

# Info-Book

## For Firstsemesters

# M.Sc. Data Science

WS 2024/25  
English Version



## Greeting

Dear Students,

A warm welcome to the Faculty of Statistics! We are very pleased that you have chosen to pursue a Master's degree with us, gaining a qualification that is both exciting and forward-looking. Regardless of the programme you choose, the skills you will acquire with us play a crucial role in today's modern (data-driven) world.



Whether in science, industry, or the public sector—everywhere, vast amounts of data are generated, which need to be analysed, interpreted, and used effectively. This is where you come in. Throughout your studies, you will deepen your understanding of the essential methods, techniques, and tools needed to make data-driven decisions, develop complex models, optimize processes, and find creative solutions.

Our department offers a diverse range of courses that not only provide you with theoretical foundations but also enable you to apply them in various practical contexts. Our instructors, who are active in both teaching and research, will guide you and allow you to gain insight into the latest developments in the field.

We are a department that is not too large—at times, almost familial—with direct communication between students, faculty members, and administrative staff. Feel free to reach out to us, especially if you encounter any difficulties at the start of your programme. Our department thrives on the lively exchange between all its members.

I wish you a successful start and many exciting discoveries ahead!

Best regards,  
Philipp Doebler  
Dean of the Department of Statistics

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## Introduction

We, the Statistics Student Council, welcome you to the Technical University of Dortmund. We have created this booklet to provide an easy reference place containing all the information you might need to start your studies. If you have any questions, feel free to contact us, we always try to help.



To make it easier for you to deal with all the links in this document and so that you don't always have to have the booklet at hand, we have uploaded a digital version of the booklet to our website. You can find it here (<https://fs-statistik.tu-dortmund.de/en/first-semester-students/>) or by scanning the QR code below



# 1. The premises

## 1.1 Room numbers

Since the TU has rooms of all kinds and is divided into many buildings at the same time, navigation can be complicated. To make this easier, each room number consists of a building code and a room number. The exception to this rule are lecture halls, some of which do not have room numbers, but are specially numbered as lecture halls. So, a typical room number would be M322, the M stands for the math tower, the 300 means the third floor and then room 22. A lecture hall, on the other hand, could look like this: HSG2 HS3, HSG2 stands for "Hörsaalgebäude" 2, and HS3 stands for lecture hall ("Hörsaal") 3.

## 1.2 Important buildings

You will probably spend most of your time at TU Dortmund University in the CDI building and in the "Mathetower". However, lectures and tutorials can take place anywhere on campus.

The third floor of the Mathetower is a student workspace with many small rooms where you can study alone or with friends. In addition, you will find the sofa room of the student council, a computer room and the help desks for mathematics and statistics. On the second and seventh floors are the offices of most of the staff and lecturers of our faculty. If you have a short question, you can usually just walk by.

## 1.3 The canteens

The TU has over 30,000 students, and to ensure that everyone can get something to eat, there are several canteens on campus. It is important to note that the entire campus is cashless. Payment can only be made with cards in all canteens and the like! The main canteen is located next to the Mathetower and offers a selection of different menus as well as a salad buffet every day. There are always three main courses to choose from, at least one of which is vegetarian. The prices for these dishes are usually between €2.50 and €4 for students. In addition, there is a dish of the day for €1.90 and the "Aktionsteller", a permanently available dish at a price of €5.60.

On the ground floor of the cafeteria building is the gallery, where hot dishes are offered in addition to pastries and sandwiches. Here you will find schnitzel or currywurst with fries and burgers, among other things.

Across the street is the Food Faculty, where pizza, pasta and lasagna are served.

On the south campus there is also the Archeteria, a smaller version of the main canteen with a different menu.

In addition to the canteens, there are also some cafés on campus that offer drinks and various pastries.

Normally, the food is served on the dishes of the cafeteria, which you return after the meal. However, if you want to take your food with you, you can do so as well. If you don't have your own dishes with you, the Relevo system is available, which works via an app of the same name.

At the food counter, you simply let them know that you would like to take the food to go and receive it in a special reusable container with a QR code. Before paying, the QR code must be scanned in the app, as the rental status must be shown at the register. As long as the containers are returned within the specified period, the use of the system is free of charge. However, if you forget to return the container on time, it will be purchased automatically.

## 1.4 North and South Campus

The TU campus is divided into two parts, which are connected by the H-Bahn. Your lectures and tutorials will take place almost exclusively on the North Campus (main campus). The South Campus is significantly smaller than the North Campus and mainly houses the students of architecture and materials science courses. There is also a lecture hall building there, the HSG 1 and theoretically it can happen that you have exercises there, but that is rather rare. If this is the case, you can be there within 3 minutes with the H-Bahn from the Mensabrücke or the S-Bahn station and the H-Bahn runs every 5-10 minutes during the lecture period. In the case of exams, however, a large buffer should always be planned, as if the H-Bahn is closed due to bad weather, frost or maintenance work, large delays can occur. In the event of maintenance work, there will be a replacement bus service, but they will take longer and will not be on site immediately in the event of spontaneous closure. On foot, it takes approximately 20 minutes

## 1.5 Study Spaces

In addition to the already mentioned third floor of the Mathetower, there are a few other places that are particularly suitable for studying. Due to the closure of our library, many study spaces have been lost, so it will be very crowded, especially at the beginning of the new semester. Particularly recommended are the study spaces in the Emil Figge Library, which is open Monday to Saturday until 10 p.m., as well as the co-learning space (container-building) behind the SRG 1 ("Seminarraumgebäude" 1) as well as the SRG 1 itself. In order to compensate for the loss of the library's study spaces, the university has rented other study spaces off campus, the library at Sebrathweg 7 and 9 (easy to reach by bus) and the City Learning Space in Dortmund city centre (Westenhellweg 127). An overview of all learning locations and their opening hours can be found here (<https://www.tu-dortmund.de/en/campus/work-and-study-places/>). If you are still studying at the university until late in the evening, you can be accompanied by the security service to the S-Bahn station or to the parking lot.

## 1.6 The University Library

The main building of our library is currently being demolished to make way for a modern new



building, which is scheduled for completion in 2029. In the meantime, the library's more than one million books have been placed in a storage stack and can be ordered overnight from the Emil Figge Library. The Emil Figge Library will function as the main library on a transitional basis and will be supplemented by the library at Sebrathweg 7 and 9, as well as by the two departmental libraries on Campus South. In addition, the library has a large digital offer, where many books can be downloaded as pdf files. Where books are currently located and whether they can be downloaded can be viewed here (<https://katalog.ub.tu-dortmund.de>).

## 2. Organization of studies

### 2.1 Module Examinations

Almost every module is completed with an exam, but in order to take this exam, you must first achieve the coursework (“Studienleistung”) in this module. In most cases, you will achieve your Studienleistung by regularly working on the exercise sheets, often requiring that you achieve at least half of all available points. Once you achieve the Studienleistung, it will be noted down and regardless of whether you take the exam or not, you will still have it for years to come. So if you attend a module two years in a row and have already achieved the Studienleistung in the first year, you no longer have to work on the exercise sheets in the second year. (However, it is highly recommended to do this anyway, as the exercise sheets usually contribute very well to understanding the material!)

Your exams are almost always graded and can take different forms. The curriculum and the module handbook contain the established rules for the examinations of each module, in particular whether they are graded and what form they take. There are essentially three types of exams: the typical written exam (1-3 hours), the oral exam (20-30 minutes) and project work. Exceptions are possible, such as the digital exam in programming with R for statisticians last year. The form of the examination and the dates for the first and second attempt are announced by the lecturer at the beginning of a module. For exams, you have to register in advance in the BOSS portal. If you change your mind, you can deregister from oral exams up to 7 days in advance without giving reasons, for written exams until midnight the day before. If you want to deregister afterwards without the exam being counted as failed, you will need a medical certificate.

If you fail an exam, don't panic – it happens to most people. You have three attempts to pass each exam, with the second and third attempts having to take place within three semesters of the first attempt.

### 2.2 Uni Account

Together with the documents for your enrolment, you have received the account details for your university account. This account accompanies you throughout your studies and is used to log into all online services of the university. Since with this account you can see your grades and make all important decisions about the continuation of your studies, it is very important that you choose a good password to protect it.

### 2.3 The Uni-Mail

Together with your enrolment, you have received your own e-mail address, which you can log in to here ([webmail.tu-dortmund.de](mailto:webmail.tu-dortmund.de)) with your university account. This email address is automatically linked to your university account, which means that all important messages from the university to you, go to this address, as well as messages from Moodle. It is therefore very important to check your inbox regularly and check whether any important messages have arrived. If you want to, it is also possible to set up an automatic forwarding of mails to your private address in the settings of the mail portal.

### 2.4 Moodle

The TU uses its own instance of Moodle as the digital platform of choice, which can be found here (<https://moodle.tu-dortmund.de>). Each course has its own Moodle-room where all files are



shared. Often, submissions are also uploaded via Moodle and important announcements by the lecturers are published here.

## 2.5 LSF

The LSF (<https://www.lsf.tu-dortmund.de>) is a portal that contains the course catalogue as well as all room plans. In order to take the module exam in a module, it is important to register for this course in advance at the LSF. In some cases, it is even only possible to enter the Moodle room of a course if you have registered for this course in advance at the LSF. Furthermore, the LSF usually contains information on the page of the respective course about the time and place of the course, the content to be covered, and the form of the examination. In courses with limited places, a raffle is usually held among all people who have registered in time, but such situations only occur rarely at our faculty and if they occur it will be for programming courses, especially lectures never exclude participants.

lehre  
studium  
forschung

## 2.6 BOSS

The BOSS Portal ([boss.tu-dortmund.de](http://boss.tu-dortmund.de)) is designed to manage everything related to exams. Here you can register and deregister for exams and get the grades of those exams. You can also view your entire transcript of records here and when the time comes, you will submit your thesis here.

bologna  
online  
study  
service

## 2.7 The TU App

The TU Dortmund has its own mobile app, which can be downloaded from the Play Store and the Appstore. The app is divided into two sections, one general and one personal. The general area contains, for example, the opening hours and offers of the canteens, a map with all buildings and the like of the university as well as the current course catalogue. The personal area, on the other hand, can be used to view your grades and contains your student ID, the Deutschlandticket and your library card.

## 2.8 Wi-Fi

The entire university campus (and most other universities in Europe) has the eduroam Wi-Fi network. Every enrolled student has an account, but you still have to set the password for it, for example in the TU app. Since the setup works differently for each device and in some cases requires the download of special software, there is an official manual from the university, which you can find here. (<https://service.tu-dortmund.de/anleitungen-wlan>)

## 2.9 VPN Service

Digital services such as downloading pdf files from the university library, accessing the servers of our faculty or, for example, the full version of the Statista website can only be used if you are logged in to the university's Wi-Fi. In order to be able to access these services from home, there is a VPN service, more information about how you can access it and the download of the software can be found here (<https://service.tu-dortmund.de/group/intra/vpn>).

### 3. The Fachschaft Statistics

The Fachschaft Statistics includes all students of the Statistics and Data Science degree programs of our faculty. These include the Bachelor's degree programmes in Statistics and Data Science as well as the Master's degree programmes in Statistics, Data Science and Econometrics.



fachschaft  
statistik

#### 3.1 The Student Council

The Student Council (FSR) is your central point of contact for all questions and concerns about studying. Whether you are looking for support with organizational questions, problems in your studies or simply advice, the student council is at your side and can refer you to other contact points if necessary. In addition to these offers of help, the student council also regularly organizes various events where you can get to know your fellow students and have a good time together. Our monthly board game evenings are particularly popular. In addition, there are a number of events per semester, such as a big party, a werewolf and poker evening as well as excursions, for example to the Christmas market. These events offer you the perfect opportunity to make new friends and enjoy student life to the fullest. The prices for drinks and the like are often subsidized and therefore very student-friendly.

The student council runs an e-mail newsletter that always informs you about the latest events and the like. To subscribe to this newsletter, you have to send any email to [fs-info+subscribe@statistik.tu-dortmund.de](mailto:fs-info+subscribe@statistik.tu-dortmund.de), then the registration will happen automatically.

#### 3.2 The General Assembly

The General Assembly (FVV) is the highest body of the Fachschaft Statistics and usually takes place at the beginning of each semester. At the FVV, the current student council reports on its activities and finances of the past semester. Other important committees also introduce themselves and give a brief overview of their work in the last semester. Afterwards, all present students will vote on important decisions, such as amendments to the statutes, and elect the new student council. Every member of the Fachschaft Statistics can stand for election and thus has the opportunity to actively participate in the work of the Student Council. The student council is always looking for motivated members and has its own budget to finance good proposals.

## 4. Important contact information's

It is very possible that you will have questions during your studies that the student council cannot answer directly, or that you would prefer to discuss with the responsible person right away. Nevertheless, please always try to do your own research first. Our faculty has a very large website with articles that can answer many questions immediately. If your research is unsuccessful, there are a number of contact people with different areas of responsibility, to which you can write an email to at any time:

The student council can be reached via the e-mail address [fsr@statistik.tu-dortmund.de](mailto:fsr@statistik.tu-dortmund.de) . In addition, we have our own website where you can find information about current events as well as some materials for first-semester students (<https://fs-statistik.tu-dortmund.de>).

The study coordinator/counselling service can advise on all organisational matters relating to your studies from enrolment to the final thesis and can be reached at the e-mail address [studienberatung@statistik.tu-dortmund.de](mailto:studienberatung@statistik.tu-dortmund.de)

The ERASMUS advisory service helps you plan a semester abroad and has the e-mail address [erasmus@statistik.tu-dortmund.de](mailto:erasmus@statistik.tu-dortmund.de)

Depending on the degree programme, there are different contact people for examination matters, you can find a list of their email addresses here (<https://statistik.tu-dortmund.de/studium/pruefungsangelegenheiten/>) or you can use the general email address for all degree programmes of our Faculty [pruefungsverwaltung-statistik@tu-dortmund.de](mailto:pruefungsverwaltung-statistik@tu-dortmund.de)

For questions about scholarships and the like, our faculty also has its own working group, more information and the current contact people can be found here (<https://statistik.tu-dortmund.de/studium/stipendien/>)

## 5. Important committees

There are numerous committees at the university that make decisions. Students are represented in most of these committees, so if you are interested in working in such a committee, please feel free to contact the student council.

### 5.1 The Faculty Council

The Faculty Council is the most important body of our faculty. It makes the final decisions on all essential topics, such as the course catalogue or changes to the study regulations, and also appoints all other committees. The students provide two voting representatives, who are elected once a year.

### 5.2 The QV Commission

The QV Commission is responsible for improving teaching. It has a budget that can be used to fund positions and courses that are considered beneficial to students, such as additional exercises on a full module or the Master's preparatory course. Fittingly, the students are in the majority in this commission and also hold the position of chairman.

### 5.3 The Examination Boards

Each degree programme has an examination board that takes care of all important matters in regards to examinations. Applications for compensation for disadvantages and the like can be submitted to them, which are then discussed and decided.

### 5.4 The Student Parliament

The student parliament (StuPa) is elected once a year and is the highest representation of the students to the university. It votes on important issues that affect all students and takes care of, among other things, the semester ticket and the representation of the interests of the students to the university.

## 6. Study tips

### 6.1 Nextbike

Our university has a contract with Nextbike to give students better access to their product. If you create an account there and register it as a student here, the first hour of each rental is free, which means that as long as you don't use one of their bikes for more than an hour at a time, you can ride your bike for free.

### 6.2 Theatre flat rate

As students of the TU, you have the opportunity to attend performances at the Theatre Dortmund free of charge. To do this, you have to register here (<https://www.theaterdo.de/kartenabo/theaterflatrate/>) for one semester and can then order tickets beginning one week before the event (provided it is not sold out). This offer is not available for premieres, here you can get tickets beginning one hour before the start of the event.

### 6.3 University Cinema

Every Wednesday and occasionally on Mondays, at 20:15, the Uni-Film-Club organizes a cinema in lecture hall 1 of the EF50. Both current cinema films and classics will be shown. A ticket costs 3€, more information about the offer can be found here ([ufc.tu-dortmund.de](http://ufc.tu-dortmund.de))

## 7. Elective modules

In all degree programs there are elective modules, where it is only specified how many credits you have to collect, but it is up to you which courses you want to attend. There is a catalogue of possible courses for each of these modules and their credits, which of them are actually offered in a semester, changes every year and can be checked in the LSF. If you would like to attend a course that is not on this list, but you think it fits the general area of the module, you can always contact the lecturer and ask if he shares this assessment. If he does, you can, after a short consultation with the examination office, attend this module and get credited.

## 8. Other

### 8.1 The AStA



The AStA is formally responsible for the implementation of the resolutions of the student parliament. However, in practical terms, they take care of many aspects that could help students. They offer counselling services of all kinds and other helping programmes, such as running a bicycle repair shop and having committees for all student groups to ensure that there is no discrimination. A complete overview of the AStA's offers can be found on their website (<https://asta-dortmund.de>)

### 8.2 Erasmus

Erasmus+ is a programme of the European Union that provides financial support for stays abroad at partner universities. The Erasmus office of our faculty will help you plan a semester abroad, for example by finding modules that you can have credited to your studies.



### 8.3 Student Advisory Service

Our faculty has its own student advisory service, which can support you with all questions and problems related to your studies. If you need help planning a semester or would like advice on whether you should change your subject, they will do their best to help you.

### 8.4 Hochschulsport

The Hochschulsport (HSP) offers a large number of different sports, operates a gym on campus and organises events such as the campus run or the football league. To participate in the sports, you need a sports card, which you can buy from the HSP for €20 and is valid for one semester. With this card you can participate in most sports for free, only a few sports cost extra. As a rule, you have to register for courses you want to participate in, either weekly or for the whole semester, to give the organizing team the opportunity to plan in advance how many people will attend and also to limit how crowded it can be. Registering for courses is very straightforward and can be done with just a few clicks either on the HSP website (<https://hsp.tu-dortmund.de>) or in the TU app. You will probably never have access to so many different sports at the same time again, so it is highly recommended to try it out for a semester.

### 8.5 Important documents

All documents related to your degree programme, for example the module handbook or your examination regulations, can be found on the website of our faculty (<https://statistik.tu-dortmund.de/en/studies/degrees/>).

## 9. Dates

### Semester and lecture period:

Semester: 01.10.2024 - 31.03.2025

Lecture period: 07.10.2024 – 31.01.2025

Lecture-free days: 01.11.2024, 23.12.2024 - 03.01.2025

### O-Week:

#### **Mon, 30.09**

9:30 - Information event and getting to know each other (Bachelor - M/E21, Master - M/E27)

12:00 - Lunch

13:00 - Games Café (CDI 120)

#### **Tue, 01.10**

13:00 - Campus rally (expected to last until 17:00), meeting point is at Martin-Schmeißer-Platz (next to the Mathetower, with the big red cogwheel).

#### **Wed, 02.10**

14:00 - City rally (expected to last until 18:00), followed by a pub tour. Meeting point is in front of the German Football Museum next to the Dortmund central station.

18:00 - End of the city rally and start of the pub tour in Westpark.

#### **Thu, 03.10**

Public Holiday (Tag der deutschen Einheit)

#### **Fri, 04.10**

16:00 - Barbecue in the Westpark (depending on the weather)

### Other events:

#### **Mon, 07.10**

10:00 - Welcome for first-semester students at the BVB Stadium (Signal Iduna Park)

#### **Fri, 11.10**

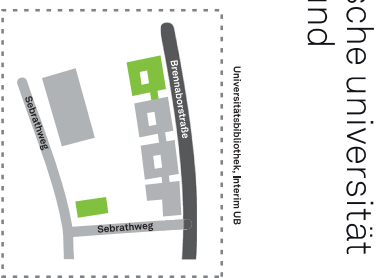
19:00 - Welcome-Back Party in the Helpdesk Room (M315/317)

#### **Mid-October**

Student Council General Assembly (see 3.2, it would be nice if as many new students as possible would attend)

#### **Mid-November**

First semester trip



- Technische Universität Dortmund
- Fachhochschule Dortmund
- Technologiezentrum Dortmund
- Fraunhofer Institut – Institut für Materialfluss und Logistik (IML)
- Max-Planck-Institut für molekulare Physiologie (MPI)
- Leibniz-Institut für Analytische Wissenschaften – IASAS e.V.

ca. 50m



- Zentralförderer Campus Nord
- Zentralförderer Campus Süd
- Öffentliche Straßen
- abc Straßen innerhalb der Universität
- Fußweg
- Einfahrten
- Außenaufzug
- S S-Bahnhaltestelle
- H H-Bahnhaltestelle
- P Bushaltestelle
- P Parkplätze



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- TU Dortmund University
- Fachhochschule Dortmund – University of Applied Sciences and Arts
- TechnologieZentrumDortmund
- Fraunhofer Institute for Material Flow and Logistics (IML)
- Max-Planck-Institute of Molecular Physiology (MPI)
- ISAS

- i Central Reception Service/North Campus
- i Central Reception Service/South Campus
- abc Public roads
- abc Internal roads
- Footpath
- 51 Gateway
- Exterior elevator
- Urban railway station (S-Bahn)
- H-Bahn stop
- Bus stop
- Parking area



ca. 50m

1st semester	2nd semester	3rd semester	4th semester
<b>Module MD 5:</b> <b>Big Data</b> Big Data Analytics (4+2); 9 ECTS; Graded module exam	<b>Module MD 4:</b> <b>Project Work</b> Case Studies (4P) or External Internship; 8 ECTS; Graded partial work	Seminar (2S); 4 ECTS; Graded partial work	<b>Module MD 6:</b> <b>Master Thesis</b> Prerequisites: Modules MD 1 and MD 4 30 ECTS; Course achievement: Advanced Seminar („Oberseminar“); Graded module exam: Master Thesis
<b>Module MD 2:</b> <b>Statistical Theory</b> Statistical Theory (4+2); 9 ECTS; Graded module exam	<b>Module MD 1:</b> <b>Advanced Statistical Learning</b> Advanced Statistical Learning (4+2); 9 ECTS; Graded module exam	Graded module exams or accumulated graded exams (at least 24 ECTS in total)	
<b>Elective courses:</b> <b>Methods</b>			
Elective modules from catalogue (In the entire elective area – Methods and Applications – modules with a total of 45 ECTS are to be chosen.)			
<b>Module MD 3:</b> <b>Data Science in Practice</b> Programming course (2 to 4 P); 3 ECTS; Data Science in Context (2); 3 ECTS; Accumulated graded exams	<b>Elective courses:</b> <b>Applications</b> Elective modules from catalogue	Graded module exams or accumulated graded exams (at least 16 ECTS in total)	
Total: 30 ECTS	Total: 30 ECTS	Total: 30 ECTS	Total: 30 ECTS

blue: courses at the Faculty of Statistics

green: courses at the Faculty of Computer Science

brown: (joint) courses at this or other faculties

Denoted hours:

S: Seminar

P: Practical course

else: Lecture + Tutorial or Lecture only