Possible Tracks within Elective Courses - for Orientation

The table below should be understood as an indication only to help MScQF students to set individual focus points in their curriculum.

The table contains examples of elective courses in the Master of Science UZH ETH in Quantitative Finance.

The list is not exhaustive, courses might change from term to term, and new courses might be developed / offered and might not yet be in the table. The table will be updated periodically. If you find a particular course, which is part of the MScQF curriculum and not in the list, and are not sure where it would belong, please contact chantal.spale@bf.uzh.ch.

Abbreviations:

- MF: course from area "Mathematical Methods in Finance"
- FIN: course from area "Finance" (formerly area EF, before 31 July 2022)

Please look at the table below

FALL SEMESTER

Track 1 Machine Learning, AI and Data in Finance	Track 2 Uncertainty and Risk Management	Track 3 Mathematical Topics in Finance	Track 4 Banking and Corporate Finance	Track 5 Insurance	Track 6 Portfolio Management and Asset Pricing
Fall Semester	*Fall Semester*	*Fall Semester*	*Fall Semester*	*Fall Semester*	*Fall Semester*
Data Analytics in Organizations and Business (ETH, FIN, Fall)	Asset Liability Management and Treasury Risks (ETH, FIN, Fall)	Continuous Time Quantitative Finance (UZH, MF, Fall) (until 31 July 2022 Core)	Bank Treasury Management (UZH, FIN, Fall)	Life Insurance Mathematics (ETH, MF, Fall)	Asset Management Applied Portfolio Theory (UZH, EF, Fall)
Digital Tools for Finance (UZH, FIN, Fall)	Counterparty Credit Risk Management (UZH, FIN, Fall)	Mathematical Finance (ETH, MF, Fall)	CFA Investment Challenge (UZH, FIN, Fall)	Microeconomics of Insurance (UZH, FIN, Fall)	
Finance and Machine Learning (UZH, MF, Fall)	Matlab for Portfolio Management (UZH, FIN, Fall)	Numerical Analysis of Stochastic Ordinary Differential Equations (ETH, MF, Fall)	Corporate Finance (PhD Course) (UZH, FIN, Fall)	Reinsurance Analytics (ETH, MF, Fall)	
			Environmental and financial sustainability (UZH, FIN, Fall)		
			Seminar Corporate Governance (UZH, FIN, Fall)		
			Takeover, Restructuring, and Corporate Governance (UZH, FIN, Fall)		

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Fall Semester	*Fall Semester*	*Fall Semester*	*Fall Semester*	*Fall Semester*	*Fall Semester*
Courses in 2 tracks	*Courses in 2 tracks*	*Courses in 2 tracks*	*Courses in 2 tracks*	*Courses in 2 tracks*	*Courses in 2 tracks*
Advanced Business Valuation (UZH, FIN, Fall)			Advanced Business Valuation (UZH, FIN, Fall)		
Advanced Statistics (UZH, FIN, Fall)		Advanced Statistics (UZH, FIN, Fall)			
Applied Financial Analytics for Strategic Decisions and Value Creation (UZH, FIN, Fall)			Applied Financial Analytics for Strategic Decisions and Value Creation (UZH, FIN, Fall)		
			Computational Economics and Finance (UZH, MF, Fall)		Computational Economics and Finance (UZH, MF, Fall)
				Financial Risk Management (ETH, MF, Fall)	Financial Risk Management (ETH, MF, Fall)
Linear Models and Time-Series Analysis: Regression, ARMA, and GARCH (UZH, MF, Fall)		Linear Models and Time-Series Analysis: Regression, ARMA, and GARCH (UZH, MF, Fall)			

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Fall Semester	*Fall Semester*	*Fall Semester*	*Fall Semester*	*Fall Semester*	*Fall Semester*
Courses in 2 tracks	*Courses in 2 tracks*	*Courses in 2 tracks*	*Courses in 2 tracks*	*Courses in 2 tracks*	*Courses in 2 tracks*
		Statistical Aspects of Risk Measures (UZH, MF, Fall)		Statistical Aspects of Risk Measures (UZH, MF, Fall)	
	Stress Testing of Banks (UZH, FIN, Fall)		Stress Testing of Banks (UZH, FIN, Fall)		
	The Economy of Risk in Insurance (UZH, MF, Fall)			The Economy of Risk in Insurance (UZH, MF, Fall)	

SPRING SEMESTER

Track 1 Machine Learning, AI and Data in Finance	Track 2 Uncertainty and Risk Management	Track 3 Mathematical Topics in Finance	Track 4 Banking and Corporate Finance	Track 5 Insurance	Track 6 Portfolio Management and Asset Pricing
Spring Semester	*Spring Semester*	*Spring Semester*	*Spring Semester*	*Spring Semester*	*Spring Semester*
Introduction to Machine Learning (ETH, MF, Spring)	Introduction to Operations Research: Stochastic Models (UZH, MF, Spring)	Rough Path Theory (ETH, MF, Spring)	Advanced Valuation (UZH, FIN, Spring)	Microeconomics of Insurance II (UZH, FIN, Spring)	Economic Theory of Financial Markets (ETH, FIN, Spring)
Machine Learning in Finance (ETH, MF, Spring)	Introduction to Risk Modelling (ETH, MF, Spring)		Advanced Corporate Finance II (UZH, FIN, Spring)	Stochastic Loss Reserving Methods (ETH, MF, Spring)	Investments – Selected Quantitative Tools (UZH, MF, Spring)
	Stochastic Systems (UZH, MF, Spring)		Corporate Risk and Resilience (UZH, FIN, Spring)		Portfolio Management Implementation II (UZH, FIN, Spring)
	The Risk and Finance Lab (UZH, FIN, Spring)				Portfolio Management Theory 2 (UZH, FIN, Spring)
			Theory of Financial Intermediation and Banking (UZH, Fin, Spring)		

Track 1 **Machine Learning, AI and Data in Finance**	Track 2 **Uncertainty and Risk Management**	Track 3 **Mathematical Topics in Finance**	Track 4 **Banking and Corporate Finance**	Track 5 **Insurance**	Track 6 **Portfolio Management and Asset Pricing**
Spring Semester	*Spring Semester*	*Spring Semester*	*Spring Semester*	*Spring Semester*	*Spring Semester*
Courses in 2 tracks	*Courses in 2 tracks*	*Courses in 2 tracks*	*Courses in 2 tracks*	*Courses in 2 tracks*	*Courses in 2 tracks*
		Applied Quantitative Finance (UZH, FIN, Spring)			Applied Quantitative Finance (UZH, FIN, Spring)
		Capital Adequacy and Risk Measures (UZH, MF, Spring)		Capital Adequacy and Risk Measures (UZH, MF, Spring)	
Data Analytics for Non-Life Insurance Pricing (ETH, MF, Spring)				Data Analytics for Non-Life Insurance Pricing (ETH, MF, Spring)	
Crunchpoints in seriously large banking/payment-IT-projects (UZH, FIN, Spring)			Crunchpoints in seriously large banking/payment-IT-projects (UZH, FIN, Spring)		
			Sentiment Analytics (UZH, FIN, Spring)		Sentiment Analytics (UZH, FIN, Spring)