Information for potential applicants

M.Sc. Data Science

Trier University

This version: May 26, 2023

Thank you for your interest in our master programme at Trier University!
This document should offer you some orientation on the nature of the pro-
gramme, its admission requirements, application deadlines, resources etc.
The following topics are covered:

Contents

1 The programme

The M.Sc. Data Science programme at Trier University is special in its **multidisciplinary approach**. The programme is supported by researchers from **three different subjects: computer sciences, mathematics, and statistics**, which are all part of Faculty IV of Trier University. This explains why you will not find a *Data Science Department* website, etc. Our programme is research-focussed and aims at investigating topics linked to data science from the three disciplines' specific viewpoints. As such, the programme is demanding, contains a considerable amount of self-study and is thus **designed as a full-time programme**. Although some courses use flipped classroom elements, the progamme is **designed as an on-site programme**.

1.1 Language

You can completely study the whole master programme in English. However, if you have sound German skills, the choices for elective courses etc. will be broader, thus giving you more options.

1.2 Duration

The programme is designed as a **four semester (or two years) course of study**.

1.3 Internships and semesters abroad

As of 26 May 2023, the programme **does neither contain mandatory internships nor mandatory semesters abroad**. Due to the specific na-

ture of the programme, organising a semester abroad might be challenging. However, these matters can only be discussed once a student has been admitted to the programme and has actually started her/his studies at Trier University.

2 Admission requirements

2.1 Degree

In order to successfully apply to this master programme you need to hold a **bachelor's degree (or equivalent) from a German or foreign university** at the time of application. This means that you have earned **at least 180 credit points according to the European Credit Transfer and Accumulation System (ECTS)**. If you are in doubt regarding the transfer of credit points from your local system to the ECTS, please consult related websites. If your degree is in **one of the following fields**, you **do not have to check the credit points** earned during your studies **in detail**:

- (Applied) mathematics

- Business informatics

- Business mathematics

- Economics

- Computer sciences

- Statistics

If your degree is in **another field** (e.g. business administration, sociolgy, engineering, etc.), you **have to check the credit points** earned during your studies **in detail**. You should then only apply if you have earned **at least 50 credit points (ECTS) in computer sciences or mathematics or statistics** (as an example, 20 points in computer sciences, 20 points in mathematics, and 10 points in statistics would be OK). Some **examples of courses** that will count towards these 50 credit points **are listed in the appendix** of this document. Please note that although you clearly need mathematics in a course on microeconomics or in a course on finance (to give just two examples), these courses will not count towards these 50 credit points. The same goes for, e.g., a course on pre-calculus. **If you do not hold a bachelor's degree in one of the six fields mentioned above, please provide a list of the courses you consider to count in this category with your application and attach the respective syllabi if possible. Please refrain from asking whether course *XYZ* will count in an e-mail and try to judge for yourself (using the examples given in the appendix as a guideline). The official check can only**

be done once you formally applied for the programme.

In some cases, it is possible to apply without having finished the bachelor studies yet, i.e. without holding a degree yet. Applicants then have to submit a transcript of the credits they already earned in their studies. As a rule of thumb, such applicants should finish their studies within a semester from their application for the programme. As an example, German applicants should have earned 150 of the total 180 credit points associated with a bachelor's degree. If you are in doubt whether you have enough credits to apply in such a situation, please contact the *Studierendensekretariat* (Admission Office) of Trier University (see Subsection 11.2). However, we recommend applying with a finished degree.

2.2 Bachelor's vs. master's degree etc.

In the German higher education system, the basis for a decision on admission of an applicant into a *consecutive* master's degree (meaning a master's degree that is not self-contained, like e.g. an MBA programme, but rather deepens the prior academic education) is always a bachelor's degree. **Therefore, a master's degree in a related field (see Subsection 2.1) cannot *compensate* for a bachelor's degree in an unrelated field, like, e.g., history in this specific case**.

2.3 Grade point average (GPA)

Your **grade point average (GPA) should be 1.7 or better according to the German grade system** (where a lower number is better) if your bachelor studies were in **one of the six fields explicitly mentioned** in Subsection 2.1 or **1.4 or better** in **other, related, fields**. If your GPA is **worse than 1.7 but better than 2.3 in one of the six fields explicitly mentioned or worse than 1.4 but better than 2.0 in another field**, your **application might still be successful**. If your GPA is **2.3 / 2.0 or worse (depending on your field as mentioned above)**, your **application will not be successful. There is no remedy for a worse GPA than 2.2 or 1.9, respectively.** To **convert your *local* GPA to the German GPA**, please use the following formula:

$$\frac{G_{max} - G}{G_{max} - G_{min}} \cdot 3 + 1 \,,$$

where G is your actual local GPA, G_{max} is the maximum (i.e. the best possible value) of your local GPA, and G_{min} is the minimum passing grade in your local GPA. The result will then be truncated after the first decimal place. As an *example*, suppose that your actual GPA is 9.5, the best possible value of your local GPA is 10, and the minimum passing grade in your local GPA is 6. This would lead to the following result:

$$\frac{10 - 9.5}{10 - 6} \cdot 3 + 1 = 1.375 \approx 1.3$$

Please provide your GPA conversion with your application.

2.4 English language skills

As the master programme is taught in English, students need sufficient English language skills. The respective requirements can be found in the current version of the *Einschreibeordnung der Universität Trier*, specifically §4 Section 2. The current documents (as these are legal documents, they are in German) can be found under `https://www.uni-trier.de/index.php?id=56986`. The following details refer to the current situation as of January 6, 2020. **Applicants are exempt from having to prove their English language skills if they were born or have studied a programme taught in English full-time for two years (within the last two years prior to application) in one of the following countries/country groups**:

- United Kingdom

- United States of America

- Canada

- Australia

- New Zealand

- Malta

Applicants are exempt as well if they had at least 5 years of school English in *Sekundarstufe I und II* or got at least a grade of 5 out of 15 in their *Abitur*. All other applicants have to prove their English language proficiency by providing ONE of the following certificates (issued within the last three years prior to application), where scores relate to **overall bands**:

- Cambridge Certificate in Advanced English (CAE)

- C1 certificate according to CEF (Common European Framework)
  → This is usually only relevant for European students.

- International English Language Testing System (IELTS) with a score of at least 6.0
  For IELTS, both versions (*General* as well as *Academic*) count. If you still have to take the examination, we would recommend the *Academic* version though.

- Test of English as a Foreign Language (TOEFL) (Code 9208) with a score of at least

  - 80 in the internet-based test, or

  - 215 in the computer-based test, or

  - 550 in the paper-based test

- UNIcert III
  → This is usually only relevant for European students.

A letter issued by a university that prior studies were done in English is not sufficient proof of English language proficiency.

2.5   Letter of motivation

Applicants have to provide a **letter of motivation** with their application. This letter should **not be longer than one DIN A4 page** and explain why the applicant chose Data Science, why the applicant chose Trier University, and why the applicant is suited for the programme.

2.6   Letters of recommendation

The examination board cannot and **does not take letters of recommendation** into account in its decision. Therefore, please refrain from sending such documents with your application.

2.7   Decision of examination board

If an applicant holds a bachelor's degree (or equivalent) in a field explicitly listed as a bullet point in Subsection 2.1, has a GPA of 2.0 or better, and has proven her/his English proficiency (if needed), she/he will be admitted

to the programme by the examination board. **Please note that the final admission is also conditional on other formal requirements related to the general enrollment as a student at Trier University! These procedural details are outside of the examination board's reach. Please contact the *Studierendensekretariat* of Trier University for questions related to this.** If an applicant holds another bachelor's degree (or equivalent) **and/or** has a GPA that is worse than 2.0 but better than 2.6, and has proven her/his English proficiency (if needed), the examination board will decide on admission on a case-by-case basis. In all other cases, applicants cannot be admitted to the programme.

2.8   Provisional admission letters

Trier University does not issue any provisional letters of admission. Letters of admission can only be issued once all admission requirements have been met and the examination board has decided in favour of the application. After consulting the coordination of the German Academic Exchange Service (Deutscher Akademischer Austauschdienst, DAAD), no provisional letter of admission is required for applying to their scholarships. The only documents needed are those related to the students themselves, i.e. degree certificates, CVs, etc.

3 Professional experience and online courses

Some potential applicants do not have an academic background fitting our programme (e.g. they studied a certain language, etc.). They would like to *compensate* for this by detailing their professional experience (e.g. working as a data analyst, etc.) or online courses related to our programme they took on platforms like Coursera, Udemy, etc. We are perfectly aware of the fact that people can be very successful working in fields that do not coincide with their original academic studies. Online courses are a valid tool of life-long learning as well. However, the process of becoming a student at a German university is governed by rather strict regulations. As we have no way of objectively (and comparatively) assessing your knowledge gathered in professional work or online courses, we cannot and are not allowed to take these into account when dealing with your application. **Summing up, the only thing that matters for your application (besides some other formal requirements) is your academic background and we cannot consider your professional experience and/or online courses you took.** So please refrain from giving us details about the latter.

4 Programme start

We STRONGLY recommend that you start your studies in our programme in the winter semester! The programme is structured in such a way that the introductory and propeadeutics courses are held in winter. A start in the summer semester would still be possible but quite a bit harder than the regular start in the winter semester.

5   Application

5.1   Deadlines

Our master programme is officially a **subject without admission restrictions**. There are obviously certain requirements that applicants have to meet, as outlined in Section 2. Admission restrictions per se, on the other hand, refer to certain student quota. The current application deadlines for the upcoming semesters can be found here: `https://www.uni-trier.de/index.php?id=709&L=2`. The deadlines differ depending on whether you have German university admission qualifications (*Bildungsinländer*) and on your citizenship (EU versus non-EU citizens). As detailed in the last section, non-EU citizens can only apply for the winter semester. However, EU citizens should also note the remark given in the last section.

5.2   Application portal

Trier University uses an online application portal that you can reach under `https://porta-system.uni-trier.de/qisserver/pages/zul/applicant.faces`. To see the English version of the portal if you land on a German website, please click on the flag in the upper left corner to switch the language. The respectice details will be given in the process. **Please do not send any copies of documents by mail without being asked to do so first.** The application portal will give you some information on the current status of your application as well. **Please refrain from sending e-mails asking for updates on your application status. You will be informed as soon as a decision has been reached.**

5.3   Delays after admission

Currently, once an applicant has been admitted to the programme for a certain semester, she/he can start their studies at Trier University in this or the following semester. However, we strongly encourage you to start your studies in the winter semester, as the propaedeutics courses are only taught in this semester!

5.4   uni-assist

As of 26 May 2023, Trier University does not cooperate with *Arbeits- und Servicestelle für ausländische Studienbewerbung* **(uni-assist e.V.). Therefore, if you want to apply for this programme,**

you cannot do so using their services.

6   Fees

International students have to pay an application processing fee once (as of May 26, 2023, it amounts to 70 EUR). **Please do not transfer this amount unless you have either been explicitly told to do so by the application portal and/or administrative staff. Trier University does not charge tuition fees.** However, students pay a relatively small **semester fee each semester (approx. 250 EUR)**. This fee covers public transport by bus and train in the region, discounted prices for food and drinks on campus, access to computer pools, etc. The first semester fee is a bit higher as it includes the cost of a student ID card, etc.

7   Double degrees

Ambitious students may follow a double degree programme with certain other master programmes (e.g. combining the M.Sc. Data Science and the M.Sc. Applied Statistics). This clearly leads to a longer study time and a larger workload for students. **As a rule of thumb, UP TO 50 credit points (out of the 120 credit points per programme) can be shared between programmes.** Details can be discussed with the academic student advisor.

8   Scholarships

Trier University does not provide any scholarships. Please contact potential national and international funding organisations individually. However, Trier University can assist in finding scholarships once you are a student here: `https://www.uni-trier.de/index.php?id=71314` (website only in German as of January 7, 2020).

9   Jobs

If you plan to take a job besides your studies, we **cannot assist you** in finding one.

10   Ph.D. studies

You cannot centrally apply for Ph.D. student positions as there is currently no structured Ph.D. programme in Data Science at Trier University. Open Ph.D. student positions (*Stelle als Wissenschaftliche/r Mitarbeiter/in*) are regularly posted as job vacancies on Trier University's main website (`https://www.uni-trier.de/index.php?id=12072`) or on specific chair websites. Unsolicited applications for Ph.D. student positions are very uncommon in Germany.

11 Consultation

Please first note that academic and administrative university staff has many different duties and that the counselling of potential applicants and students is usually only a small part of said duties. Additionally, the interest in this master programme is very strong, leading to many inquiries per day. Accordingly, we would like to kindly ask you to gather the necessary information using this document, the master programme's website, and the general website of Trier University (see Section 12). **Clearly, if a certain piece of information is still missing, please do not hesitate to contact us. We are happy to help you. But please make sure that the information is really not to be found in the given resources and links first.** This ensures a swifter processing of your application and reduces staff workloads. **Depending on the nature of your remaining question(s), there are two ways of communication open to you, as detailed in the following two subsections. Finally, please note that neither the academic student advisor nor the university administration staff can give you final information on admittance to the programme, as detailed in Section 2. The final decision is up to the examination board.**

11.1 Academic matters

If you have additional questions regarding the master programme itself and its academic contents, please contact the **academic student advisor** of the master programme Dr. Florian Ertz. You can reach him using the following e-mail address: datascience@uni-trier.de.

11.2 Administrative/procedural matters

If you have additional questions regarding administrative/procedural matters related to your application (i.e. non-academic matters), please contact the *Studierendensekretariat* (**Admissions Office**) of Trier University. Some typical *examples* of such questions are the following ones:

- Does my specific school count as a foreign university?

- How can I transfer my *local* credits to the ECTS?
  → This information should be available online, though.

- I have a specific question regarding Trier University's application portal. Can you help me out?

You can contact administrative staff members in the Admissions Office of Trier University who deal with international applicants using the following e-mail address: admission@uni-trier.de.

Depending on the first letter of your surname, the following staff members will deal with your inquiries:

A–G: Mrs. Kristina Filz (phone: +49 (0)651 201 3270)
H–N: Mrs. Tina Bareiß (phone: +49 (0)651 201 2715)
O–Z: Mrs. Monika Genannt (phone: +49 (0)651 201 3865)

German applicants should look for their contact person in the section *German applicants and students* on `https://www.uni-trier.de/index.php?id=6072&L=2`.

12   Some useful links

The **programme website** can be reached here:
`http://www.datascience.uni-trier.de`.

Trier University's general website can be reached here:
`https://www.uni-trier.de/index.php?id=1&L=2`.

Some **general information for international applicants** can be found here:
`https://www.uni-trier.de/index.php?id=50869&L=2`.

Information on living in Trier (including, e.g., accomodation, insurance, etc.) can be found here:
`https://www.uni-trier.de/index.php?id=67034&L=2`.

Appendix

The following are some **examples of courses that count towards the 50 credit points that have to be earned in computer sciences or mathematics or statistics** if your degree is not explicitly listed as a bullet point in Subsection 2.1. Please see also remarks in Subsection 2.1.

Computer sciences:
Algorithms & Data Structures; Automata Theory and Formal Languages; Computer Networks; Databases; Discrete Structures and Logic; Introduction to Programming; Object-oriented Programming; Theory of Computation; Software Engineering

Mathematics:
Calculus; Differential Equations; Linear Algebra; Linear Programming; Mathematical Modeling; Numerical Mathematics; Real and Complex Analysis; Stochastics

Statistics:
Descriptive Statistics; Econometrics; Empirical Economics; Empirical Sociology; Inferential Statistics; Probability Theory