or Master’s studies) and highlight in the email those of your qualifications which match the job description. General inquiries by email not containing these documents are often not answered.

2.11.2 Off-campus student jobs

There are 5 Fraunhofer Institutes (research institutes) in Freiburg who often offer student jobs. Just check out the nationwide Fraunhofer job database: https://recruiting.fraunhofer.de/Jobs/1?Reset=G&lang=ger&searchFunction=10050&search1

If you are looking for a job for the semester break or for short term jobs (working in the production of an industrial plant, helping people move houses, baby-sitting, or even playing Santa Claus in a kindergarten or school), you should check out
2.12 Internships/Industrial Placements

An internship or industrial placement is not a mandatory part of the ESE curriculum. However, if you want to, you can do such internship voluntarily. The best time to do that is in the second year. If you combine the internship with a master thesis, you can still complete the Master program in 4 semesters. If not, you should be ready to stay one more semester. Internship offers can be found

- On the notice board of building 101 (ground floor)
- Via job portals in the internet
- Via the mailing list markt@tf.uni-freiburg.de

More information about theses placements can be found at: https://www.tf.uni-freiburg.de/studies/services/jobsplacements

If you want to write your thesis in cooperation with a company, please ask some professors at the Faculty of Engineering about their company contacts. Some research groups run projects with specific companies or have had good experiences in sending students to specific companies for the thesis. A thesis always has to be supervised by a professor from the Faculty of Engineering. You should therefore first make sure that supervision is offered before looking for a company or research institute.

3 Further Sources of Information and Assistance

3.1 Student Services (Studierendenwerk)

The Student Services of Freiburg (SWFR) has about 300 employees serving over 40,000 students who are pursuing their higher education goals at the area’s institutions of higher learning. In addition to those institutions in Freiburg, the Student Services are responsible for students in Furtwangen/Villingen-Schwenningen, Offenburg/Gengenbach and Kehl. The Student Services are financed in part through the “student activity fee” which you pay to the university each semester.

The following highlights a few of the interesting services and activities offered by the Student Services. The “Studi-Tours” department regularly organizes short trips and excursions. Going on them is a great way to meet lots of people from other faculties and countries. You can have a look at the current Student Services program of events at: https://www.swfr.de/en/events/studitours/

Studierendenwerk’s International Club offers a buddy program, a tandem program (learning German with help of German students), a “families for international friendship” program and lots of cultural events. Just have a look at http://www.swfr.de and click on “International” and “International Club”.

In addition to running the cafeterias, the Student Services also operates various

The Student Services also can give you information about, and help you find financial aid possibilities, for example with student loans and scholarships. For more details, contact the Student Services directly or have a look at the SWFR website.

At the Student Services, you can also get assistance and advice with such issues as legal questions, social or psychological problems (for example exam nerves) or finding a job or a room. More information can be found in the internet under: https://www.swfr.de/en/social-services/counselling-services/

You can also drop by the information office:
Student Services Freiburg
Schreiberstraße 12-16
79098 Freiburg
Tel.: (0761) 2101-200
Email: info@swfr.de

3.2 University Recreational Sport

The University of Freiburg offers a wide-variety of opportunities for its students to participate in athletics and sports on a recreational basis. You can take part in numerous sport classes at no charge. You can visit classes for competitive games like soccer, learn a martial art or indulge your passion for outdoor or individual sports. Or maybe you are more interested in keeping fit with gymnastics, fitness training or dance? These are just a few of the activities available for you in the course program.

The University Recreational Sport Program can be found at http://www.hochschulsport.uni-freiburg.de

You can register for courses online or visit the University Recreational Sport Office at:
University Recreational Sport Office at the University of Freiburg
Faculty of Sport und Sport Science
Schwarzwaldstraße 175
79117 Freiburg
Tel.: (0761) 203-45 13 or 4503
Email: ahs@sport.uni-freiburg.de

3.3 Social Aspects

3.3.1 Meeting People

At the beginning of your first semester, everything is new and a bit strange, and normally, you do not know anyone here. The easiest way to meet new people is in the tutorial groups. Here the number of other students is small enough so as not to be overwhelming. Lectures present a bit of a different situation, but do not be shy
about speaking to the people sitting around you. After all, they are all in the same boat as you are! Most of your classmates will be glad if you make the first move here, because then they do not have to do it themselves. If the lecture is just before lunch, you might suggest going to the cafeteria together, as it is a good idea to try and sit with people from your classes, especially at the start. You also have plenty to talk about in regards to your studies. This is a topic of interest to everyone and so there will be lots to say.

International students tend to stick together and not get involved with German students. However, we would like to encourage you to get in touch with other German students. Speak to German students living in the same house, look for a buddy or a tandem partner (http://www.swfr.de/en/international/the-international-club/tandem/), get in touch with German students on our campus. Germans might seem a bit “cold” in the beginning, but if you get to know them a better, they can be very nice 😊.

3.3.2 Where you can get involved

There are many opportunities beyond your course of studies to be involved and take part in extra-curricular activities. There are various student committees, a debate club for students, the University Radio, the academic film club and many, many more places for you to meet new people with similar interests. The following list gives you internet addresses from a whole host of organizations where you are welcome to participate. You can get details about the individual groups by clicking on the corresponding link on the list at: https://portal.uni-freiburg.de/studium/studieninteressierte/leben_in_freiburg/studgruppen
4 Annexe
4.1 An Overview of the Most Important Links

University Freiburg
http://www.uni-freiburg.de/

Department of Microsystems Engineering
http://www.imtek.de/

Department of Computer Science
http://www.informatik.uni-freiburg.de/

Faculty of Engineering
https://www.tf.uni-freiburg.de/

Semester dates

Deadlines for course registration
https://www.tf.uni-freiburg.de/en/studies-and-teaching/calendar-dates

Examination periods
https://www.tf.uni-freiburg.de/en/studies-and-teaching/a-to-z-study-faq/de-registration-of-exams

Deadlines for exam registration
https://www.tf.uni-freiburg.de/en/studies-and-teaching/a-to-z-study-faq/de-registration-of-exams

Online Lectures on ILIAS
https://ilias.uni-freiburg.de/

Contact persons
http://www.tf.uni-freiburg.de/en/faculty/central-services

HisinOne (for course and exam registration, course catalog, etc.)
https://campus.uni-freiburg.de/

Pool Manager, Faculty of Engineering
http://poolmgr.informatik.uni-freiburg.de/

WLAN (WiFi)

Student Services
http://www.swfr.de/en/

German language courses
Overview of the most important Dates and Deadlines

The following is a list of the most important dates and deadlines for the winter semester 2018:

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 Oct</td>
<td>Beginning of lectures of the winter semester</td>
</tr>
<tr>
<td>1 Nov</td>
<td>Public holiday</td>
</tr>
<tr>
<td>22 Dec 2018 – 6 Jan 2019</td>
<td>Christmas break</td>
</tr>
<tr>
<td>15 Jan – 15 Feb</td>
<td>Registration for the summer semester</td>
</tr>
<tr>
<td>8 Feb</td>
<td>Last day of lectures of the winter semester</td>
</tr>
<tr>
<td>18 Feb – 29 March</td>
<td>Examination period of the winter semester</td>
</tr>
<tr>
<td>23 April</td>
<td>Beginning of lectures of the summer semester</td>
</tr>
</tbody>
</table>
4.3 Overview of the most important contact persons

Deans of Studies:
Prof. Moritz Diehl, Tel. 203-67852, moritz.diehl@imtek.uni-freiburg.de
Prof. Thomas Brox, Tel. 203-8260, brox@informatik.uni-freiburg.de

Study advisors:
Ms. Martina Nopper, Tel. 203-8169, studienberatung@ese.uni-freiburg.de
Dr. Frank Goldschmidtboeing, Tel. 203-7496, studienberatung@ese.uni-freiburg.de

Program Co-ordinator: Ursula Epe, Tel. 203-8340, studienkoordination@tf.uni-freiburg.de

Examination office: Anne-Julchen Müller, Tel. 203-8083, Susanne Stork, Tel. 203-8087, pruefungsamt@tf.uni-freiburg.de

Impressum

Second Edition, September 2018
Issued by:
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Georges-Köhler-Allee 101
D-79110 Freiburg
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Glossary

c.t.

This is the abbreviation for “cum tempore”, which is “with time”. You see it after the time listed for a course or event to begin. What it means is that if the given start time for a course is, for example, 10 am c.t., the actual start time is punctually 15 minutes after the time given, so at 10:15 am. If you see s.t., which stands for “sine tempore”, after the course or event start time, then the course or event will begin at the exact time named. 10 am s.t. really means the class or event starts punctually at 10 am. If neither c.t. nor s.t. appears, than c.t. applies.

Course Catalog (Vorlesungsverzeichnis VVZ)

This is a list of all courses and events at the University organized according to the faculties. Many faculties also place their Course Catalog on the internet and these are usually more up-to-date than the printed versions. Some faculties also provide course catalogs which contain comments. These provide more detail and information.

Credit Hours (Semesterwochenstunde)

The number of credit hours assigned to a course denotes how many hours per week the particular course is held. A lecture, for example that is assigned four credit hours, meets four hours each week during the semester. An hour here means 45 minutes.

Dean (Dekan)

The Dean is the head of a Faculty. They represent faculty interests and the Dean serves as Chairperson of the Faculty Committee.

Dean of Academic Affairs (Studiendekan)

The Dean of Academic Affairs must ensure that there are a sufficient number of courses being offered. They are also responsible for the establishment and implementation of regulations for courses of study and examinations. Additionally, they devise class schedules and are the contact person in case of problems with academic matters.

Dean’s Office (Dekanat)

The Dean’s Office is responsible for the administration at a Faculty.

ECTS

ECTS stands for European Credit Transfer System. For each course you successfully complete, you will get a certain number of ECTS credit points. The credit points are calculated based on the estimated student work load for the course. One ECTS credit point corresponds to 30 hours of student work (including
classes, class preparation, exercises, exam preparation etc.). To get the Master’s degree you have to obtain 120 ECTS points.

**ESE**

Short form for Embedded Systems Engineering.

**Faculty (Fakultät)**

A faculty is a section, or college at a university. It may include more than one department. For example, the Faculty of Engineering includes the Department of Computer Science, the Department of Embedded Systems Engineering and the Department of Sustainable Systems Engineering.

**Hiwi**

HiWi is short for Hilfswissenschaftler, which means something like research assistant. Hiwi jobs are offered by the university to students. Depending on their academic degree HiWis earn 9 to 10 Euro per hour.

**Matriculation Number (Matrikelnummer)**

This is your personal student identification number.

**Mensa**

Latin word used in German for the cafeteria at the university.

**Module (Modul)**

A module is a unit of study for which you will receive one note in your final transcript of grades. Examples are lectures, seminars and lab courses.

**Module Handbook (Modulhandbuch)**

The Module Handbook (or syllabus) describes the content of all the courses in your program of studies which you can choose from, and receive credit for. (Modules)

**MSE (MST)**

Abbreviation for Embedded Systems Engineering. In German: Mikrosystemtechnik (MST)

**Pool**

A pool is a collection of networked computers and peripheral equipment found in one room.

**Pool Manager**
The pool manager is in charge of the student pool located in the Airport Cafeteria Building at the Faculty of Engineering.

**Semester**

This is the word used to describe the academic half year or term. In Germany, the academic year is divided into the winter semester (WS) from October to March, and the summer semester (SS) from April to September.

**Semester Ticket**

This is a special student ticket for using methods of public transportation in Freiburg and its surroundings which is valid for one semester.

s.t.

See c.t.

**Student Services (Studierendenwerk)**

An administrative organization at an institution of higher learning responsible for operating cafeterias, assigning student housing and over-seeing student dormitories. The Student Union also offers numerous advisory services for students.

**TF**

Abbreviation for the “Technische Fakultät” (Faculty of Engineering).

**WG**

Short for “Wohngemeinschaft” which is usually a group of students who share a flat.

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1 MAOT Students’ Guide, Universität Erlangen-Nürnberg, October 2011
2 MAOT Students’ Guide, Universität Erlangen-Nürnberg, October 2011
3 MAOT Students’ Guide, Universität Erlangen-Nürnberg, October 2011
4 MAOT Students’ Guide, Universität Erlangen-Nürnberg, October 2011
5 Source: [http://www.fem.uni-freiburg.de/div/pdf/regulations/exam_info_fem](http://www.fem.uni-freiburg.de/div/pdf/regulations/exam_info_fem)