

FINANCE: QUANTITATIVE FINANCE, MS

for the Master of Science in Finance, Quantitative Finance concentration

The Quantitative Finance Concentration is open to students enrolled in: Finance, MS.

The Quantitative Finance Concentration is designed to develop graduates who understand:

The fundamental characteristics of exchange traded and over-the-counter financial derivatives; understand the mathematical theorems and numerical algorithms required to value these financial securities; and, be able to assess the riskiness of these positions and be able to design trading strategies that include financial derivatives.

This concentration will not only provide a strong technical knowledge of data analytics topics, but also provide students multiple opportunities to apply this knowledge via valuation and analysis of real world products.

Admission

Candidates will apply to the Department of Finance for admission into the concentration. Students wishing to be admitted to the concentration should consult with their program advisor before applying.

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2. Ability to perform quantitative analysis and use mathematical and statistical analysis in finance problems.
3. Students should be able to work effectively on team projects with people from a variety of professional and cultural backgrounds.
4. Students will demonstrate effective oral and written communication skills.

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Department of Finance (<https://giesbusiness.illinois.edu/msf/>)

Chair of Department: Louis Chan

Director of Graduate Studies: Martin Widdicks (MSF)

Finance Department website

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Gies College of Business

Gies College of Business website (<https://giesbusiness.illinois.edu/>)

Admissions

Graduate College Admissions & Requirements (<https://grad.illinois.edu/admissions/apply/>)

Code Required	Title	Hours
FIN 512	Financial Derivatives	4
FIN 513	Advanced Financial Derivatives	4
Choose up to four credit hours from the following:		
FIN 514	Valuation of Complex Derivative Securities	2
FIN 515	Fixed Income Portfolios	2 or 4
FIN 516	Term Structure Models	2
FIN 517	Advanced Term Structure Models	2
FIN 537	Financial Risk Management	4
FIN 554	Algorithmic Trading Systems Design and Testing	4
FIN 556	Algorithmic Market Microstructure	4
Total Hours		12

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As the concentration will be part of the Masters in Finance, the learning objectives are closely linked to the overall learning objectives for the program.

These relevant objectives for this concentration would be:

1. Students should be able to apply core knowledge to new and unfamiliar circumstances and unpredictable environments.