MS in Finance (MS)

Program Director: Jeffrey Oxman, Ph.D. (oxman@canisius.edu)

The Master of Science in Finance program at Canisius College is offered full- or part-time in a non-cohort model allowing students to enter the program three times per year. It is a 30 credit hour program which may be completed in as little as 12 months. The program combines a solid theoretical grounding in the fundamentals of finance with applied quantitative and qualitative training to prepare graduates for careers in finance.

The undergraduate finance program at Canisius College is widely respected and was recognized as one of the top undergraduate business programs in the nation. Graduates of this program go on to work in equity research, banking, risk management, and other diverse finance functions locally, nationally, and beyond. The MS in Finance program was created to offer this top-ranking curriculum to students with an undergraduate degree in a quantitative discipline who have discovered an interest in the exciting and fast-paced world of banking and finance. Students will work closely with faculty in the program, including the academic director, to ensure effective progress through the program. Applied projects will help the students hone their quantitative skills and improve their oral and written communication abilities as deliverables will mimic the expectations of a professional work environment. It is the goal of the program to place as many graduates of possible on a strong career path in financial services.

The MS in Finance offers four track options, depending on students’ backgrounds and career interests. Investment Research is for students who want to combine quantitative and qualitative analysis to conduct analysis of various investments at the institutional level. The Risk Management option is for students with a more quantitative mindset that are interested in the growing field of measuring and managing risk to protect banks and other financial institutions from disaster. Data Analytics is for students who enjoy programming and working with big data sets and who want to do so in a finance setting. The General Finance track is for students without a finance background and who want a focused graduate degree to advance their career.

Admissions Requirements

Applicants are required to have completed the following preparatory courses or prerequisites:

- Math/Calculus (e.g. MAT 111 or MAT 115)
- Economics (macro/micro) (e.g. ECO 101/ ECO 102 or ECO 504)
- Financial Accounting (e.g. ACC 201/ACC 202 or ACC 505)
- Statistics (e.g. ECO 255/ECO 256, MAT 351/MAT 352 or ECO 503)
- Information Systems or Excel proficiency (e.g. ISB 101, ISB 501, or MS Excel certification)

Academic Standing

Students must have CGPA of 3.0 to graduate.

A student is placed on academic probation if:

1. After completion of six hours of course work, the student’s cumulative grade point average is 2.0 or lower,
2. Any time after completion of nine or more hours of course work, the cumulative grade point average is below a 3.0 or lower.

A student may be dismissed from the program if:

1. After completion of six hours of course work, subsequent to being placed on academic probation, the cumulative grade point average is less than 2.0,
2. After completion of at least 18 hours of course work, the cumulative grade point average is less than 3.0. A student may be dismissed without having been placed on probation first.

Curriculum

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PREPARATORY COURSES. Students with equivalent undergraduate content will be waived out of the preparatory courses.</td>
<td></td>
</tr>
<tr>
<td>ACC 505</td>
<td>Financial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ECO 503</td>
<td>Statistics for Managers with Excel</td>
<td>3</td>
</tr>
<tr>
<td>ECO 606</td>
<td>Managerial Economics</td>
<td>3</td>
</tr>
</tbody>
</table>

Required FINANCE CORE

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 508</td>
<td>Corporate Finance</td>
<td>3</td>
</tr>
<tr>
<td>FIN 620</td>
<td>Investment Management</td>
<td>3</td>
</tr>
<tr>
<td>FIN 622</td>
<td>Financial Institutions and Markets</td>
<td>3</td>
</tr>
<tr>
<td>or ECO 621</td>
<td>Money, Banking and the Economy</td>
<td>3</td>
</tr>
<tr>
<td>FIN 617</td>
<td>Portfolio Analysis</td>
<td>3</td>
</tr>
</tbody>
</table>

Select 6 elective courses below

Total Credits: 39

1 Students are encouraged to select their elective courses from one of the four options listed below.

Finance Core

Students who can demonstrate waiver of one or more Finance Core courses (FIN 508, FIN 620, FIN 622 or ECO 621, and FIN 617) will substitute additional courses in the General Finance Track or even to add a second concentration if possible in order to reach the minimum program requirement of 30 credit hours.

General Finance Track (18 credits)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Select 4 graduate electives from any of the tracks below</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Select 2 graduate-level electives</td>
<td></td>
</tr>
</tbody>
</table>

1 Graduate electives must be from a related field (Accounting, Economics, Management, Marketing (http://catalog.canisius.edu/graduate/wehle-school-business/ms-finance/graduate/courses/mba/), or Data Analytics (http://catalog.canisius.edu/graduate/wehle-school-business/ms-finance/graduate/courses/dat/)) or approved by program director.

Investment Research Concentration

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 623</td>
<td>Fixed Income Securities</td>
<td>3</td>
</tr>
<tr>
<td>FIN 624</td>
<td>Golden Griffin Fund I</td>
<td>3</td>
</tr>
<tr>
<td>FIN 629</td>
<td>Golden Griffin Fund II</td>
<td>3</td>
</tr>
<tr>
<td>FIN 812</td>
<td>Equity Analysis</td>
<td>3</td>
</tr>
<tr>
<td>FIN 628</td>
<td>Derivative Securities</td>
<td>3</td>
</tr>
</tbody>
</table>

Select 1 finance elective from list below

Total Credits: 18
Decision Resources

Learning Goals & Objectives

Student Learning Objective 1: Graduates will demonstrate an understanding of the theory and practice of Corporate Finance

Risk Management Concentration

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECO 526</td>
<td>Regression &amp; Forecasting</td>
<td>3</td>
</tr>
<tr>
<td>or DAT 501</td>
<td>Statistics and Econometrics</td>
<td></td>
</tr>
<tr>
<td>FIN 619</td>
<td>Financial Modeling</td>
<td>3</td>
</tr>
<tr>
<td>FIN 623</td>
<td>Fixed Income Securities</td>
<td>3</td>
</tr>
<tr>
<td>FIN 674</td>
<td>Business Analytics Using R</td>
<td>3</td>
</tr>
<tr>
<td>Risk Management &amp; Financial Institutions</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Risk Management &amp; Insurance</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Supervised Applied Integrative Project</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Total Credits</td>
<td>15</td>
<td></td>
</tr>
</tbody>
</table>

Data Analytics Concentration

Students will select from the following menu to complete the three-course minimum programming requirement. Additional courses taken in this menu over the three-course minimum will be counted toward the 18-credit concentration minimum:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 501</td>
<td>Introduction to Programming(^1)</td>
<td>3</td>
</tr>
<tr>
<td>CSC 502</td>
<td>Data Structures and Algorithms(^1)</td>
<td>3</td>
</tr>
<tr>
<td>DAT 511</td>
<td>Data Stewardship; Preparation, Exploration and Handling of Big Data</td>
<td>3</td>
</tr>
<tr>
<td>DAT 513</td>
<td>Database Management</td>
<td>3</td>
</tr>
<tr>
<td>DAT 521</td>
<td>Applied Integrative Projects in Data Analytics I</td>
<td>3</td>
</tr>
<tr>
<td>FIN 619</td>
<td>Financial Modeling</td>
<td>3</td>
</tr>
<tr>
<td>FIN 674</td>
<td>Business Analytics Using R</td>
<td>3</td>
</tr>
</tbody>
</table>

Select 3 or more of the following electives to complete 18-credit minimum for track:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAT 501</td>
<td>Statistics and Econometrics</td>
<td>3</td>
</tr>
<tr>
<td>DAT 512</td>
<td>Statistical Approaches to Big Data</td>
<td>3</td>
</tr>
<tr>
<td>MAT 500</td>
<td>Topics in Applied Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>MBA 526</td>
<td>Regression &amp; Forecasting</td>
<td>3</td>
</tr>
<tr>
<td>or ECO 526</td>
<td>Regression &amp; Forecasting</td>
<td></td>
</tr>
<tr>
<td>Supervised Applied Integrative Project</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Total Credits</td>
<td>18-19</td>
<td></td>
</tr>
</tbody>
</table>

1. A minimum of three programming courses required depending on prior preparation. For students with no prior programming background, CSC 501 and CSC 502 are required toward the minimum of three programming courses and will count toward the 18-credit concentration minimum. Students who demonstrate prior programming credit for one or more of these courses will substitute additional courses to meet the 18-credit concentration minimum.

Courses

FIN 508 Corporate Finance \(3\) Credits

This course provides an introduction to the basic tools of financial management. Topics covered include the goal of financial management, analysis of financial statements, the concept of cash flow, financial planning, time value of money, capital budgeting, the principles of stock and bond valuation, the risk/return tradeoff and capital markets theory, capital structure, cost of capital, dividend policy, working capital management and international aspects of finance.

Prerequisite: ECO 503 & ACC 505.
Offered: every fall, spring, & summer.

FIN 617 Portfolio Analysis \(3\) Credits

An introduction to modern portfolio theory and management. Strategies underlying portfolio construction and evaluation. Implications of market efficiency on portfolio management.

Prerequisite: MBA 620 or FIN 620.
Offered: every fall.

FIN 619 Financial Modeling \(3\) Credits

Programming in EXCEL via construction of custom functions and macros using Visual Basic. These techniques are applied to a variety of financial models.

Prerequisite: MBA 508 or FIN 508.
Offered: every fall.

FIN 620 Investment Management \(3\) Credits

This course introduces the student to the construction, management, and performance evaluation of investment portfolios. Primary topics include portfolio models, equilibrium in financial markets, market efficiency and the application of these concepts to the investment industry.

Prerequisite: MBA 508 or FIN 508.
Offered: every fall, spring, & summer.

FIN 622 Financial Institutions and Markets \(3\) Credits

This course examines the changing world of financial services and the role that financial intermediaries and financial markets are playing in a rapidly consolidating industry with new benchmarks and success factors. Universal banking as the new model will be analyzed. Emphasis will be placed on contemporary issues as well as a review of the history of this evolving industry.

Prerequisite: MBA 508 or FIN 508.
Offered: every spring.

FIN 623 Fixed Income Securities \(3\) Credits

This course discusses the various types of fixed income securities and the markets in which they are traded. Emphasis is placed on contact evaluation, extracting term/risk structure information from pricing, evaluating, investment opportunities and interest rate risk management.

Prerequisite: MBA 620 or FIN 620.
Offered: every fall.
FIN 624 Golden Griffin Fund I 3 Credits
This course is the first of a two semester program in which students become equity analysts and portfolio managers responsible for ‘real money’ portfolio of common equity securities (the Golden Griffin Fund or ‘GGF’). In the fall semester, students begin the process of stock selection and analysis, leading to recommendations for investment by the GGF. Students follow and discuss current events in the economy and financial markets, and monitor and produce written reports regarding current GGF portfolio positions. Students serve on committees, including: Accounting and Finance; Legal and Compliance; Marketing; Public Relations and Portfolio Management. Each committee will have certain responsibilities throughout the fall and spring semesters. Students taking MBA 624 are expected to continue into the spring semester in MBA 629. Student must apply in early spring before the upcoming fall semester Offered: fall
Prerequisite: MBA 620 or FIN 620 concurrent with MBA 812 or FIN 812. Offered: every fall.

FIN 625 Advanced Corporate Finance 3 Credits
This course provides an in-depth treatment of corporate financial management. Topics from the introductory course (MBA 508) are developed in greater detail with emphasis on the underlying theories and more extensive applications to financial decision making. Additional topics beyond the introductory level are presented and discussed. The class relies primarily on lectures, problems and case discussions.
Prerequisite: MBA 508.
Offered: occasionally.

FIN 626 International Finance 3 Credits
International Finance (also known as ‘Open-Economy Macroeconomics’) is the study of the monetary and economic linkages among countries. The main goal of this course is to equip students with an understanding of the global macroeconomic environment. The following topics will be covered: purchasing power parity, interest rate parity, exchange rate determination, international capital flows. MBA 504, MBA 508
Prerequisite: MBA 508 or FIN 508 and MBA 504 or ECO 504.
Offered: Occasionally.

FIN 627 Multinational Banking 3 Credits
An in-depth study of practical applications and issues faced by internationally active, large and complex banking organizations. Emphasis is given to the applications related to Basel Accord and the impact it has on capital adequacy requirements, lending guidelines, and risk-based pricing by these financial institutions. Students will also learn the scope of international trade finance with a focus on how multinational banks handle import/export transactions in the global economy.
Prerequisite: MBA 508 or FIN 508.
Offered: occasionally.

FIN 628 Derivative Securities 3 Credits
This course discusses forward and futures contracts, swaps and options. Markets for these securities are described and analyzed. Modern techniques for identifying over and undervalued contracts are presented. The use of derivative securities in risk management is discussed.
Prerequisite: MBA 620 or FIN 420.
Offered: occasionally.

FIN 626 Golden Griffin Fund II 3 Credits
This course is the second of a two semester program in which students become equity analysts and portfolio managers responsible for ‘real money’ portfolio of common equity securities (the Golden Griffin Fund or ‘GGF’). In the spring semester, students begin the process of original equity research, leading to recommendations for investment by the GGF. Students continue to follow and discuss current events in the economy and financial markets, and monitor and produce written reports regarding current GGF portfolio positions. Committee work started in the fall semester continues as well.
Prerequisite: either MBA 624 or FIN 624 and either MBA 812 or FIN 812. Offered: every spring.

FIN 650 Introduction to Financial Planning 3 Credits
Survey of topics in wealth management and personal financial planning. Review development of the wealth management industry, including the evolution of the high-net-worth investor segment. Various approaches to asset management, benchmarks for evaluating portfolio performance, risk tolerance, and tax and estate planning issues will be explored.
Prerequisite: MBA 620 or FIN 620.
Offered: fall.

FIN 651 Estate Planning 3 Credits
The valuation, transfer, administration and taxation of property will be covered along with strategies to efficiently transfer wealth. Other topics include property law, wills, trusts, income, gift, and death taxation. A course required for those interested in pursuing CFP certification.
Prerequisite: MBA 620 or FIN 620.
Offered: fall.

FIN 652 Risk Management & Insurance 3 Credits
Offered: occasionally.

FIN 654 Retirement Planning 3 Credits
Provides an overview of retirement planning including retirement savings need analysis, qualified retirement plan design, Social Security, Medicare, and more. In addition, group life, health, and disability insurance; non-qualified deferred compensation; and other commonly provided employee benefits are examined.
Prerequisite: FIN 620 or MBA 620.
Offered: Occasionally.

FIN 655 Risk Management & Financial Institutions 3 Credits
This course covers market risk including interest rate risk, credit risk, and operational risk, and how these are managed/hedged. We will model credit risk and value at risk metrics using historical simulation and scenario analysis. Relevant regulations are also covered.
Prerequisite: FIN 508, FIN 620 and either FIN 621 or FIN 622.
Offered: every spring.

FIN 674 Business Analytics Using R 3 Credits
This course introduces students to the open source software language R. Students will access publicly available financial data, process and analyze the data using R code. Analysis of financial ratios, investment portfolios, options, CAPM, Monte Carlo simulation, Value at Risk modeling and market microstructure will be explored.
Prerequisite: MBA 508 or FIN 508.
Offered: occasionally.
FIN 691 Supervised Applied Integrative Project 3 Credits
Special project or internship experience designed and supervised by a faculty member in conjunction with program professional partners. Intended primarily for the Risk Management or Data Analytics concentrations to be fully integrative with business applications. Examples may include risk management or big data projects for or within investment firms or financial institutions.
Offered: every fall, spring, & summer.

FIN 698 Finance Internship 3 Credits
Internship experience.
Offered: every fall, spring, & summer.

FIN 812 Equity Analysis 3 Credits
The analysis and valuation of equity securities is developed in stages using a case approach based on live publicly traded companies. Valuation models and the concept of value creation follows preliminary analysis of financial statements and market based financial information on risk and return.
Prerequisite: MBA 620 or FIN 620.
Offered: every fall.

FIN 841 Corporate Finance 3 Credits
This course provides an introduction to the basic tools of financial management. Topics covered include the goal of financial management, analysis of financial statements, the concept of cash flow, financial planning, time value of money, capital budgeting, the principles of stock and bond valuation, the risk/return tradeoff and capital markets theory, capital structure, cost of capital, dividend policy, working capital management and international aspects of finance.
Prerequisite: either ECO 822 & ACC 824 or ECO 503 & ACC 505.
Offered: spring day.