FSE - Master of Science in Finance

On completion of this program, students will be able to:

Overarching skill

- Develop expertise in finance using financial theory, economic reasoning, and state-of-the art quantitative techniques

Knowledge and understanding acquired in the program:

- Describe the mechanics of equity, fixed income, derivatives, and alternative (hedge funds and private equity) markets
- Describe economic theories used in the process of conducting financial decisions
- Identify econometrics and programming techniques to build optimal strategies for financial and firm decision-making

Applying knowledge and understanding:

- Apply financial theory to solve a variety of problems in investment management, corporate finance, and risk management
- Build expectations about corporate and financial risks
- Use data and modelling techniques to reach financial decisions

Making judgements:

- Build recommendations based on the financial position and performance of a firm
- Justify strategies based on the financial needs, goals, or profile of a client, a corporation, a bank or a firm
- Evaluate the ethical implications of financial decision-making and financial practices

Communication skills:

- Synthetize information in verbal presentation and written reports
- Conduct discussions with actors active in the financial and corporate sector
- Share knowledge and ideas effectively in team and through team-work

Learning skills:

- Acquire skills and information in an independent manner
- Adapt to the changing business and working environment
- Choose appropriate financial research methodology to develop new and innovative solutions

UNIVERSITÉ DE NEUCHÂTEL

FACULTÉ DES SCIENCES ÉCONOMIQUES

From the academic year 2021-2022

MASTER OF SCIENCE IN FINANCE (MScF, 90 ECTS), MASTER OF SCIENCE EN FINANCE
MASTER OF SCIENCE IN FINANCE (MScF, 120 ECTS), MASTER OF SCIENCE EN FINANCE

MASTER OF SCIENCE IN FINANCE WITH DATA SCIENCE MAJOR (MScF, 120 ECTS), MASTER OF SCIENCE EN FINANCE AVEC ORIENTATION DATA SCIENCE

Code	MScF	Instructor	ECTS	Module	H/week	Grading Policy (in class)[1]	Grading Policy (remote)[1]
	Semester 1 Autumn						
5AF2003	Asset Pricing	*Kröncke T.*	6	M	4	EI+E	EI+E
5AF2009	Fixed Income	*Guidotti I.*	6	M	4	E	E
5AF2001	Financial Accounting	*Fiechter P.*	6	M	4	E	E
5AF2041	Quantitative Methods for Finance	*Kröncke T.*	3	M	2	E	E
5AF2035	Corporate Social Responsibility and Governance	*Biedermann D.*	3	M	2	E	E
5ER2001	Economic Policy	*Stuart R.*	6	E	2+2	E	E
5ST2001	Econometrics	*Starica C.*	6	E/DS-M	4	EI+E	EI+E
	Total		**24-36**		**16-24**		
	Semester 2 Spring						
5AF2008	Corporate Finance	*Salva C.*	6	M	4	EI+E	EI+E
5AF2002	Derivatives	*Weigert F.*	6	M	4	EI+E	EI+E
5AF2007	Portfolio Management	*Kröncke T.*	3	M	2	E	E
5AF2019	Financial Analysis	*Fiechter P.*	3	M	2	EI	EI
5AF2020	Valuation	*Salva C.*	3	M	2	EI+E	EI+E
5AF2029	Programming	*Simon E.*	3	M	2	E	E
5AF2039	Finance Ethics	*Fiole E.*	3	M	2	E	E
5ER2045	International Monetary System	*Siviero A. / Stuart R.*	3	E	2	E	E
5MI2012	Computational Thinking	*Holzer A.*	3	DS-M	1 week	EI	EI
	Total		**27-33**		**16-20**		

Modalités d'inscription et conditions de réussite :
Règlement d'études et d'examens des Masters of Science en sciences économiques, du 6 mai 2019, état au 1er septembre 2019.
www.unine.ch/mscf

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From the academic year 2021-2022

Code	MScF	Instructor	ECTS	Module	H/week	Grading Policy (in class)[1]	Grading Policy (remote)[1]
	Semester 3 Autumn						
5AF2028	Equity Research Contest*	*Salva C.*	6	M	4	EI	EI
5AF2030	Alternative Investments	*Weigert F.*	6	M/DS-E	4	EI+E	EI+E
5AF2026	Risk Management	*Weigert F.*	3	E	2	EI+E	EI+E
5AF2023	Portfolio Optimization	*Sonney F.*	3	E	2	EI	EI
5AF2021	Research in Financial Analysis	*Kröncke T.*	6	E	4	EI+E	EI+E
5ST2001	Econometrics	*Starica C.*	6	E/DS-M	4	EI+E	EI+E
5MI1005	Data Science for Business	*Cotofrei P.*	6	E/DS-M	4	EI	EI
5MI2017	Data Management	*Ciorascu I.*	6	E/DS-M	4	EI+E	EI+E
5ER2001	Economic Policy	*Stuart R.*	6	E	2+2	E	E
5AF2036	Field Project in Financial Analysis		6	E		EI	EI
	Total		**12-54**		**8-32**		
	Semester 4 Spring (Research Option)						
5AF2044 or 5AF2045	Master thesis or internship thesis		30				
	Semester 4 Spring (Data Science Option)						
5MI2018	Machine Learning	*Ciorascu I.*	6	DS-M	4	EI+E	EI+E
5MI2003	Business Analytics	*Cotofrei P.*	6	DS-M	4	EI	EI
5MI2012	Computational Thinking	*Holzer A.*	3	DS-M	1 week	EI	EI
5ER2020	Applied Econometrics	*Lanz B.*	6	E	4	EI+E	EI+O
5AF2038	Field Project in Finance and Data Science		9	E		EI	EI
	Total		**15-30**		**8-12**		
	Grand Total		**90-120**				

** This course operates on the basis of the Principles governing the running of FSE courses involving companies/institutions outside the Faculty.*

Modalités d'inscription et conditions de réussite :
Règlement d'études et d'examens des Masters of Science en sciences économiques, du 6 mai 2019, état au 1er septembre 2019.
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Master in finance (90 ECTS)

- *Students in the Master in finance (90 ECTS) the need to earn 90 ECTS at least, 63 ECTS in mandatory (M) and 27 ECTS in elective (E) courses.*

In addition :

- *In place of the electives (E), a maximum of 18 ECTS can be chosen in other master programmes at the Faculty of Economics and Business and/or MScF programmes in other Swiss universities. Approval of the Director of the MScF is mandatory. In addition,*
  - *6 elective ECTS can be replaced by an internship of at least 6 weeks including the writing of a report supervised by a professor of the Faculty of Economics and Business. Approval of the Director of the MScF is mandatory*
  - *6 elective ECTS can be replaced by passing the CFA level I exam, or the GARP/FRM part I exam. Only one of the two exams can count.*
  - *3 elective ECTS can be replaced for participating in the "CFA Institute Research Challenge Final".*

Research Option: Master in finance (120 ECTS)

- *Students interested in a research career have the option to complete a research thesis to earn 30 ECTS and bring the total amount of ECTS to the number of 120.*

Data Science Option: Master in finance with Data Science Major (120 ECTS)

- *Students who register for the Master in finance with Data Science Major (120 ECTS) need to earn 120 ECTS at least, 90 ECTS in mandatory (M or DS-M) and 30 ECTS in elective (E or DS-E) courses.*
  - *The course Alternative Investments (6 ECTS, DS-E) is automatically converted to Data Science Track courses and counts as an elective course.*
  - *The courses Data Science for Business (6 ECTS, DS-M), Data Management (6 ECTS, DS-M) and Econometrics (6 ECTS, DS-M) are automatically converted to Data Science Track courses and count as mandatory courses.*
- **Computational Thinking (Data Science Option) is a one-week workshop organised the week before the beginning of the fourth semester (spring). The course Computational Thinking can be anticipated in the second semester by students who plan to complete the "Data Science Option".*

Semaine de lecture:

- *A reading week is introduced in week 45 of the autumn semester. The reading week enables students, at mid-semester, to detect possible gaps in their understanding of the subject, the acquisition of knowledge and the learning of methods. The reading week is an integral part of the programme and might be accompanied by mock, or mid-term, exams in some courses.*

M : mandatory, E : elective, DS-M : mandatory for Data Science option, DS-E : elective for Data Science option.

E: exam during the exam session at the end of the semester; EI: evaluation organized during the semester.
Retake exam after 1 failure or a justified absence: written exam during the September session or the exam session at the end of the next semester the course is offered.
[1]In the case of a re-take exam, the evaluation is repeated in the form of a written examination (E) for all 1st attempts of type E, EI +E, O or EI+O.
[1]In the case of a re-take exam, the evaluation repeated in the form of an individual written assignment (EI) for all 1st attempts of type EI.

The detailed terms of evaluation and duration of exams are specified in the course description.