UNIVERSITÀ DEGLI STUDI FIRENZE

DISEI
Dipartimento di Scienze per l'Economia e l'Impresa

FINANCE & RISK MANAGEMENT

M.Sc Program

KEY FACTS

The MSc offers its prospective students an advanced education in finance, banking, financial accounting, insurance and quantitative risk management.

The MSc response to industry's strong demand in experts with quantitative expertise in risk management, finance, insurance and their interface

The MSc is a combination of economic theory for finance with mathematical methods (probability theory, statistics, computational methods) to quantify risk arising from, but not limited to, financial, economic and insurance applications

Strong basis in academic theory is crucial for long-term success, however, theory is symbiotic with application: the MSc mix theory and practice, academic lectures and interaction with finance practitioners and empirical sessions

KEY VALUES FOR THE STUDENT

- ✓ **Quantitative skills and data analysis**
- ✓ **Teaching style**
- ✓ **Relationship with leading companies in the financial industry**
- ✓ **English as an opportunity!**
- ✓ **International experiences**

- https://infogram.com/quant-guide-2021-top-25-table-1h7v4pwwm98xj6k

Risk.net

https://www.risk.net/quant-masters-2022

IN 2021 MSC WAS RANKED IN THE TOP 25 FINANCE QUANT MASTER IN THE WORLD

Top 25 quant finance master's programmes, ranked

Rank	University/institution	Class size	Accept. rate	Students accepting	Industry-affiliated lecturers	Employment rate	Salary (US$, adjusted)
1	Princeton University (Bendheim Center for Finance)	20	6%	61%	21%	100%	115,000
2	Baruch College, City University of New York	21	8%	73%	64%	100%	116,917
3	New York University (Courant Institute of Mathematical Sciences)	42	17%	28%	92%	95%	115,000
4	ETH Zurich/University of Zurich	70	15%	53%	84%	100%	109,661
5	University of California, Berkeley (Haas School of Business)	96	17%	80%	14%	99%	115,132
6	Columbia University (Columbia Engineering)	85	11%	70%	68%	95%	106,833
7	Imperial College London	55	12%	58%	33%	90%	115,000
8	University of Toronto	30	13%	45%	62%	95%	95,000
9	Cornell University	45	17%	53%	53%	95%	101,500
10	Carnegie Mellon University	44	19%	47%	20%	99%	108,846
11	New York University (Tandon School of Engineering)	23	33%	16%	91%	94%	90,719
12	Georgia Institute of Technology	34	15%	34%	0%	100%	94,513
13	North Carolina State University	20	21%	29%	17%	94%	89,513
14	University of California, Los Angeles (Anderson School of Management)	61	24%	28%	6%	96%	97,500
15	University of Chicago	84	27%	20%	55%	95%	101,920
16	Paris-Sorbonne University/Ecole Polytechnique	72	25%	92%	31%	77%	94,211
17	Columbia University	70	26%	35%	16%	95%	102,335
18	Paris-Diderot University	50	28%	78%	20%	95%	67,000
19	EPFL	46	33%	91%	4%	91%	104,000
20	Collegio Carlo Alberto, University of Turin	14	56%	34%	44%	84%	N/A
21	University of Washington	41	47%	32%	67%	92%	79,111
22	University of Amsterdam	25	63%	66%	14%	90%	N/A
23	Fordham University	31	59%	11%	50%	91%	89,812
24	Paris-Saclay University	32	18%	58%	47%	90%	50,000
25	University of Florence	40	24%	128%	19%	89%	42,000

Download data

IN 2022 MSC IS RANKED IN THE RANGE 25TH-50TH BEST FINANCE QUANT MASTER IN THE WORLD

Our Goal

Student will be prepared for high profile careers across a wide range of sectors: in financial institutions, insurance and reinsurance companies, banks, accounting firms, private equity firms, management consulting, data analytics companies, industry, management and academia.

Risk manager
Asset manager
Actuary
Financial analyst
Financial consultant
Investment banks
Market analyst
Trader in financial markets
Data scientist

INDUSTRIES: companies who have employed recent graduates from the MSc include

PLACEMENT

ABN AMRO	ERNST & YOUNG	KPMG
ACCENTURE	FINDOMESTIC	MARSH
ALPIQ	GENERALI	MENARINI
AVIVA	GENERAL ELECTRIC	MILLIMAN
AXPO	GOLDMAN SACHS	PROMETEIA
AZIMUT	HSBC	P&G
BCE	IFIS BANK	PWC
BHGE	IFIGEST	BANCA SELLA
BLOOMBERG	ILLIMITY	SDG GROUP
BNP PARIBAS	BANCA IMI	UNICREDIT
CAPGEMINI		WIDIBA
DELOITTE		YOOX
ENEL		

- ✓ FIRM Employement rate 82% in 1 year (benchmark Atenei area geografica = 69%; Benchmark Atenei nazionali = 74%)

- ✓ FIRM Employement rate = 90% in 3 years

ADMISSIONS

Prospective students must have:

- a I level degree in:
  Economics/Business,
  Maths,
  Computer Science,
  Engineering,
  Statistics,
  Physics

- B2 or higher level English certificate

For the a.y. 2023-24

- **Early Submission**
31/05/2023 deadline submission application for assessment evaluation
- ***Regular Submission***
31/07/2023 deadline submission application for assessment evaluation
- ***Late Submission (only for EU students)***
31/10/2023 deadline submission application (Italian NULLAOSTA) for assessment evaluation

COMMON TRACK 66 ECTS

Course	SSD	ECTS	compulsory
Quantitative Finance and Derivatives (B019184)	Secs-s/06	9	yes
Computational Finance (B019185)	Secs-s/06	6	yes
Corporate Finance (B018849)	Secs-p/09	6	yes
Corporate Governance and Financial Institutions (B019219)	Secs-p/08 Secs-p/11	12	yes
Computational Economics (B028630)	Secs-p/02	6	yes
European Capital Market Law (B026820)	Ius/05	6	yes
Financial Statement Analysis (B019215)	Secs-p/07	6	yes
Econometrics of Financial Markets (B019206)	Secs-p/05	9	yes
Quantitative Risk Management - with MATLAB modulus (B019125)	Secs-s/06	6	yes
Final examination (B019218)		18	yes

MASTER THESIS 18 ECTS

INTERNSHIP WORKSHOP 6 ECTS

Internship (B019480)	
Workshop in Corporate finance (B024220)	SECS-P/09
Workshop in Machine Learning for Finance and Insurance (B031083)	SECS-S/06
Workshop (B019482)	

In collaboration with DELOITTE

- ✓ Workshop in Financial Risk Management in collaboration with Prometeia
- ✓ CFA Research Challenge
- ✓ Workshop in financial networks

BUILDING BLOCKS 12 ECTS

Choose one from:		
Insurance and Risk models (B028050)	Secs-s/06	12
Pensions, solvency and financial reporting – with Phyton modulus (B028053)		
Portfolio choice and Bond Markets (B029675)		

BUILDING BLOCKS 9 ECTS

Choose one from:		
Merger and Acquisition Valuation (B020932)	Secs-p/09	9
Bank Management and sustainable finance	Secs-p/11	
Private Equity Risk Management and due-diligence Lab	Secs-p/09	

FREE CHOICE 9 ECTS

Optional courses – Choose one from:		
Insurance and Risk models – mod.A (B028051)	Secs-s/06	9
Pensions, solvency and financial reporting – mod.A (B028056)	Secs-s/06	
Portfolio choice and Bond Markets – mod.A (B029676)	Secs-s/06	
Merger and Acquisition Valuation (B020932)	Secs-p/09	
Bank Management and sustainable finance	Secs-p/11	
International accounting (B029665)	SECS-P/07	
Mathematics for Economics (B020834)	SECS-S/06	
Private Equity Risk Management and due-diligence Lab	Secs-p/09	
Other courses		

MAIN TRACKS

Track: CORPORATE FINANCE and BANKING

BANKING MANAGEMENT & SUSTAINABLE FINANCE
PRIVATE EQUITY RISK MANAGEMENT AND DUE-DILIGENCE LAB
INTERNATIONAL ACCOUNTING
Workshop in Corporate Finance (Deloitte)
CFA Research Challenge

Track: INSURANCE AND RISK MANAGEMENT

INSURANCE AND RISK MODELS
PENSIONS, SOLVENCY AND FINANCIAL REPORTING
Workshop in Financial Risk Management (Prometeia)

Track: QUANTITATIVE FINANCE

PORTFOLIO CHOICE &
BOND MARKETS
Workshop in Machine Learning for Finance
Workshop in Financial Risk Management (Prometeia)

Few Numbers for the MSc FiRM

	a.y. 2017-18	a.y. 2018-19	a.y. 2019-20	a.y. 2020-21	a.y. 2021-22	A.y. 2022-23
Applications (foreign students)	217 (158)	265 (200)	290 (212)	306 (215)	320 (220)	430 (340)
Enrolled students	55	40	53	56	85	52
Erasmus students	27,1%	35%	34%	-	-	-
Placement	83,3%	85% (88,5% in 3 years)	86% (88,8% in 3 years)	83,3% (94,4% in 3 years)	82% (90% in 3 years)	-
DD	5 Out/ 3 In	6 Out/ 4 In	4 Out/ 4 In *	4 Out/ 4 In *		

Greater than average employement rate of Italian Universities (74%)

SCHOLARSHIP FINANCED BY LEADING COMPANIES IN FINANCIAL INDUSTRY

- ✓ 2 scholarship financed by Prometeia
- ✓ 2 Scholarship financed by Deloitte Financial Advisory
- ✓ 2 scholarship financed by Ernst & Young

INTERNATIONALIZATION

INTERNATIONAL LECTURERS

INTERNATIONAL STUDENTS

ERASMUS PROGRAMS

DOUBLE DEGREE		
	SGH WARSAW	active
	KATOWICE	active
	ENSIIE	active
	KONSTANZ	active

INTERNSHIP AND MASTER THESIS ABROAD

DOUBLE DEGREE (DD)
CALL FOR APPLICATIONS
JAN/FEB

<u>Admission requirements</u>

Can apply for the DD:

- by the deadline of the announcement, students regularly enrolled in the first year of the Master course in Finance and Risk Management of the University of Florence;

- at the time of submitting the application, students who have already achieved the exams according to call for application (different exams depending on the different DD applied).

DOUBLE DEGREE PROGRAM FiRM SGH

DD COURSES

I YEAR AT UNIVERSITY OF FLORENCE

Quantitative Risk Management
Computational Finance
Corporate Finance
Quantitative Finance & Derivatives

Econometrics of Financial Markets
Insurance and Risk Models
International & Financial Economics
Workshop o Internship 6 ECTS

60 ECTS

II YEAR AT SGH UNIVERSITY

Business Law
Financial and Tax Law
Managerial Economics
Bank Management
Business Ethics
Advanced Financial Accounting (ACCA)
M&A of enterprises
Auditing
Financial crisis Financial Stability

Management Accounting
Monetary Policy

one among:
Risk in Insurance Company
Derivatives Markets
Market and Operational Risk Management

Thesis

60 ECTS

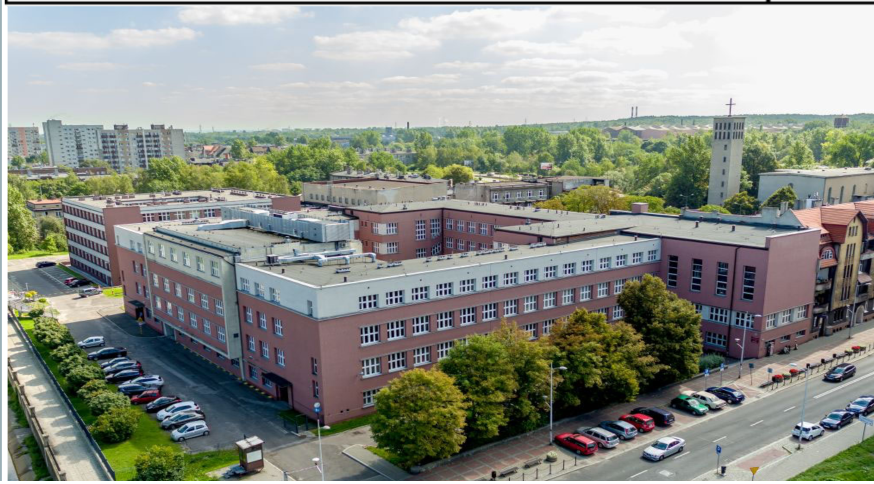
DOUBLE DEGREE PROGRAM FiRM KATOWICE

First year - UNIFI

ETCS	Exam Unifi	semester
6	**Corporate Finance**	I
6	**Computational Finance**	I
9	**Quantitative Finance & Derivatives**	I
6	**European Market Law**	I
12	**Corporate Governance and Financial Institutions**	II
9	**Econometrics of Financial Markets**	II
6	**Financial Statement Analysis**	II
6	**Workshop**	II

Second year - KATOWICE

Exam Katowice	ETCS
Module 7: Risk Management for Banks	**12**
Module 8: Asset and Liability Management and Risk Management for Insurance	**9**
Choose between: **(1) (4+2=6) Programming and database + Equity and Foreign Exchange Derivatives** **(2) Integrated Aspects of Asset Management** **(3) 6 ECTS between:** **Module 4: Risk Measurement OR** **Module 5: Asset Management**	**6**
Advanced Issues in Corporate Finance 6 ECTS **Fixed Income and Credit Derivatives 4 ECTS**	**10**
Erasmus exams 2nd semester * **(eg Global Financial Markets)**	**5**
Seminar Master Dissertation	**18**
	60
Final	**120**



DOUBLE DEGREE PROGRAM

FIRM
AT UNIFI
+
FINANCIAL ENGINEERING
AT ENSIIE- PARIS

- Ecole Nationale Superieure d'Informatique pour l'Industrie et l'Entreprise
- https://www.ensiie.fr/
- Financial engineering training

ensiie
PARIS-ÉVRY

DD COURSES

I YEAR AT UNIVERSITY OF FLORENCE

Quantitative Finance & Derivatives	9
Computational Finance	6
Corporate Finance	6
European Capital Market Law	6
International Financial Economics	6
Corporate Governance and Financial Institutions	12
Financial Statement Analysis	6
Quantitative Risk Management	6
Workshop	3

60 ECTS

II YEAR AT ENSIIE

Numerical Pricing Methods and Models Calibrations	6
Financial English	3
Computer Project	3
Choose between Stochastic Calculus 6 or Risk Management 6	6
Choose 12 ECTS between Machine Learning 5 Computer Programming 5 Finance of Insurance 4 Deep Learning/ Neural Network 3 Term Structure Models 3 Financial Markets and Actuarial Science 3 Financial Econometrics 2	12
Project Cutting Hedge	3
TOEIC training	3
Choose between Asset Management 3 Stochastic Control 3	3

Free Choice (under propaedeutic constraints): Stochastic Analysis 4 XVA Analysis and "IT quant" techniques with Python and Cuda GPU 5 Derivatives 5 Block Chain and Fintech 3 High Frequency Data and Order Books 4 Model for Corporate Finance and Insurance 3 Or other courses in the program	9

Master Thesis	12

60 ECTS

DD with University of Konstanz (MSc in International Financial Economics), Germany

I YEAR AT UKON

First year at UKON	
Modules at UKON	**ECTS**
Advanced Econometrics	10
Advanced Microeconomics I	10
Advanced Macroeconomics I	10
Risk Management	8
Seminar	6
Elective courses from the areas International Financial Economics AND Econometrics and Applied Economics*	16-20 ECTS**
Overall year 1	**at least 60**
**(only 16 ECTS will be transferred to UNIFI)	

60 ECTS

II YEAR AT UNIFI

Second year at UNIFI	
Modules at UNIFI	**ECTS**
Corporate Finance	6
Portfolio Choice and Bond Markets	12
Quantitative Finance and Derivatives	9
Financial Accounting	6
Choose one between: - Private Equity Risk Management & Due Diligence Lab - Banking Management & Sustainable Finance*	9
Master Thesis	18
Overall year 2	**60**
Year 1 + 2	**at least 120**
*students can choose either Bank Management (at UKON) or Banking Management & Sustainable Finance (at UNIFI), t both	

60 ECTS

ALUMNI NETWORK

Ex FIRM Alumni in top jobs and relevant positions in Italy and abroad, created an international network that has brought employment opportunities directly to our current students as former graduates and their employers look to hire the very best.

The MSc encourages all alums to connect with them and to keep us updated as their careers progress.

ALUMNI INAUGURAL EVENT

Simone Biondi
Rowan Dartington, London
Silvia Sanna
Deloitte Financial Advisory
Alessio Brini
PhD Scuola Normale Superiore
Fiammetta Menchetti
Phd University of Florence
Niccolò Brandini
Findomestic Spa - BNP Paribas
Cosimo Zangari
MPS capital services
Andrea Venuta
Azimut

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FIRM
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