



## HOW TO BCI

MASTER PSE 2023

Dear students,  
Welcome in Dortmund! We are happy that you decided to study at the department of chemical and biochemical engineering ("BCI"). With this brochure you get the necessary information for having a good start.

**Best wishes!**

*Marie-Christine Boos*












*Co-ordinator of the Masters' Programme*





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	FACTS AND FIGURES ABOUT BCI	5
	WHO IS WHO	10
	HOW TO GET INFORMATION	12
	MODULES, CURRICULUM, EXAMS	15
	BEING A STUDENT IN GERMANY	21
	WEIRD? WE DO NOT THINK SO, BUT DIFFERENT FROM HOME	23
	HOW TO SURVIVE THE COLD?	31
	WHAT/WHO ELSE SHOULD I KNOW?	33
	CONTACT	36

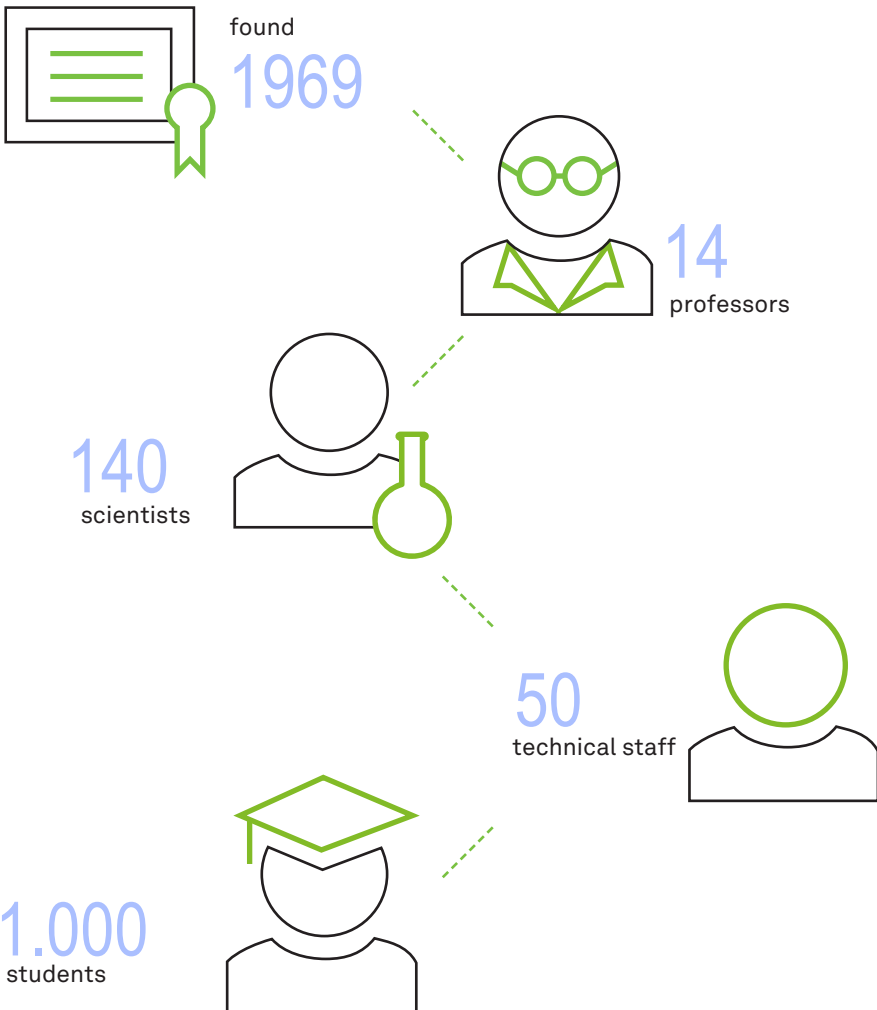
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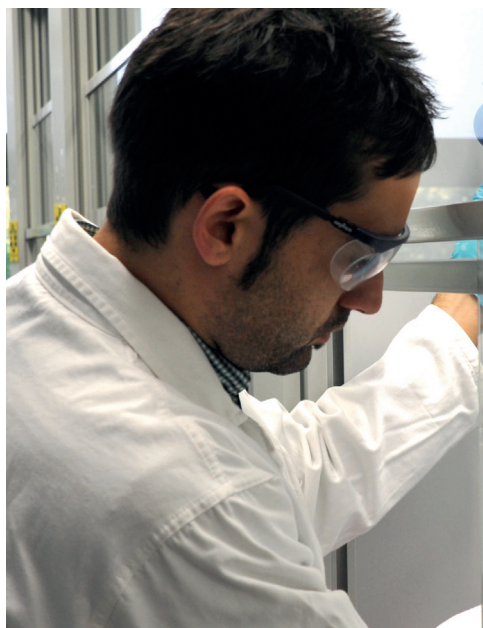


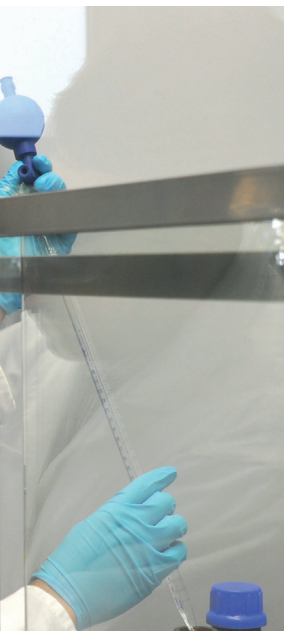
DEPARTMENT OF  
CHEMICAL AND BIOCHEMICAL  
ENGINEERING (BCI)

## Facts and Figures about BCI

The department of chemical and biochemical engineering ranks among the biggest and most successful ones in its field in Germany.

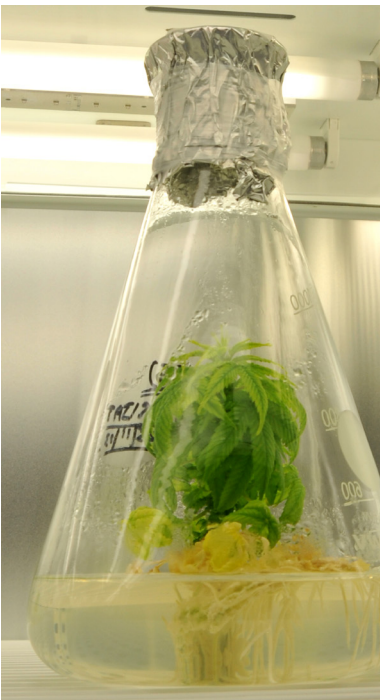














## Who is who

### THE STUDENTS BOARD (FACHSCHAFT)



**is your first contact at the university.**

- » is part of the “democratic self administration” of the university
- » has open doors and represents your interests in the department
- » reserves one seat in the board for your masters' programme
- » provides information and support for students
- » organises special tutorials for exam preparation
- » sells labcoats and lab glasses



### MARIE-CHRISTINE BOOS



**is your first contact at the university from the side of the department.**

- » counsels and coaches students
- » plans curricula, exams and the reservation of lecture halls
- » works as complaint manager
- » organises exchange programmes, e.g. ERASMUS



### DR. PAUL KERZEL



**is managing the department.**

- » is responsible for study orientation among pupils
- » manages the staff, the budget and the facilities of the department
- » is responsible for the administration and acknowledgement of industrial internships (“Praktikumsbeauftragter”)





## PROF. MARUUS NETT



**is Dean of Academic Affairs and responsible for all tasks in relation to studies and teaching.**

He takes care that

- » the programme can be studied in the given time
- » the course offerings comply with the examination and study regulations
- » the students are adequately supervised

## PROF. JÖRG TILLER



**is the head of the examination board.**

- » his responsible for everything that has to do with modules, examinations, theses or certificates
- » his executive" is the examination office contacts there are Mrs. Maja Schäfer and Mrs. Katharina Müller)

## PROF. SERGIO LUCIA



**is responsible for international affairs.**

- » is responsible for Degree Progress Inquiries (Studienstandsabfragen") for the Foreigners Registration Office ("Ausländerbehörde")
- » contacts the International Office (Social Counseling) in case of residence issues
- » supports the International Office at information events for international students as well as in case of scholarship questions

## How to get information

INFORMATION IS ESSENTIAL FOR BEING  
SUCCESSFULL. HOW DO TO GET IT!



Our most important sources of information:

#Moodle - Digitaler Zentralbereich (BCI department)

#Moodle - course rooms

#website BCI (module handbook, exam plans...)






#LSF (courses, curricula)

#Instagram @bci.tudortmund @fs\_bci @tu\_dortmund

#your peers

#fellow students

## GETTING CONNECTED

- After the enrolment you get a TU Dortmund account and mail address.  
You also need access to the PC-Pools.  
Please find the information online:  

- Read your examination regulations.  
You find it under "Rechtliches" in the "Digitaler Zentralbereich"  

- Learn to use your module handbook. It contains all information on the courses. See pages 16/17. The current handbook is to be found on the BCI website.  

- Check the websites of the labs that offer courses.  
Mostly you find information under "teaching"
- Learn to work with the electronic lecture survey LSF (elektronisches Vorlesungsverzeichnis). You can set the language to English in the right upper corner. The ongoing semester can be seen without logging in with the TU-Account/log in.  

- Ask senior students and/or German fellow students and /or the students' board (Fachschaft).
- Use the TU-App (mensa plan, bus timetables etc.).  




MODULES,  
CURRICULUM,  
EXAMS

## Recommended layout of the programme

### MASTER PSE

SEMESTER	0	1	2	3	Credits
	Pre-semester				
Introduction to Process Balancing	■				5
Industrial Chemistry	■				4
Fundamentals of Chemical Engineering	■				8
Lab Course	■				4
Language Course German or English	■				4
Introduction to Process Dynamics and Control	■				5
Fluid Separations		■			4
Reaction Engineering		■			4
Modeling and Simulation		■			10
PSE Lab		■	■		2 + 1
Electives according to module handbook		■	■		10 + 6 to 16
Particle Technology			■		4
Conceptual Design			■		4
Group Project			■		10
Process Performance Optimization			■		5
Masters's Thesis				■	30

Please make sure you finish two of the pre-semester modules (except practical and German course), otherwise you are not allowed to write exams in the following summer semester.

## Fluid separations

Masters-Modul	responsible verantwortlich	Held		programme Studiengang	mandatory Pflicht	elective Wahl	sem.	language Sprache
	department Fakultät	BCI		CE/PSE	X		1	E
	CP overall Gesamt Leistungspunkte (LP)	4		CE		X	1	E
Structure	elem./No. Element/Nr.	title of course / professor Veranstaltungstitel /Lehrender	LSF No. LSF Nr.	turnus Turnus	type Typ	semester hours Semesterwo- chenstunde	CP LP	work- load overall
	1	Fluid separations/ Held	066140/ 066141	SS = summer semester WS = winter semester	V = lecture Ü = tutorial P = practical	2+1	3+1	90 (22,5) + 30 (11,25)
Lecture Content	<p>In the lecture advanced topics of the thermal separation processes are covered. The lecture is built upon the knowledge gained in the lecture "Introduction to Fluid Separation". This knowledge should be deepened and extended not only to multicomponent and non-ideal systems but also to new unit operations in the field of fluid separation processes.</p> <p>In the tutorials, this knowledge is applied to several practically relevant tasks of conceptual design and process feasibility and thus fixed.</p>							
Competences	<p>The students attain complementary knowledge about central questions and theoretical concepts of thermal separation processes. Through the treatment of fluid separation operations, phenomena and their combination the students are educated to select and apply the correspondent scientific description approach. Such knowledge represents the core competence of the chemical engineer.</p>							
Examination	Examination modus Prüfungsart	Modulprüfung = module exam Teilleistungen / TL = separate exams						
	Elem./No. Element Nr.	Form Form	Net duration of exam / min Dauer Prüfung netto/min					
	1	Written	120	5				
Preconditions	Module note is formed according to the masters' exam regulations § 15.							
Literature	Basic knowledge in fluid separation processes and transport phenomena.							
	The recommended literature is found in lecture script and/or in the website of the course and will be announced during the lecture.							

## Modules, Curriculum, Exams

The module handbook contains all information on the courses except from times and locations. To understand this handbook is therefore the most important tool for you as a student.

- 1 Module complete with xxx credits (LP). This information is essential for electives since electives have to be completed in order to be taken into the Transcript of Records. However, not in all cases you have to take all courses of a module to complete it. Example: If you find a border here like 1.5-10 credits the module is “complete” with 1.5 credits already. You can choose other modules to collect the necessary elective credits.
- 2 Responsible for this module / information can be obtained at Prof. Held.
- 3 Course number in the electronic lecture survey.
- 4 6 credits 180 h workload. 45 h of lectures have to be attended. The general workload (preparation, work after lectures and before exams) will be 180 h.
- 5 After the semester you will have to write an examination of 120 min.

tu technische universität dortmund lehre studium forschung

Startseite | Dienstleistungen | Letzte Anmeldung: 14.03.17 Frau Kristin Lindner-Schweidick | Sie sind angemeldet als: kristelind | In der Rolle: Abteilung für Bio- und Chemieingenieurwesen |

Alle Funktionen | **Veranstaltungen** | Einrichtungen | Räume und Gebäude | Personen

Ich bin hier: Startseite > Veranstaltungen > Studienanmeldung

Anfragegeheim

Studienang - Lehrplan

Wochen: 40 3.10.2016 - 9.10.2016 Liste > kurz > mittel > lang Plan > kurz > mittel > lang > Druck

Bachelor Chemieingenieurwesen, Abschluss BA Ordnung: 2016-10-10 Semester von: 1. Semester bis: 1

Einzeltermin Blockveranstaltung 14 Tage Veranstaltung

Zeit	Montag 03.10.2016	Dienstag 04.10.2016	Mittwoch 05.10.2016	Donnerstag 06.10.2016	Freitag 07.10.2016	Samstag 08.10.2016	Sonntag 09.10.2016
vor 8							
8							
9							
10							
11							
12							

LSF - lectures -Curricula Timetable (list) -  
Master (CIW) Process Systems Engineering  
(- Master Uni mit Abschluss) / your semester.

### ATTENTION:

- » Before the lectures start your curriculum is given in semester view as default.
- » Change the default to the first week or to lecture time only with repeating events.
- » You do not have to register for courses just go there. Starting from summer there will be courses with registration. These courses are specially marked in the LSF.

Special hint: log in into LSF This enables more functions. Logged in you can select courses, they will be listed in your starting menu and shown in your personal curriculum. you can also export this plan as calendar dates.  
Important: You need a registration for labwork.



*For planning purpose you will also need the examination plans.*

You find the examination dates for mandatory courses on the BCI website. Examinations for electives are set at the beginning of the lectures.





BEING A STUDENT IN  
GERMANY

## German Language Course

Knowledge of German brings success. Although you might get around with English it would be almost impossible to find an intern or a Job here without good command of German. A basic language course is included in your presemester curriculum. In case you attended a language course at home get it acknowledged here. Visit Dr. Carsten Martin at Sprachenzentrum at the Department of Foreign Languages at the the Center for Higher Education for this purpose - his office hours are given on the website. The certificates he hands out has to be brought into the Examination Office afterwards for the administration. As a matter of course all of you are free to visit more German courses than the basic one.

## Regulations

Please get to know the study regulations. Everything you have to know about the presemester is laid down in the Admission Regulations.

Digitaler Zentralbereich / Rechtliches:



There are conditions for taking part in examinations of the summer semester. Make sure you know and fulfil them. Everything you have to know about examinations is laid down in the examination regulations.

All regulations are valid for all students and there are no exceptions.

**Important:** Please register for exams in time, otherwise you will not be able to write them. There are only three attempts for each course and absolutely no exclusions to that rule. After a failed third attempt of any exam you will be exmatriculated.

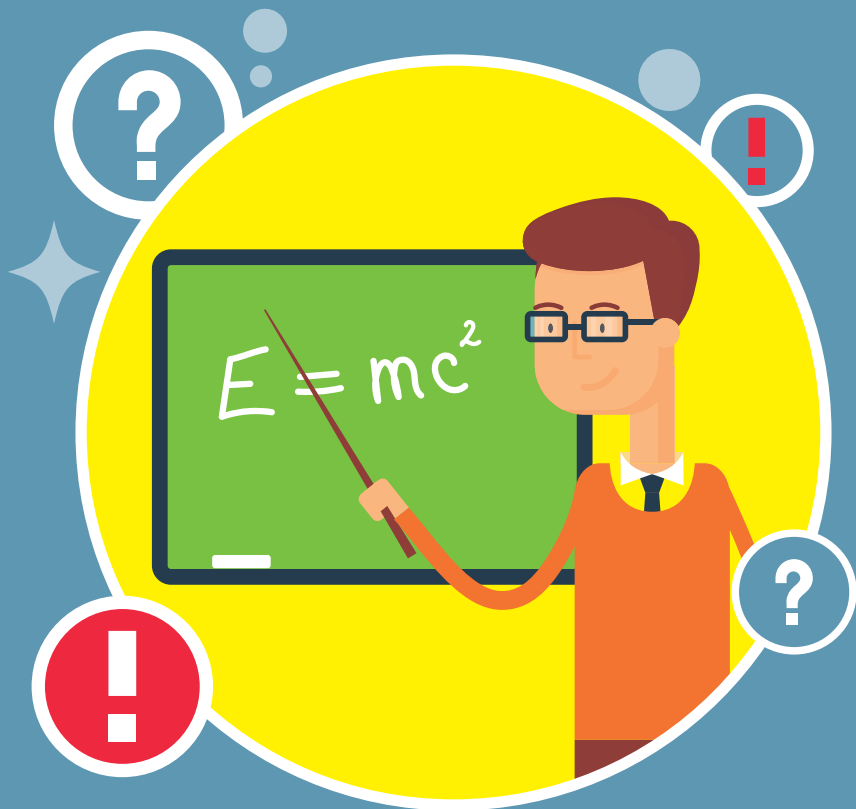
**Please do not go into a third and last attempt without again visiting all lectures and all tutorials of the respected course plus a detailed counselling by the co-ordinator.**

## Practicals

Make sure you

- have registered if necessary and come in time
- are well prepared for the colloquials that take place before the practical
- have your labcoat and glasses ready (you can buy a full sleeve and glasses in your home country, otherwise it can be bought in university with a total cost of 15 euro)
- stick to the safety and lab regulations

Otherwise you might be excluded from the participation and/or have to repeat the experiment.



Weird? We do not think  
so, but maybe it's  
different from home.

## At University

### COURSES HAVE TO BE ATTENDED.

Although you might be accustomed not to visit (all) lectures and tutorials during your bachelor studies at home you will not be successful without changing this habit in Germany. A vital part of teaching and learning take place in the classrooms. Be at the university from the very first day of the lecture time. Especially for group and lab work attendance is mandatory without exceptions.

The “delivery rate” of contents will be rather high and often in front room modus. Make sure you are present at the university and attend all the teaching including all tutorials. In the presemester you might have to bridge some gaps from your bachelor studies and sometimes you also might encounter repetitions. This is normal as the presemester is designed to bring everybody onto the same level in all fields.

Important note: Tutors will always be willing to help you. Best ask your questions during the semester. Office hours will be crammed full shortly before the exams and within the examination periods. Prepare questions when you turn to the tutors, do not expect to get “extra lectures” especially when you have never appeared in class during the semester.

### TIME MATTERS IN EXAMS.

Examinations are time-critical in Germany. So for good marks you do not only have to know the things but also have to reproduce them in a limited amount of time. The more you practice this (in the tutorials and at home) the better your marks will be.

### APPOINTMENTS SHOULD BE MADE.

There are some labs that operate with office hours. If not write a mail to the respective persons and ask for an appointment. It is effective to suggest some time slots that are convenient to you already in this request. Be in time for such an appointment.

### DATA PROTECTION IS IMPORTANT.

In Germany data protection is a high value. Names of students will not be published in exam lists, mail addresses etc. will not be handed out. Please act accordingly.

### CONTRACTS ARE CONTRACTS.

Written contracts (e.g. for your mobiles or for your accommodation) will be valid and have to be fulfilled. Make sure you do not sign contracts you do not fully understand in order to avoid bad surprises. If in doubt ask your German fellows or the co-ordinator. In case you need legal advice, you can contact the legal aid office at the AStA:

<https://asta-dortmund.de/en/consultation/>

## At home and social life

### GERMAN TV/RADIO HAVE TO BE PAID EVEN IF YOU DO NOT HAVE A TV OR RADIO.

TV and radio have to be paid for, there is no way to avoid this “tax”. Do not disobey requests for payment when you get it. (This is a general rule: React if you get a payment request, do not just throw away letters. Payment problems accumulate very fast in Germany)

### GERMANS I D TO BE GREETED.

“Guten Tag” (Good day) and “Auf Wiedersehen” (Good bye) are common greetings. Greeting everybody is particularly common where you meet only one or a few people. For example when entering small shops or doctors’ waiting rooms or even the escalator with “Guten Tag”, one greets the people who are already there as a whole group. Smiling in public is not usually considered flirting, even when you are talking with a stranger. People normally just try to be friendly and welcoming when smiling.

### NEVER HESITATE TO ASK!

If you need help, feel free to ask any adult person: People are usually friendly. It is advisable not to approach children without permission from their parents.

### GERMANS RESPECT DISTANCE.

People in Germany value their personal space and their privacy, which can appear distant at times. It is completely common to sit next to a stranger in a train or in the restaurant for hours with only saying hello and goodbye. As well, many people prefer to sit on their own, for example in public transport. It is considered rude to have lengthy and loud conversations. Conversations and phone calls are rather low pitched. (This is valid for talks with mobile phones, too.)

For privacy and silence, people often have their doors closed, e.g. in big office buildings or at home. It is considered polite to knock on the door before entering and usually you will be welcomed and asked in.

### SUNDAY IS A QUIET DAY.

Almost all shops are closed and only few people work. Neighbors might complain if your noise disturbs their resting day. Likewise, people in Germany expect silence during sleeping time which is between 22 o'clock (10 pm) and 6 o'clock in the morning (6 am).

### SPECIAL RULES FOR ELDER AND SICK PEOPLE.

In public transportation there are seats and places reserved for the elderly, sick, and pregnant and some for buggies and wheelchairs. People usually try to leave these places free or move aside if they are needed.



## Regulations, rules and being in public

### STAND RIGHT, WALK LEFT.

On escalators, people usually stand on the right side and walk on the left side.

### RELIGION.

Everybody can confess to and practice his or her own religion - or no religion at all. Religion is considered a private matter. So you are free to believe whatever you like, but you are also expected to accept that other people believe in another god or no god at all.

### OPINIONS AND DEBATES.

In Germany people are rather oriented towards compromising than polarizing. The press enjoys a special kind of freedom, the freedom of the press. This is guaranteed by law. The press addresses a wide range of topics, including criticism of the government and societal institutions (such as churches). "Freedom of speech" allows you to speak out your mind as long as no one is discriminated, deeply insulted or threatened.

### AFFECTIONS MAY BE VISIBLE

Public displays of affection among (same or different sex) couples are common. It includes holding hands and sometimes kissing or cuddling in public places. This is commonly accepted behaviour and should be ignored when passing by.

Partial nudity is common and normal, for example wearing t-shirts and shorts or short skirts. Staring at other people is considered impolite.

### SHAKE HANDS AND HUGS

People in Germany do a lot of handshaking, and they like to do so both when arriving and when departing, and when meeting new people. It is common for a person who is joining a group to have a firm handshake with every single individual. The handshake is accompanied by a straight look in the other person's eyes. The handshake is common for all people in the group, male and female. When welcoming friends it is very common for people to hug, and in some regions of Germany, to kiss the others, mostly the opposite gender on the cheeks. This is understood in a friendly non-sexual way.

### SA WHAT YOU MEAN

People often say exactly what they think. They do not want to be impolite but honest. (Constructive) Criticism is considered a central part in improving oneself and others, particularly in work life. So being criticized or criticizing someone is not uncommon.

### BE IN TIME OR TELL PEOPLE YOU CANNOT

Punctuality is important. If you are late for an appointment or for meeting people, 5 minutes can already be seen as a lack of respect because you keep the other person waiting. If you are late, call the person and inform them about your delay. This is usual for both work and private occasions, such as visiting friends.

### ACCEPTS OFFERS OR NOT

If you are offered something, "nein, danke" (no, thanks) is a polite "no", and "bitte" or "gerne" means "yes". Nobody will be offended if you refuse offers.



### SMOKING

Is common in many public spaces, both for men and women. In restaurants and at train stations there are designated “smoking areas”. It is generally considered more polite to go outside or on the balcony for smoking. Smoking next to non-smokers, children or pregnant women is considered to be rude.

### ALCOHOL

Beer and wine are considered a common part of social events in the evening, such as during dinner or when hanging out. Nevertheless, it is completely accepted to not drink alcohol and many Germans do not drink any alcohol at all. If you are offered an alcoholic drink, you can always decline it with a “nein, danke”. Driving after you have consumed alcohol is forbidden.

## Environment

### GERMANS RESPECT THE ENVIRONMENT

People in Germany are well known for their environmentally friendly behaviour: they separate garbage and try to recycle a lot. They do not like litter on the ground. This is true both in the city, and in nature, for example in parks, next to roads and in the woods. It is quite common for garbage to be kept and thrown into the nearest waste bin, even if this means carrying the waste until you reach a waste bin. Typically there will be waste bins in public spaces, including train stations, bus stops, parks etc.

lots of people in Germany try to limit their use of energy and resources. This is done for environmental protection but also to save money. For example, people try to not leave the refrigerator open for too long (at home or in the supermarket). People usually also switch off the lights when leaving the room. Closed windows usually seal tightly. Hence, it might be necessary for ventilation to open the windows from time to time. To save energy, turn down/off the heating when you leave the room. Many bottles have a small deposit (between 8 and 25 Cent) that will be refunded when you return the bottle. You can return them to any supermarket selling them, not only the supermarket where you bought it. This is meant to help the environment by recycling and re-using bottles and producing less garbage.

## Food and water

### WATER AND MEAT

Drinking water from the tap is perfectly safe. Tap water is strictly supervised in Germany and free of risks. There are only few exceptions to this rule, for example in public places or in trains, which are specifically labeled: “Kein Trinkwasser” (no drinking water).

In Germany you will find a variety of meals which might include pork, beef or chicken. You can always ask which meat is included in a meal if you do not want to eat a particular type. Traditionally Germans eat a lot of pork. The mensa offers veggie food. Dishes with meat are labelled, however only the Döner meat is strictly halal in the mensa. A lot of German sweets contain gelatine made from pork, so if you want to make sure that a sweet is halal, buy the ones that say “vegetarian” on the label or check the list of ingredients for “Gelatine”.

You might find a lot of places which offer Döner, simply kebab meat in a bread roll. It comes either with chicken, veal or lamb meat. Döner, like other fast food (pizza, burgers, fries etc.) is usually eaten without cutlery. However, cutlery is usually used when eating at the table.

### SHOPPING

Germany has a variety of cheap discounters (for example ALDI, LIDL, Norma and Penny) and more expensive supermarkets (for example REWE and EDEKA) that offer everything that people need for their living. Besides, there are also farmers' markets, and small supermarkets, including Turkish, African, Asian or Greek supermarkets. If you only eat halal meat and sweets you will most likely find them in the Turkish or Arabic supermarkets (or restaurants). Unlike supermarkets, some petrol stations are open 24h a day and often sell groceries, but they are very expensive in comparison.

### FORMALITIES

Shops and (official) offices open and close on time. If for example the opening hours (“Öffnungszeiten”) end at 16 o'clock (4 pm), it is advisable to be there at 15.55 (3.55 pm), because at 16.01 (4.01 pm) you might already face a shut door. The same is true for trains, buses etc. and their departure times.

Dealing with bureaucracy is sometimes quite complex and can seem to be inefficient. It takes time and follows standardized procedures. This can be frustrating. However, this bureaucratic procedure is the same for everybody and it is designed to be fair. Offering or accepting bribes is a crime.

## OUTSIDE

People in Germany mostly stick to the traffic rules. They obey signs and stop at red traffic lights even if nobody is in sight. If there is no sign or traffic light: the person coming from the right has the right of way ("rechts vor links").

Separate paths or lanes are designated for bicycles, particularly in cities. Texting and talking on the phone while driving is forbidden. When travelling by car, all passengers are required to fasten their seatbelts. In the car, children must use a special seat appropriate for their size.

## IN DANGER

Always try to help other people that are in danger. Never look away, you can always do something. Everybody is required to help a person in danger, for example by providing first aid and calling emergency services (see below).

In case of conflicts, theft, sexual harassment: call the police (dial 110 on any phone). Police officers are generally friendly and there to help you and will take every call seriously.

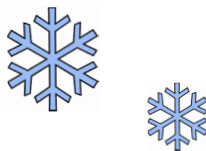
In case of fire or medical emergencies: call the fire brigade (dial 112 on any phone). This hotline should be used only for (life-threatening) emergencies. The same is true for emergency rooms in hospitals.

Doctors' offices are usually open from 8 o'clock in the morning until 12 o'clock and sometimes in the afternoon, too. Most doctors speak English.

If you need medication in the evening, Sundays or on holidays, you can visit a standby pharmacy ("Not-Apotheke"). To find out which pharmacy is on standby duty, use google or dial 22 8 33 (max. 69 Cent/Min.) from a mobile phone. The nearest standby pharmacy is also posted on the doors of all other pharmacies.



HOW TO SURVIVE THE COLD?



## How to survive the cold

It is cold and dark and you rather stay at home? This is a mistake. You need light and as we Germans say: There is no bad weather, only bad clothing. So this is how you survive the cold:

### Use a four layer clothing system:

1. long sleeved shirt and long underwear
2. a fleece or real wool (not cotton) sweater as an insulating midlayer.
3. a jacket and pants as a wind-proof/waterproof layer (e.g. the Jack Wolfskin hard shells that nearly all Germans wear)
4. a puffy down or synthetic jacket and pants for more warmth.

In addition, wear gloves (better mittens than fingered gloves) and warm caps/bonnets. You lose a lot of warmth through the head, so although it might ruin the hair wear a warm cap.

Also extremely important: Warm socks from real wool (not cotton again). However, warm socks alone do not help when you wear inappropriate shoes like sneakers or ballerinas.

You need boots with thick rubber soles to protect you from the cold ground.

If you got really cold and want to avoid a flu: Take a warm feet-bath asap. This often helps, best in combination with ginger tea.

### Further reading

- <https://www.goabroad.com/articles/intern-abroad/myths-misconceptions-about-germany>
- <https://www.make-it-in-germany.com/en/https://howtogermaany.com/>
- <https://howtogermaany.com/>
- <https://www.tu-dortmund.de/en/international/international-campus/>



WHAT/WHO ELSE SHOULD I  
KNOW?

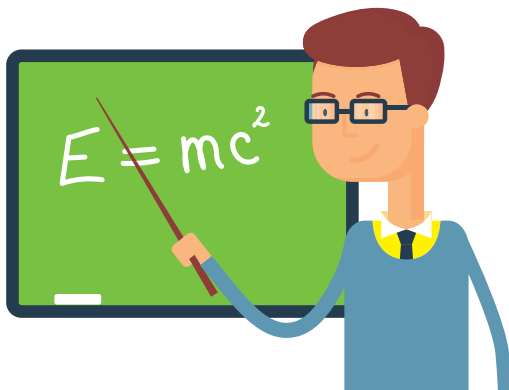
## What/Who else should I know

Theme/ Area	What	Who	Contact
<b>Examinations, Certificates, Examination adminis- tration system BOSS, Transcripts of Records</b>	Information about the examination regulations, e.g. on conditions, dates, deadlines administration, registration, cancelling of examinations sick-leaves paperwork for theses	<b>Examination Office (Prüfungsamt) Team 4 Frau Maja Schäfer</b>	
<b>International Office Enrolment / Disenrolment Semester fee Change of Address Holiday semester Exchange programmes Practicals abroad</b>	Enrolment / Disenrolment Semester fee Change of Address Holiday semester Study Certificates Health Insurance Issues Exchange programmes Practical abroad	<b>International Office</b>	
<b>General Counselling (Studienberatung)</b>	Individual Counselling - Organisation of studies - cancelling studies - ob placement	<b>Zentrale Studienberatung (ZSB)</b>	
<b>Psycho- logical Counselling</b>	Individual Counselling With and without appointment - planning and workload - learning strategies - procrastination - training of social competencies - personal crises	<b>Psychological Counselling (Psychologische Studienberatung)</b>	
<b>Social Counselling (Soziale Beratung) - International Office</b>	- Graduation scholarships - Visa Questions - Ph.D. Events - Cultural Events	<b>International Office</b>	









## Contact

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**Web:** [www.bci.tu-dortmund.de](http://www.bci.tu-dortmund.de)

## PHOTOS

TU Dortmund  
Fakultät Bio- und Chemieingenieurwesen  
Privat