

Master of Science (MSc) Quantitative Finance

ABOUT QFIN

The internationally oriented program is designed to provide students with an excellent academic and practical education, as well as with a promising outlook for a future career in today's challenging and dynamic financial markets. Throughout the program, a well-balanced curriculum builds strong quantitative skills coupled with a solid knowledge base of the underlying theory of finance. Students acquire the necessary knowledge and

skills to use mathematical models to comprehend complex financial problems and learn how to independently apply these models in the field of economic sciences. In addition to the internationally-renowned faculty, the Vienna Graduate School of Finance (VGSF) is involved in the program as a cooperation partner. The VGSF (vgsf.ac.at) is a PhD Program funded by the Austrian Science Fund (FWF) which is aimed to prepare its graduates for the international academic job market.

PROGRAM STRUCTURE 1ST YEAR SCIENCE TRACK/INDUSTRY TRACK

1st semester

Mathematics 1	Financial Markets and Instruments	Computing	Probability	Principles of Finance	Statistics 1
5 ECTS	4 ECTS	5 ECTS	5 ECTS	4 ECTS	5 ECTS

2nd semester

Mathematics 2	Optimization	Statistics 2	Continuous Time Finance 1	Microeconomics	Econometrics
5 ECTS	5 ECTS	5 ECTS	4 ECTS	4 ECTS	5 ECTS

PROGRAM STRUCTURE 2ND YEAR SCIENCE TRACK*

3rd and 4th semester

Common courses	Required courses	Electives (choice of three)	Master Thesis
<ul style="list-style-type: none"> › Asset Pricing › Corporate Finance › Financial Econometrics › Game Theory › Master Thesis Seminar 	<ul style="list-style-type: none"> › Paper Reading & Writing › Research Seminar 1 & 2 	At least six electives are offered each year, three have to be selected. The electives offered vary regularly depending on current developments in theory and practice. The actual electives offered are announced on wu.at/qfin	
Total 20 ECTS	Total 12 ECTS	Total 12 ECTS (à 4 ECTS)	20 ECTS

PROGRAM STRUCTURE 2ND YEAR INDUSTRY TRACK*

3rd and 4th semester

Common courses	Required courses	Electives (choice of four)	Master Thesis
<ul style="list-style-type: none"> › Asset Pricing › Corporate Finance › Financial Econometrics › Game Theory › Master Thesis Seminar 	<ul style="list-style-type: none"> › Industry Lab 	At least six electives are offered each year, four have to be selected. The electives offered vary regularly depending on current developments in theory and practice. The actual electives offered are announced on wu.at/qfin	
Total 20 ECTS	Total 8 ECTS	Total 16 ECTS (à 4 ECTS)	20 ECTS

* For details see: wu.at/qfin

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CONTENT AND STRUCTURE

The curriculum ensures that students acquire not only theoretical but also practical knowledge and skills. The **first year** consists of a structured curriculum concentrating on the basics common to all specializations in quantitative finance.

In the **second year**, students choose between a **Science Track** and an **Industry Track**. The Science Track focuses on preparing students for an academic career in all major fields of finance and numerous electives. Special emphasis is on academic literature research and scientific writing. The Industry Track aims at students who are seeking a career as quants in the finance industry. Besides courses in the major fields, the program concentrates on combining financial models with computational skills.

QUALIFICATION AND CAREER PROSPECTS

The program has been designed to provide students with the advantageous combination of state-of-the-art academic qualification and a specialization in the field of finance. After graduating, students will be able to

- › understand and analyze complex financial problems using mathematical and statistical models
- › use mathematical and statistical methods and computational procedures for financial decision-making
- › handle financial market data and information systems in theory and practice
- › work in teams and participate successfully in problem-solving processes
- › write and present academic papers (Science Track)
- › develop and apply computational processes for finance-related problems (Industry Track).

Graduates are qualified to be tomorrow's experts in the increasingly complex world of finance, e.g. in asset management; credit and market risk management; treasury and trading; financial engineering; research and technical analysis and corporate finance. Graduates are also qualified to continue their qualification in a relevant PhD program.

APPLICATION CRITERIA AND ADMISSION

A rigorous selection process ensures that only the best students enroll in the program, keeping quality standards high. The admission process starts with online application. Applicants' aptitude for the Master in Quantitative Finance is judged based on the following criteria:

- › A bachelor degree or equivalent first degree in a subject relevant to the program (the program is worth at least 180 ECTS credits). Examinations must have been taken in one of the following subjects: (i) business administration, and/or economics, and/or finance, worth a minimum of 60 ECTS credits (ii) mathematics, and/or statistics, and/or computing worth a minimum of 45 ECTS credits
- › English proficiency
- › Skills and knowledge in business administration/economics/finance
- › Skills and knowledge in mathematics/statistics
- › Achievement potential

APPLICATION DEADLINE

WU employs a rolling admission allowing students to apply from the beginning of September until spring. Rolling admission for the academic year starts September 1st, with the following three priority deadlines: October 8th, January 8th and March 8th.

For further and more detailed information on the application requirements and admission process please visit the program's website at wu.at/qfin

AT A GLANCE

Duration	Four semesters, full-time degree program
Start	Every winter semester
Language of instruction	English
Credits	120 ECTS credits
Degree awarded to graduates	Master of Science (WU)
Contact	qfin@wu.ac.at