MS in Financial Engineering

- For additional program information see the Weissman School website

The Baruch College Financial Engineering MS Program is a professional Master's Program that graduates competitive, high-quality individuals who successfully pursue careers in quantitative finance.

The Master of Science in Financial Engineering (MFE) requires the completion of 36 credits, including seven 3-credit required courses. The remaining 15 credits are to be completed from elective courses. Students entering the program with exceptional mathematical or financial skills may be permitted to replace one or more of the required courses with additional electives.

The curriculum of the MFE Program is designed to provide students with the background required for modeling and solving problems that arise in the financial services industry across various markets and asset classes. All courses are offered in the evening to accommodate students with work commitments.

Courses in Specialization (36 credits)		
Required Courses (21 credits)		
MTH 9814	A Quantitative Introduction to Pricing Financial Instruments	3 credits
MTH 9815	Software Engineering in Finance	3 credits
MTH 9821	Numerical Methods for Finance I	3 credits
MTH 9831	Probability and Stochastic Processes for Finance I	3 credits
MTH 9852	Numerical Methods for Finance II	3 credits
MTH 9862	Probability and Stochastic Processes for Finance II	3 credits
MTH 9903	Capstone Project and Presentation	3 credits
Elective Courses (15 credits)		
Choose courses from the following list:		
MTH 9841	Statistics for Finance	3 credits
MTH 9842	Linear and Quadratic Optimization Techniques	1.5 credits
MTH 9845	Market and Credit Risk Management	3 credits
MTH 9848	Elements of Structured Finance	3 credits
MTH 9849	Deal Theory and Structured Analysis	3 credits
MTH 9863	Volatility Filtering and Estimation	1.5 credits
MTH 9865	Commodities and Futures Trading	1.5 credits
MTH 9867	Time Series Analysis and Algorithmic Trading	3 credits
MTH 9868	Advanced Risk and Portfolio Management	3 credits
MTH 9871	Advanced Computational Methods in Finance	3 credits
MTH 9873	Interest Rate Models and Interest Rate Derivatives	3 credits

MTH 9875	The Volatility Surface	3 credits
MTH 9879	Market Microstructure Models	3 credits
MTH 9881	Current Topics in Mathematical Finance	3 credits
MTH 9882	Fixed Income Risk Management	1.5 credits
MTH 9883	Structured Security Valuation in the Primary Market	1.5 credits
MTH 9884	Machine Learning	1.5 credits
MTH 9891	Introduction to Applied Financial Econometrics	1.5 credits
MTH 9893	Time Series Analysis	1.5 credits
MTH 9894	Algorithmic Trading	1.5 credits
MTH 9895	Big Data in Finance	1.5 credits
MTH 9896	Behavioral Finance	1.5 credits
ECO 82100	(Term I) Econometrics I	3 credits
ECO 82100	(Term II) Financial Econometrics	3 credits
FIN 9770	Financial Markets and Institutions	3 credits
FIN 9782	Futures and Forward Markets	3 credits
FIN 9783	Investment Analysis	3 credits
FIN 9786	International Financial Markets	3 credits
FIN 9790	Seminar in Finance	3 credits
FIN 9793	Advanced Investment Analysis	3 credits
FIN 9797	Options Markets	3 credits
STA 9700	Applied Regression Analysis	3 credits
STA 9701	Time Series: Forecasting and Statistical Modeling	3 credits