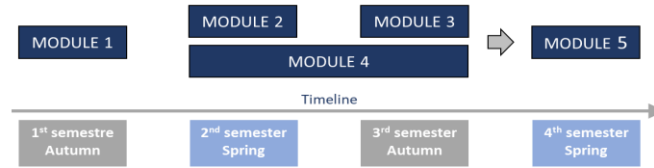


HEC Lausanne
MSc Actuarial Science
 120 credits ECTS
 Study Plan 2023-2024

Structure of the Master



Courses	Professors	Semesters				ECTS	Language	Types of Evaluation	Exam duration
		1 st sem Autumn	2 nd sem Spring	3 rd sem Autumn	4 th sem Spring				
MODULE 1 PROPEDEUTIC: Average set (≥ 4.0) of compulsory courses - 30 credits ECTS									
Computational Tools for Actuaries	Zucchini G.	●				6	E	O	20
Insurance Economics	Wagner J.	●				3	E	VCN + E	120
Mathematics of Compound Interest	Tamraz M.	●				3	E	VCN + E	120
Principles of Finance	Roger T.	●				6	E	E	150
Probability and Stochastic Processes	Albrecher H.	●				6	E	VCN + E	180
Quantitative Methods for Actuaries	Loisel S.	●				6	E	VCN + E	180
MODULE 2 GENERAL: Average set (≥ 4.0) of compulsory courses - 24 credits ECTS									
Life Contingencies I	Cani A.		●			6	E	VCN + E	180
Loss Models	Hashorva E.		●			6	E	E	120
Ratemaking and Claims Reserving	Günter S.		●			3	E	E	120
Risk Theory	Albrecher H.		●			6	E	VCN + E	180
Social Insurance	Arnold S.		●			3	E	VCN + E	120
MODULE 3 GENERAL: Average set (≥ 4.0) of compulsory courses - 24 credits ECTS									
Asset and Liability Management for Actuaries	Wagner J.			●		6	E	VCN + E	180
Credibility Theory	Smith N.			●		3	E	E	120
Dependence Modelling	Hashorva E.			●		6	E	E	120
Insurance Analytics	Hieber P.			●		3	E	E	120
Life Contingencies II	Hieber P.			●		6	E	VCN + E	180
MODULE 4 OPTIONAL: Optional courses - 12 credits ECTS (6 credits per semester)									
Advanced Programming	Scheidegger S.		●			6	E	VCN	N/A
Time Series	Hashorva E.		●			3	E	E	120
Simulation Methods in Finance and Insurance	Tamraz M.		●			3	E	VCN	N/A
Actuarial Data Science	Vacat			●		3	E	VCN	N/A
Blockchain and Crypto Economy	Ivliev S.			●		3	E	VCN	N/A
Financial Accounting	Markarian G.			●		6	E	ENEP	120
Investments	Goyal A.			●		6	E	E	120
Mathématiques des caisses de pension	Arnold S.			●		6	F	VCN + E	180
Prévoyance professionnelle	Monnard Séchaud C.			●		3	F	O	15
MODULE 5: Master thesis (compulsory) - 30 credits ECTS									
Thesis (Research or Internship)	Choose your thesis director				●	30	E/F	M	N/A

Thesis Information

1. Internships must be full time or at least 80% for a minimum of 12 weeks.
2. Only students having acquired 90 ECTS credits from Modules 1, 2, 3 and 4 are allowed to present their thesis.
3. [Research thesis guidelines here.](#)
4. [Internship thesis guidelines here.](#)

Legend:

ECTS: Credits

Lang: Teaching language (F: French; E: English)

Eval: Type of Evaluation (E: Examen écrit; ENEP: Examen numérique en présentiel; O: Examen oral; VCN: Validation continue notée; M: Mémoire; VCN+E: Validation continue notée et examen écrit; VCN+O: Validation continue notée et examen oral; VCN+ENEP: Validation continue notée et examen numérique en présentiel)

Duration of the exam: per minute (N/A: non applicable; TBD: to be determined)

General Information:

1. [Read the 2023-2024 Study Regulation.](#)
2. Courses are delivered face-to-face on campus
3. The pandemic has shown us that circumstances beyond our control may require us to make the following adjustments to study plans during the academic year:
 - possibility to switch from one teaching mode to another (face-to-face <-> distance learning, synchronous <-> asynchronous, switch to co-modal teaching where it was not foreseen at the beginning).
 - adaptation of assessment without leading to derogations from the study regulations (oral <-> written, examination <-> validation, individual work <-> group work, practical work <-> theoretical work, in-person assessment <-> online assessment, etc.)
 - alternative or shifted modalities for courses, internships, practical work, fieldwork and camps that could not take place or courses that could no longer take place in the form initially planned.

Students are invited to consult regularly the study plans, syllabi and their email.