

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) | | |
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| Required Courses (21 credits) | | |
| MTH 9814 | A Quantitative Introduction to Pricing Financial Instruments | 3 |
| MTH 9815 | Software Engineering in Finance | 3 |
| MTH 9821 | Numerical Methods for Finance I | 3 |
| MTH 9831 | Probability and Stochastic Processes for Finance I | 3 |
| MTH 9852 | Numerical Methods for Finance II | 3 |
| MTH 9862 | Probability and Stochastic Processes for Finance II | 3 |
| MTH 9903 | Capstone Project and Presentation | 3 |
| Elective Courses (15 credits) | | |
| Choose courses from the following list: | | |
| MTH 9841 | Statistics for Finance | 3 |
| MTH 9842 | Linear and Quadratic Optimization Techniques | 1.5 |
| MTH 9845 | Market and Credit Risk Management | 3 |
| MTH 9848 | Elements of Structured Finance | 3 |
| MTH 9849 | Deal Theory and Structured Analysis | 3 |
| MTH 9863 | Volatility Filtering and Estimation | 1.5 |
| MTH 9865 | Commodities and Futures Trading | 1.5 |
| MTH 9867 | Time Series Analysis and Algorithmic Trading | 3 |
| MTH 9868 | Advanced Risk and Portfolio Management | 3 |
| MTH 9871 | Advanced Computational Methods in Finance | 3 |
| MTH 9873 | Interest Rate Models and Interest Rate Derivatives | 3 |
| MTH 9875 | The Volatility Surface | 3 |
| MTH 9879 | Market Microstructure Models | 3 |
| MTH 9881 | Current Topics in Mathematical Finance | 3 |
| MTH 9882 | Fixed Income Risk Management | 1.5 |
| MTH 9883 | Structured Security Valuation in the Primary Market | 1.5 |
| MTH 9884 | Machine Learning | 1.5 |
| MTH 9891 | Introduction to Applied Financial Econometrics | 1.5 |
| MTH 9893 | Time Series Analysis | 1.5 |
| MTH 9894 | Algorithmic Trading | 1.5 |
| MTH 9895 | Big Data in Finance | 1.5 |
| MTH 9896 | Behavioral Finance | 1.5 |

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| ECO 82100 | (Term I) Econometrics I | 3 |
| ECO 82100 | (Term II) Financial Econometrics | 3 |
| FIN 9770 | Financial Markets and Institutions | 3 |
| FIN 9782 | Futures and Forward Markets | 3 |
| FIN 9783 | Investment Analysis | 3 |
| FIN 9786 | International Financial Markets | 3 |
| FIN 9790 | Seminar in Finance | 3 |
| FIN 9793 | Advanced Investment Analysis | 3 |
| FIN 9797 | Options Markets | 3 |
| STA 9700 | Applied Regression Analysis | 3 |
| STA 9701 | Time Series: Forecasting and Statistical Modeling | 3 |