

The Master's degree program in data science is a great way to become a true expert in the world of data analysis and processing. In this degree program, you will learn the latest technologies and methods to model and analyze large amounts of data and furthermore gain insights that are critical in many use cases.

In your studies, you will gain a comprehensive understanding of data analytics, artificial intelligence, machine learning and statistics. You will learn how to create complex data models and apply them to different use cases.

Data science has become a revolutionary technology that everyone seems to talk about. It is becoming a key concept for large private businesses, public institutions and research. While it is not easy to define it in a few words, data science deals with the methods and tools needed to analyze data and draw actionable conclusions from the results gained in the process. These methods and tools, which cover big data and their analysis, data modeling, machine learning, and simulation methods, are located mainly at the intersection of the subjects mathematics and computer science. Consequently, this new Master's program at Friedrich-Alexander Universität is taught jointly by lecturers from these fields. This program uses dynamic learning methodologies to ensure our students stand out in today's competitive job market. Students will enjoy a wide variety of long-lasting benefits:

The M.Sc. Data Science degree programme offers the following specialization areas:

A student has to select one specialization area as major field of study in which modules of in total 30 ECTS have to be completed. All other specialization areas form the minor field of study in which modules of in total 20 ECTS have to be completed.

Additionally, there are three core modules of in total 15 ECTS that are mandatory for all students of this degree programme. This is complemented by technical qualification modules of in total 5 ECTS.

Every student has to complete modules of in total 15 ECTS from the following application subjects:

The degree programme is finalized by a Master's seminar (5 ECTS) that should lead to writing a Master's thesis (30 ECTS) in the field of Data Science.

At the beginning of the Master's degree program, one major field of study is selected from the following subject areas as part of an individual study agreement:

The other subject areas together form the minor field of study. The courses are mainly taught in English. Every student chooses a mentor at the beginning of the course of study. The mentor gives the student advice how to design the study plan in accordance with the student's individual interests.

If you still have doubts about choosing the "Data Science" degree program, read through the following statements and consider whether they apply to you.

If these points fit you, you will definitely make the right choice with the degree program "Data Science".

FAU Erlangen-Nuremberg offers unique conditions for the degree program "Data Science". Due to the strong content-related networking of the departments of mathematics and computer science and the spatial distance of just two minutes on foot, there is a wide range of informatics and mathematics topics available, taught centrally in the degree program. Due to the great variety of subjects at FAU, you can choose your application subject from many different subject areas. This helps you to find your own individual specialization in your studies, and focus on subjects which you are particularly interested in and enjoy. In addition, the industrial environment of the Nuremberg metropolitan region creates ideal conditions for sustainable and application-oriented studies. And perhaps

you will already get to know your future employer during your studies, such as Siemens, Schaeffler or adidas.

With a Master's degree as a data scientist, many exciting fields of work open up to you in which you can profitably apply your knowledge. You work directly at the interface between man and machine. Here are some examples of industries with potential employers:

Due to the high demand for graduates in the field of data science - there is an estimated shortage of over 100,000 experts for data science in Germany alone - graduates can expect a relatively high starting salary when starting their career.

Alternatively, you can further deepen your understanding of data modeling and analysis by choosing to continue with a doctoral degree and thus even advance the current state of research, which will decisively shape the handling of the resource "data" for the coming decades.

German skills on a B1 level are highly recommended.

31.05.

30.11.

As the Master programme is in English we are asking for a certificate of upper intermediate English (level B2) are mandatory. Even if your undergraduate degree was taught in English we recommend to submit a language certificate.

For everyday life and for internships and working student jobs, we recommend solid knowledge (B1) of German, but a certificate is not necessary for the application.

Applications have to be submitted via the campus management portal campo.fau.de.

Our Student Advice and Career Service (IBZ) is the central point of contact for all questions about studying and starting a degree programme. Our Student Service Centres and subject advisors support you in planning your studies.

Degree: Master of Science

Duration of studies in semester: 4

Start of degree program: Summer semester, Winter semester

Study location: Erlangen

Number of students: 250-600

Subject group: Mathematics, Natural sciences

Special ways to study: International degree program, Part-time degree program

Teaching language: completely in English

Admission Requirements: Qualification assessment

Admission requirements (first semester): Qualification assessment

Application deadline winter semester: 31.05.

Application deadline summer semester: 30.11.

Content-related admission requirements: A completed Bachelor's degree in Mathematics, Industrial Mathematics, Mathematical Economy, Computer Science, Data Science, or Physics from FAU or another equivalent German or international degree that is not significantly different with regard to the competence profile taught in the respective degree program. Please note that your competence profile cannot be evaluated in advance, but only by the admission committee after completing the application process (described below).

A Grade Point Average (GPA) of 2.5 or better with respect to the German grading system. Candidates with an admissible degree (described above) and a GPA between 2.6 and 2.8 are invited for a short online interview in which their knowledge in calculus, linear algebra, algorithms and data structures is evaluated.

English proficiency at level B2 CEFR (vantage or upper intermediate) or six years of English classes at a German secondary school (Gymnasium).

Applicants who have completed their university entrance qualifications or

their first degree in English are not required to provide proof of proficiency in English.

German language skills for international applicants: No DSH, English (level B2, CEFR)

General language skills: As the Master programme is in English we are asking for a certificate of upper intermediate English (level B2) are mandatory. Even if your undergraduate degree was taught in English we recommend to submit a language certificate.

For everyday life and for internships and working student jobs, we recommend solid knowledge (B1) of German, but a certificate is not necessary for the application.

Details and notes: Applications have to be submitted via the campus management portal campo.fau.de.