

FACULTÉ DES SCIENCES ÉCONOMIQUES

MASTER OF SCIENCE IN FINANCE (MSCF, 90 ECTS), MASTER OF SCIENCE EN FINANCE MASTER OF SCIENCE IN FINANCE (MSCF, 120 ECTS), MASTER OF SCIENCE IN FINANCE WITH DATA SCIENCE MAJOR (MSCF, 120 ECTS), MASTER OF SCIENCE EN FINANCE AVEC ORIENTATION DATA SCIENCE

MScF	Instructor	ECTS	Module	H/week	Grading Policy
Semester 1 Autumn Asset Pricing Fixed Income Financial Accounting Quantitative Methods for Finance Corporate Social Responsibility and Governance Economic Policy Econometrics Total	Kröncke T. Guidotti I. Renders A. Kröncke T. Biedermann D. Stuart R. Starica C.	6 6 6 3 3 6 6 24-36	M M M M E E/DS-M	4 4 4 2 2 2 2+2 4 16-24	EI+E E E E E E EI+E
Semester 2 Spring Corporate Finance Derivatives Portfolio Management Financial Analysis Valuation Programming Finance Ethics International Monetary System Monetary Policy in a New Era Computational Thinking Bayesian Econometrics with Applications in Economics and Finance Total	Salva C. Weigert F. Kröncke T. Fiechter P. Salva C. Simon E. Fiole E. Siviero A. / Stuart R. Canetg F. Holzer A.	6 6 3 3 3 3 3 3 3 3 3 2 4-39	M M M M E E E DS-M	4 4 2 2 2 2 2 2 2 1 week 1 week 16-26	EI+E EI+E EI+E E E E EI EI
Semester 3 Autumn  Equity Research Contest Alternative Investments Risk Management Portfolio Optimization Research in Financial Analysis Econometrics Data Science for Business Data Management Economic Policy Field Project in Financial Analysis Total	Salva C. Weigert F. Weigert F. Sonney F. Kröncke T. Starica C. Cotofrei P. Simon E. Stuart R.	6 6 3 3 6 6 6 6 6 6 12-54	M M/DS-E E E E E/DS-M E/DS-M E/DS-M E	4 4 2 2 4 4 4 4 2+2	EI EI+E EI+E EI+E EI+E EI+E EI+E EI+E
Semester 4 Spring (Research Option) Research Thesis		30			
Semester 4 Spring (Data Science Option)  Machine Learning Business Analytics Computational Thinking Applied Econometrics Bayesian Econometrics with Applications in Economics and Finance Field Project in Finance and Data Science Total Grand Total	Ciorascu I. Cotofrei P. Holzer A. Lanz B. Huber F.	6 6 3 6 3 9 <b>15-33</b> <b>90-120</b>	DS-M DS-M DS-M E E	4 4 1 week 4 1 week	EI+E EI EI EI+E EI



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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, 60 ECTS in mandatory (M) and 30 ECTS in elective (E) courses.
- 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. In addition, 6 elective ECTS can be replaced by passing the CFA level I exam.

## 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, 87 ECTS in mandatory (M or DS-M) and 33 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.

## Interim arrangements:

 Students who have started in the academic year 2019-2020 can validate credits for the courses Quantitative Methods for Finance (3 ECTS) and Corporate Social Responsibility and Governance (3 ECTS) in the <u>third</u> semester as <u>elective</u> (E) 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: 2h written exam during the exam session at the end of the semester or the September session.

Retake exam after a justified absence: 2h written exam during the exam session at the end of the semester or the September session or evaluation organized during the semester. The detailed terms of evaluation are specified in the course description.