

FINANCIAL ANALYTICS

The Master of Science in Financial Analytics prepares students for success in the financial professions by focusing on analytical and algorithmic techniques in financial analysis. The program is open to students with strong quantitative and analytical skills, regardless of their undergraduate major.

Students may enroll on a full- or part-time basis, but course availability is greatest during the fall and winter semesters. The program usually can be completed within three semesters of full-time study. Most students begin the program in Fall. Admission in January and May may also be possible.

Goal 1: Students will demonstrate analytical skills in solving problems.

Objectives: MS Financial Analytics students will have the ability to:

1. Apply Quantitative and Analytical knowledge in financial analysis.
2. Evaluate Banking, Insurance, and Fintech's role in the modern financial system.
3. Apply Python programming to financial data processing and modeling of financial data.
4. Manage corporate and portfolio risk exposures.
5. Value assets and financial securities using quantitative tools.
6. Evaluate managerial decisions concerning financial policy.
7. Apply Quantitative portfolio techniques to construct and manage the client's portfolio.

Goal 2: Students will be persuasive and/or informative communicators.

Objective 1: MS Financial Analytics students will be able to convey finance knowledge through data visualization and effective communication.

MS in Finance Admission Prerequisites

- Mathematics admission prerequisite. Calculus is not required for admission to the MS in Finance. However, applicants who wish to pursue careers in investments or risk management, as well as those who wish to earn Chartered Financial Analysts (CFA) credentials, are strongly recommended to satisfy the Mathematics admission requirement with a college level Calculus course.

Accelerated MS in Financial Analytics 4+1 Option and Requirements for Admission and Continuation

The Finance 4+1 option at the University of Michigan-Dearborn offers students an accelerated path to earn both the Bachelor of Business Administration (BBA) in Finance or Bachelor of Arts (AB)/Bachelor of Science (BS) in Economics and the Master of Science (MS) in Financial Analytics (MSFA). The 4+1 option is available to BBA Finance major and Economics major AB (BA)/BS students. This program allows students to double-count up to five master's-level listed courses toward their undergraduate degree. Courses eligible to be double counted include FIN 581 (for FIN 402), FIN 651 (for FIN 407), FIN 652 (for FIN 447), FIN 655 (for IB 441), FIN 657 (for FIN 457), and ACC 608 (for ACC 358).

Eligible students must meet the following criteria:

- Currently enrolled at UM-Dearborn as a BBA student with a declared Finance major, or a BA or BS student with a declared Economics major
- Have a cumulative GPA of at least 3.2 at UM-Dearborn
- For BBA students, have completed BE 401 and FIN 401, and have a GPA of at least 3.0 in BE and Finance courses at UM-Dearborn.
- For BA/BS students, have completed ECON 302/BE 401, ECON 305/DS 302 and FIN 401 with a B or better at UM-Dearborn, and ACC 298 with a B or better.

Students must complete the graduate level courses with a grade of B or better to maintain eligibility in the 4+1 program.

Applying to the 4+1/Accelerated option is a two-stage process coordinated with both your undergraduate and graduate advising teams. For detailed instructions and application links, please visit the central 4+1 programs webpage (<https://umdearborn.edu/academics/program/41-programs/>).

MS in Financial Analytics Curriculum

Code	Title	Credit Hours
Foundation Courses ¹		
Required:		0-12
ACC 505	Devel & Interp Financial Info ⁵	
BE 530	Econ Analysis: Firm & Consumer ⁵	
DS 520	Applied Statistical Modeling ^{3,5}	
or BA 510	Introduction to Business Analytics	
FIN 531	Fin Fundament & Value Creation ⁵	
Core Courses		
Required:		21
BA 530	Programming and Data Structures with Python	
FIN 651	Investment Procedures, Analysis & Management ⁴	
FIN 652	Derivatives & Risk Management ⁴	
FIN 653	Asset Pricing and Portfolio Management	
FIN 654	Banking, Insurance, and Fintech	
FIN 656	Fixed Income Securities	
FIN 658	Algorithmic Finance Using Python	
Electives		
Select one to three courses (3-9 credits). Must include at least one FIN course:		3-9
ACC 608	Financial Statement Analysis ⁴	
DS 630	Applied Forecasting with Python	
DS 633	Machine Learning for Business Intelligence	
FIN 581	Advanced Corporate Finance ⁴	
FIN 650	Corporate Valuation & Strategy	
FIN 655	International Financial Mgt ⁴	
FIN 657	Investment Fund Management ⁴	
BA 682	Experiential Project ²	
BA 690	Graduate Research ²	
BA 691	Graduate Seminar ²	
BI 500	Business Internship ²	
Total Credit Hours		30-36

¹ Previous equivalent undergraduate or graduate coursework may qualify students to waive any of the foundation courses. Students may

complete the MS Financial Analytics in as little as 30 credit hours if they have completed at least two equivalent foundation courses, with a converted grade of "B" or better, before admission. Otherwise, students complete remaining required foundation courses in the program for a total of 36 credit hours.

² A maximum of 3 credit hours on any combination of BA 682, BA 690, BA 691, and BI 500. Requires Department of Accounting & Finance Chair approval.

³ If an admitted student has not already fulfilled this requirement, he/she/they is/are recommended to take DS 520.

⁴ Simultaneous credit toward the BBA Finance major or BA/BS Economics program, and MSFA for students admitted to the Finance 4+1 option

⁵ Finance 4+1 students may not receive credit for ACC 505, BE 530, DS 520, or FIN 531 if those students have earned a B or better in the undergraduate courses of ACC 298, BE 401/ECON 302, DS 302/ECON 305, or FIN 401, respectively. Instead, Finance 4+1 students must replace these courses with more advanced electives from the MS in Financial Analytics program.

Learning Goals

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