



Deutscher Akademischer Austauschdienst
German Academic Exchange Service



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Master's degree



Master of Science in Mathematical Finance

Kiel University • Kiel

Overview

Degree	Master of Science (MSc) in Mathematical Finance
Teaching language	<ul style="list-style-type: none">English
Languages	All mandatory courses and the most relevant elective courses are taught in English. German is helpful for having an even broader range of elective courses to choose from, but it is not necessary in order to complete this degree programme.
Programme duration	4 semesters
Beginning	Winter semester
Tuition fees per semester in EUR	None
Combined Master's degree / PhD programme	No
Joint degree / double degree programme	No

Description/content

What is Mathematical Finance?

The finance industry increasingly relies on complex mathematical models and highly sophisticated mathematical tools, e.g., for derivatives trading and risk management. Mathematical Finance provides their scientific foundation on a variety of levels and deals with a wide range of theoretical and practical issues. On a general theoretical level, students study topics such as the probabilistic structure of financial markets or the choice of a consistent way to measure risk. From a more application-oriented point of view, the concrete valuation of a financial product or the quantification of risk via numerical procedures are of interest. Methodologically, the mathematical focus is on probability, statistics, numerics, optimisation, and analysis.

Master's programme Mathematical Finance

The Master's programme in Mathematical Finance leads to an MSc within two years. Combining mathematics, financial engineering, economics, and statistics, it provides all the knowledge for a successful career in finance. The Master's programme is particularly aimed at graduates with a BSc in Mathematics. Applicants with a Bachelor's degree in Physics, Engineering, or Economics are also welcome if they have a solid background in university-level mathematics. Knowledge of German is not mandatory in order to successfully complete the programme and be awarded the MSc.

Why should I study Mathematical Finance in Kiel?

The Master's programme is embedded into a very active research environment in the departments of mathematics and economics. It is distinguished by tailor-made courses with a strong emphasis on the interplay between mathematical and economic methods for financial engineering. Relying on a dedicated teaching staff from the departments of mathematics and economics, students are offered a great variety of courses from the participating disciplines. They also benefit from the links to the more economics-oriented MSc programme in Quantitative Finance.

Course Details

Course organisation www.math.uni-kiel.de/mathfinance

Course-specific, integrated German language courses No

Course-specific, integrated English language courses No

Costs / Funding

Tuition fees per semester in EUR None

Semester contribution An **enrolment fee** ("Einschreibgebühr") of 55 EUR is charged for the first enrolment at Kiel University. A **semester contribution** ("Semesterbeitrag") currently amounting to 277 EUR must be paid each semester at Kiel University. This covers free public transport ("landesweites Semesterticket") for trains and buses in Schleswig-Holstein and Hamburg, reduced lunch prices, and other benefits for students.

Costs of living The monthly costs of living in Germany are currently at least 934 EUR per month. Please note that when applying for a visa (from countries requiring a visa) and also later in Germany when extending a residence permit, financial means in the amount of the living costs for one year (11,208 EUR) must be proven.

More information can be found here: www.international.uni-kiel.de/en/advising-activities-services/service-information/visa.

Funding opportunities within the university No

Requirements / Registration

Academic admission requirements

- Bachelor's degree (180 ECTS credit points) in mathematics with grade 3.0 or better, provided that contents, extent, and scientific level are comparable to BSc in Mathematics from Kiel University, or
- Bachelor's degree (180 ECTS credit points) in another subject with grade 2.5 or better, if at least 30 credit points are in analysis, linear algebra, probability theory, and statistics, again with grade 2.5 or better (If necessary, admission can be granted conditionally under the condition that students take additional Bachelor's courses in the first two semesters of the programme.)
- In any case, be aware that the mathematical level in the Master's programme in Mathematical Finance is very high. For an alternative Master's programme with a stronger focus on economics rather than mathematics, consider the Quantitative Finance programme: www.wiso.uni-kiel.de/de/studium/master/quant-fin
- Precise prerequisites can be found in §16 of the "Fachprüfungsordnung" (presently only in German: www.studservice.uni-kiel.de/sta/fachpruefungsordnung-mathematik-und-

Language requirements

Due to the fact that the programme is taught primarily in English, the following requirements concerning the level of language command have to be met:

- good reading skills (C1 CEFR) in English, evidenced by the school certificate (minimum of four years of English, at least with grade "satisfactory") or
- TOEFL test (550 paper-based, or equivalent test result) or
- Bachelor's degree from a course of study with English as the language of instruction

Submit application to

www.uni-assist.de

Services

Accommodation

Please find information on accommodation in Kiel on the following website: www.international.uni-kiel.de/en/advising-activities-services/service-information/accomodation-in-kiel/.



Kiel University Interfaces

Kiel University (CAU) uses research, teaching and the transfer of science to address the great challenges of our time in health, environmental and cultural change, technology and energy. In doing so, it ensures peace and preserves livelihoods for future generations.

» more:
https://www.youtube.com/watch?v=WYX_XFd0ROM

Kiel University



Kiel University

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Kiel University (also referred to as the CAU) was founded in 1665. It is Schleswig-Holstein's oldest, largest and best-known university, with 27,000 students and 3,700 staff members. It is also the only full-fledged university in the state. Seven Nobel Prize winners have worked here. The CAU has been successfully taking part in the Excellence Initiative since 2006.

We use research, teaching and the transfer of science to address the great challenges of our time in health, environmental and cultural change, nutrition and energy. In doing so, we ensure peace and preserve livelihoods for future generations. We use responsible actions to make sure that scientific discoveries are transferred into all sectors of our society by interdisciplinary thought – regardless of short-lived trends – where they are incorporated into political, economic and social decisions aimed at securing peace and prosperity.

When it was founded back in 1665, the CAU had the motto “Pax Optima Rerum: peace is the most valuable asset.” This maxim is as applicable today as it was over 350 years ago. We want to follow this key idea and contribute towards creating a peaceful, fair world in which everyone lives freely and comfortably. We aim to create a world in which treating the environment with respect also enables future generations to enjoy the same benefits.

CAU's mission:

Our mission is to deliver research and teaching that contribute to peace, prosperity and maintaining a pluralistic, free society as well as address the challenges we are facing. Our strong disciplines carry out this mission. The fulfilment of this mission requires interdisciplinary collaboration and involves transdisciplinary issues. We find solutions to today's pressing problems and implement these solutions together with stakeholders from society, industry and politics.

Teaching profile:

We are dedicated to research-based teaching and learning. Therefore, the development of new teaching approaches is evolving constantly at the interfaces between research from the different scientific disciplines. Students from all over the world benefit from this: research results are quickly integrated into programme curricula and our academic staff is trained in state-of-the-art teaching methods.

Research profile:

The CAU is Schleswig-Holstein's only full-fledged university with a major focus on research. Over time, four dynamic priority research areas have systematically developed. These are based on strong disciplines interacting together – Marine Science, Life Science, Societal and Cultural Change, and Nano Surface and Interface Science. Each individual research area makes a substantial contribution towards dealing with at least one of the grand challenges of our time.

Transfer profile:

A university is not an island. It is an entity that impacts on, with and for society in a number of ways, by offering space for new ideas, passing on knowledge and values, and enabling debates about controversial subjects. Universities train specialists, produce innovative products and start-ups, help companies to develop further and assist politics by giving advice and warnings. The CAU encompasses top quality, innovative science, a sense of responsibility and the transfer of knowledge. We advocate for the university's active role in society and aim to work closely together with the community to be the driving force behind regional, national and international development by looking for and finding pioneering solutions for our most pressing issues. This is the reason why we maintain a variety of active connections with our partners in science, industry, politics and society.

[Read more about our profiles.](#)

University location

The city of Kiel is located directly on the Baltic Sea coast and is the capital of the northernmost German federal state, Schleswig-Holstein. Famous for its sailing tradition, Kiel has hosted two Olympic sailing competitions. The city's annual "Kiel Week" is the world's largest sailing event and one of the biggest cultural festivals in northern Europe. Kiel's international flair is enhanced by its port, where Scandinavian ferries dock next to cruise liners and historic ships. Those who enjoy going out will benefit from the city's lively cultural life as well as the many clubs and bars to be found between the campus and the city centre. Kiel is a strong centre of science and research. Our students benefit from studying by the sea in a city that offers short distances and a wide range of leisure facilities by the waterside. It takes less than 20 minutes to get from the lecture hall to the beach. A fresh breeze on your face and the right books on hand create a great atmosphere for learning. The social conditions for studying in Kiel are excellent. Freshmen receive a welcome payment of 100 EUR when they come to Kiel to commence their undergraduate studies. Here, they have the opportunity to live in one of the many halls of residence, which are reasonably priced and situated close to the universities. In our bicycle-friendly city, not only the universities but also other inner-city locations can be reached conveniently by bike. The new scientific generation represents the most important resource for making Kiel, the state capital, fit for the future.

www.kiel.de.

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 Course website: <https://www.math.uni-kiel.de/mathfinance>

 <https://www.facebook.com/kieluni>

 <https://twitter.com/kieluni>

 <https://www.linkedin.com/school/kieluni/>

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 <https://www.youtube.com/kieluni/>

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Disclaimer

The data used for this database was collected and analysed in good faith and with due diligence. The DAAD and the Content5 AG accept no liability for the correctness of the data contained in the "International Programmes in Germany" and "Language and Short Courses in Germany".

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