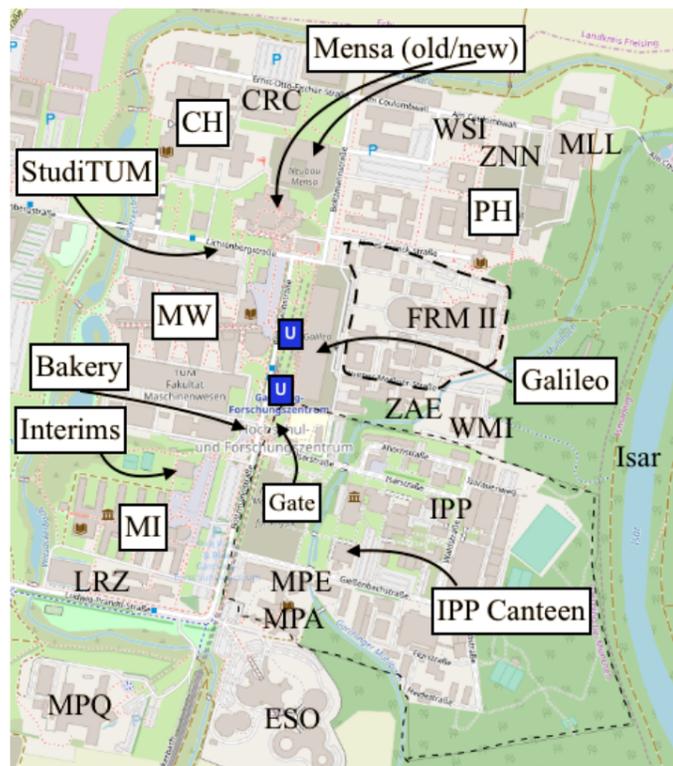


## A Physic Students Travel Guide

Welcome to the Technical University Munich! This Guide was created for physics students starting in the winter semester 2019/20. It might not contain all details about life as a physics student, however it contains a variety of key topics you will face day-to-day. In principle, everything is explained in the introduction days (called SET), but you never know what your SET tutor might forgot to mention :). It was designed and continuously extended by active students of the Fachschaft Maths/Physics/Informatics (FSMPI). This is the group of students that realises the SET (and much more) :).

## Finding Your Way Around

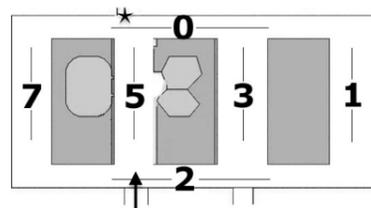
One of your first concerns might be where to find your lecture or seminar rooms. During your studies you will often be sent around the campus Garching by your timetable. This section gives a short overview of the campus and the most important departments including the room number conventions. By understanding these conventions you can easily find all the rooms located in those buildings. In addition you can use the Room-Finder: <http://portal.mytum.de/campus/roomfinder>.



### Physics Department (PH)

Your new home! The Physics Department consists of two buildings PH I and PH II ("Physics One and Two"). PH I has a simple numbering system of 4 digits each:

- 1. digit:** floor (1=cellar, 2=ground floor, 3=1st floor)
- 2. digit:** Gear (See sketch, main entrance at arrow)
- 3. and 4. digit:** Numbering within an aisle.



As an exercise, you can figure out where the rooms 2271, 3343, 3344, and 1141 are. These are the standard rooms for tutorials. Corridor 5 on the ground floor is in reality the foyer with the three lecture halls PH1,2,3. The Physics Fachschaft is located in room 2257, your first point of contact for questions, problems and suggestions. Or simply step by for a coffee/tea. In the east of the PH I there is a container, with three more seminar rooms on the upper floor.

Over the bridge on the north side of the building (star in the sketch) you can reach the upper floor of the PH II. In this building the rooms have three-digit numbers:

- 1. digit:** Floor (1=down, 2=up)
- 2. and 3. digit:** Room number

The most important rooms here are the two seminar rooms 127 and 227.

To quickly find rooms in the physics department there is the practical link: <http://www.ph.tum.de/roomfinder>.

### Math and Informatics (MI)

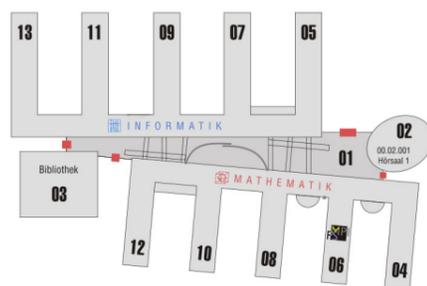
Most of the lectures and classes will take place at the MI building. You can see the large lecture hall HS1 on the left when you enter the main entrance. HS2 and 3 are opposite the main entrance on the ground floor. The building consists of 10 side-buildings, called fingers. Between the two halls, in finger no. 6 are the rooms of your Fachschaft FSMPI.

All the rooms are named by the following convention: A room name consists of three components (e.g. 01.10.052).

**1st component:** Floor (-1=Basement, 0=Ground Floor, 1=1st Floor, etc.)

**2nd component:** Finger (see blueprint)

**3rd component:** Room number



### Mechanical Engineering (MW)

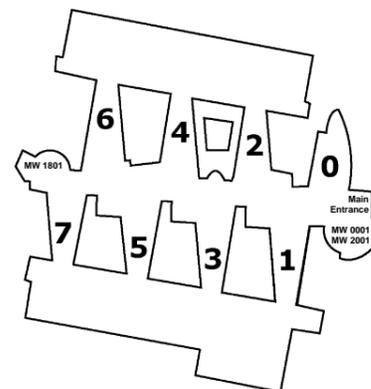
The Mechanical Engineering is the biggest building on the campus. The most important rooms for CS/IS students are the lecture halls MW0001, MW2001 and MW1801. The MW2001 is the largest lecture hall on Campus Garching and is stacked on top of MW0001 located near the main entrance. At the end of the building is the lecture hall MW1801. Those lecture halls are of importance, because some central tutorials and exams take place there. From time to time tutorials are offered in seminar rooms in between.

A room name starts with „MW” and is followed by 4 digits:

**1st digit:** Floor (-1=Basement, 0=Ground Floor, 1=1st Floor, etc.)

**2nd digit:** Yard (see blueprint)

**3rd & 4th digit:** Room number



### Chemistry (CH)

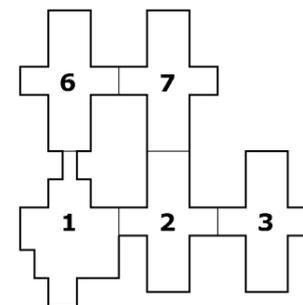
From time to time some tutorials are offered in the chemistry building and here the room search becomes really adventurous. The room numbers here have 5 digits:

**1. digit:** Floor (1=Basement, 2=Ground Floor, etc..)

**2. digit:** Number of Part of Building (see sketch)

**3. digit:** Direction of the corridor (1=east, 2=north, 3=west, 4=south, 0 and 5=unassigned).

**4. and 5. digit:** Room number in the corridor



Those who find their rooms here without an odyssey can award themselves the hero status. And no, I don't know where building parts 4 and 5 have gone. But since it's chemistry, you can give free rein to your imagination. An overview is given in the 3D building map at <https://www.t3.ch.tum.de/en/contact/maps/>.

### Other Buildings

The **StudiTUM** is the new building between the Mensa, the CH and the MW. Every student can activate his student card via TUMonline to have access 24/7. In the building you will find working-rooms and one kitchen per floor. In addition, there is a roof terrace and a rehearsal room for bands is under construction in its basement.

Between the MI and MW is the **Interims** building with adjacent sports fields (basketball, volleyball, etc.). The new **Interims II** building is between the CH and the StudiTUM. Both Interims each contain two medium-sized lecture halls.

The permanent construction site in the middle of the campus is the **Galileo**. It will be home of a huge lecture hall (approx. 1300 seats) for lectures and concerts as well as restaurants, the first supermarket on the campus, a bookshop, hotel rooms, apartments and offices. There is also a gym, which is already open now all week, even though the rest of the building is still under construction.

In addition, there is a whole bunch of research institutes on campus, which will become interesting later during your studies. South of the MI building is the Leibniz Data Centre (LRZ), for example, which operates the Munich Research Network provides a number of IT services and is home to a super computing cluster in the (almost) cuboid building.

### Food & Drinks (Oh my coffee!)

Congratulations, you belong to the first year to directly enjoy the **new Mensa** (opened 11.09.2019). You can find it north of the old Mensa building and it promises to be much better than the old one: There are eight counters including salad and vegetable counters, pizza and pasta counters and a barbecue.

The food counters are open from 11:00 to 15:00 (Mon - Thu) or until 13:45 (Fri). In the lecture-free time the Mensa closes at 14:00. There, one pays at self-checkout terminals. However, it is important to know that you must pay with your Student Card, which can be charge a balance at one of the machines located in ground floor of the building. To do so, you hold your card (might still be placed in your wallet) against the card reader and feed it with a banknote. Alternatively you can register for **Autoload**: The student card is automatically recharged when the credit falls below a certain value.

By the way, it is worth having a look at the timetable of mechanical engineering freshmen, at least around lunchtime. With a class of this size you really don't want to wait in line together. Not even if the new Mensa can actually reduce the waiting times.

In addition the Studentenwerk operates two cafeterias on the campus Garching, called **StuCafe**. They also offer hot lunches, but are a bit more expensive. As in the Mensa, you will also pay with the Student Card. One StuCafe has been moved to the new cafeteria building. (Mon - Thu 08:30 - 15:45 and Fri until 14:45). The other StuCafe is located at the western end of the MW building and has longer opening hours (Mon - Thu 08:00 - 17:00 and Fri until 16:00). In the middle of the MW-Magistrale is a **coffee bar**, which additionally offers snacks and hot dogs. In this bar you can pay with cash as well as with your Student Card.

Only cash will be accepted for the following meal locations. In the MI building the privately run **FMI Bistro** offers a larger (and usually better) selection of meals, but is generally more expensive than the Studentenwerk's offer. However, it is also open in the evening (Mon - Fri 07:00 - 19:00, lunch from 11:30). In the 8th finger there is a **coffee terminal**, which you may have already discovered.

The **bakery Riedmair** near the southern subway exit is also open weekdays until 19:00. Adjacently there are two popular stalls: **Onkel Luu** (Asian) and a **Kabab**. A food truck, which is on campus Tuesday to Thursday from 11:00 - 14:00, is the **Pita Booth** at the parking lot in front of the ESO entrance. Furthermore there is the big **IPP-Kantine** in the fenced area of the Max-Planck-Institutes, which is often used as an alternative to the Mensa. It is in the same price category as the

FMI bistro, but has a little more choice. To enter the site you need your student card. Show it at the IPP-gate to enter. Here you can also ask for the way to the canteen.

Unfortunately, in the physics building you need to survive only with snack and coffee machines. They are placed in the foyer. New is the possibility to use your own cup instead of the plastic cup (and get a discount for doing so).

If you are still hungry and moreover thirsty in the evening after 19:00, there is the **Campus-Pub C2**.

You can find menus for many of these food options at <https://hunger.tum.sexy>.

## Studies

A course of studies at the TUM consists of lectures, central exercises, tutorials, homework and exams. At <https://mpi.fs.tum.de/en/entering-tum/begin-of-studies/process-of-studies> you will find general comments. Depending on the subject it may differ a bit.

In most classes attendance is not compulsory. Questions can (and should!) be asked by you at any time, even if it can take some courage to ask in front of the whole class. Remember: if you didn't understand something, you're probably not alone. The other students just didn't have the courage to ask.

“Homework?!”. Yes, indeed there are **homeworks**. In most courses you aren't required to hand them in, or even solve them. You might take this and the fact that most questions are rather hard as an excuse not to do them. Don't! You might have to spend a lot of time with the homeworks, but they are the only way to get a feeling for the course material, and give you the skills needed to pass the exam. You don't have to work on them alone. In some cases, you are even required to hand them in as a team. Not without reason: You will be grateful for the productive discussions that result. An active participation in the practice is important. It will be announced in the first lecture of the semester how to register for tutorials. Usually the attendance of the tutorials is flexible, i.e. simply change the practice group, if it does not suits you.

The exams are much more difficult than those you might have had so far, but typically easier than the homework. So if you've completed all of them, your chances of passing are pretty good.

### Books

As an enrolled student you can borrow books from the TUM University Library. In the PH-library you'll find all the books that are relevant for you, but many of them are not borrowable. The large textbook collection with many borrowable copies of all subjects is located in the chemistry library. To search, order, or reserve books, the university library page is quite useful: <https://www.ub.tum.de/en>. As a rule, you can borrow books for 4 weeks. If nobody else preorders your copy, you'll get an automatic extension for a few months, see <https://www.ub.tum.de/en/borrowing-checking-out>. The books can be returned in any library section.

At <https://www.ub.tum.de/en/opening-hours> the current opening hours are listed.

### Lecture Notes

Printed scripts issued by some lectures and collections of previous exams can be purchased from the Fach-

schaft. You'll find the opening times of our sales office at: <https://mpi.fs.tum.de/en/for-students/services-of-the-student-council/script-sales>. There you also find the link to the catalog. If you're interested in participating, you can help us selling these scripts!

### Working Rooms

All libraries are very well suited for quiet learning, but for group working you need to get hold of one of the popular group rooms. At the benches in the foyer of the physics department students often do their homework in groups. In addition, there is a dedicated student learning room in the container (enter and turn right). You have access to this room, which also contains computer and a couch, with your student card. Less known is the area in the basement at the northeast corner of the building (near the media lab, room 1122), with tables, chairs, a blackboard and sometimes students who are learning.

In the atrium (called Magistrale) of the MI building you have surely already found a larger number of wooden benches. In the library extension of the MI there are additional single and group rooms on the 1st floor, which you can reach via the wooden staircase at the end of the Magistrale. These are accessible 24 hours a day (and quite popular). You can also use the rooms between the fingers of the building in the upper floors, called „glass boxes”.

In the MW there are tables and chairs everywhere in the Magistrale, which are also suitable for group work. There are also work-rooms in the StudiTUM.

If a room is connected to the learning room management system, you can see whether it is occupied or not at <http://go.tum.de/lernraum> (German but might still be useful). Please use the displays in these rooms (next to the door) so that the website shows the actual occupancy at all times.

## Computing

The university provides a rich IT infrastructure and many possibilities for accessing computers, software and the internet.

Upon enrolling you receive an university account with an e-mail address which should look like [ab12cde@mytum.de](mailto:ab12cde@mytum.de) or [name@tum.de](mailto:name@tum.de). This address is used by the university to contact you. In addition you need the address or your TUM-ID (of the form ab12cde) for authentication at several services.

### Computer Rooms and Networks

In PH I there are three computer rooms: two larger **CIP-Pools** in room 1151 (CIP1) and 1161 (CIP2) at the eastern end of the building and a smaller room next to the main entrance called **Mini-Pool**. There are more PCs in the container, first door left. You can enter the rooms with your student card from 8:00 to 20:00 (Monday to Friday). There are also some additional PCs in the foyer near lecture halls 2 and 3 that are often overlooked.

In the Linux-based network every physics student has a directory at `/home/stud/[login]` with 3GB disk space and the possibility of their own web space. All details can be found at <https://www.cip.ph.tum.de>. Furthermore every student can use LRZ Sync+Share with 50GB free space <https://syncandshare.lrz.de>.

At the Infopoint in the Magistrale, every student can apply for a identifier for the computer hall in the MI building (rooms 00.05.011 and 00.07.023) and the MI library. Opening hours for the computer halls are 8:00 to 24:00 (Monday to Friday). An Internet café, which is accessible 24 hours a day, is located in room 00.08.057.

In the MW building there are also some computers for public use. Entering at the main entrance and looking to the upper left you will find them. You can log in with your LRZ/mytum account.

### Wifi

The network, **eduroam**, even available worldwide at many teaching and research institutions. In other words, you can dial into **eduroam** at all other institutions with access authorization from the TUM. Detailed instructions to the institutions can be found at <https://www.lrz.de/services/netz/wlan>.

In all faculty buildings you'll find the **lrz** network. This is an not password protected network - however you will only gain internet access after establishing a secure VPN connection. For a detailed instruction on how to establish the VPN connection, connect to the **lrz** network and browse to the following page: <https://www.lrz.de/services/netz/mobil/vpn>.

In the MI building there is also the FMI network, which you can access with WEP key. If you are logged in with the VPN client somewhere in the world, you can get this key at <http://wwwrbg.in.tum.de/betrieb/funklan>.

### Software

In the CIP network you have access to many standard programs (OpenOffice.org, Gnuplot, ...) as well as to programs for scientific computing (MATLAB, Mathematica, ...). If you prefer to work at home, look at <https://www.ph.tum.de/> for „Software” or look at <https://www.lrz.de/services/swbezug>. Furthermore Dreamspark provides (free) licenses for almost all Microsoft products are available at <https://www.studisoft.de>.

Unfortunately, those websites are in German, but your German fellow students will definitely help you out.

### Printing, Scanning, and Copying

In the physics CIP network you can use 4 laser printers: „minipool”, is the one in the mini pool, „cip”, is in CIP1, „cont1” and „cont2” are in the container. If you use „pdfmail” as printer, a PDF of your printout will be sent to your [@mytum.de](mailto:@mytum.de) email address. As a physics student you get a free monthly quota of 50 pages. Use it wisely (and not to print whole lecture notes), because there is no way to add more print quota. You can check your remaining quota at <https://cups.ph.tum.de/cgi-bin/quota.pl.cgi>. In the future, printing with the Student-Card will be extended, but for the Garching campus this does not yet exist (<https://www.it.tum.de/cloudprinting>).

In the CIP1 there is a single sheet scanner that sends the scanned document to an email of your choice. In the physics library you will find a book scanner, here you need a USB stick.

You can find a **copyshop** at the western end of the MW. Alternatively you can take a look at the services of the LRZ e.g. A0-Scanner, poster printing. The script sales office also offers printing quotas for the

computer hall (if you have an identifier). Details here: <https://mpi.fs.tum.de/en/for-students/services-of-the-student-council/print-quota>.

## IT-security

You can enable basic protection of your data, your computer and your digital identity by taking some simple actions. At <https://www.it.tum.de/en/it-security/for-students> you can read how to protect your computer and smartphone.

Students have the opportunity to download the free malware protection „Sophos Antivirus” from the LRZ website. There you will find versions for common systems. For the download and the regular update you need to connect your computer to **eduroam** or activate the VPN connection to the LRZ.

Since you can log in with the TUM ID and the corresponding password to many TUM services, it is particularly important that you choose a very good password here. Many tips and a printable password card can be found at <https://www.it.tum.de/en/it-security/for-students/passwords>.

## Additional Links

**Faculty of Informatics:** <https://www.ph.tum.de/en>

**Your Fachschaft:** <https://mpi.fs.tum.de/en>

Have a look at „Entering TUM” / „Begin of Studies”

**MVV Public Transport:** <https://www.mvv-muenchen.de/en>

**Central University Sports:** <https://www.zhs-muenchen.de/en>

**Studentenwerk:** <https://www.studentenwerk-muenchen.de/en>

## Contacts

**Prof. Dr. Johannes Barth** (PH II: 211) - Dean

**Prof. Dr. Reinhard Kienberger** (PH II: 113) - Dean of studies

**Karin Lichtnecker, Sabine Ging** (PH I: 2254, 2250) - Dean's Office

**Philipp Höffer v. Löwenfeld** (PH I 2048) - Assistant of the Dean of Studies

**Dr. Karl Dressler** (PH I: 2250 [only Tuesdays 14 -17 o'clock], MI 01.06.036[main office]) - Student Advisory Service for Bachelor program

**Dr. Martin Saß** (MI 01.06.038) - Student Advisory Service for Master programs

**Dr. Leticia Fimiani** - International Affairs - Notice: The office is currently closed. Alternative contact persons: BSc: K. Dressler, MSc: M. Saß

And of course, us, your **Fachschaft** (PH I 2257)!

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