

MSc Finance

SFU

BEEDIE SCHOOL
OF BUSINESS



POSITION YOURSELF FOR SUCCESS

The Master of Science in Finance (MSc Finance) prepares you for the challenges of managing investments and risk in a rapidly changing world.

This full-time, 16-month program is designed to meet the increasing global demand for skilled risk and investment management professionals. The curriculum puts an emphasis on these two areas, while blending financial theory with real-world experience—including the chance to manage a real multi-million dollar fund.

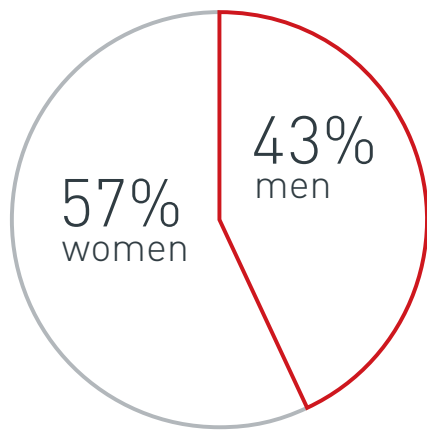
If you have a capacity for quantitative modelling and seek a career in financial risk management or investment management, this is the ideal platform to jumpstart your future.

WHY CHOOSE THE MSc FINANCE?

- Blend finance theory with practice
- Develop financial skills employers need
- Investment and risk management streams
- Manage a real-life investment fund
- Learn industry financial platforms



CLASS DEMOGRAPHICS



Class size
50-55

Average GMAT
650

Average age
25

Average work experience
3.5 years

DEVELOP IN-DEMAND FINANCIAL SKILLS

The MSc Finance lets you develop your analytical and technical skills in all aspects of finance.

Faculty members deliver rigorous instruction in the fundamentals of finance, asset pricing, market risk management and credit risk management to prepare you for positions across the full spectrum of financial and regulatory institutions.

Investment management and risk management streams allow you to acquire additional expertise in the areas of equity security analysis and strategic asset allocation, or enterprise risk management and accounting for financial instruments.

Instructors and visiting finance professionals with years of experience contribute an invaluable practical component to the program.

Get the full picture at beedie.sfu.ca/MScFinance

“Program faculty and staff bring an excellent balance of theory and experience while caring deeply about preparing graduates for the finance industry.”

— David Gontovnick, 2014
Senior Analyst, BMO Financial Group

PREPARE FOR SUCCESS IN A CHANGING WORLD

The MSc Finance is delivered over four terms. The program offers two areas of specialization: investment management and risk management.

The investment stream focuses on financial instruments, financial markets, and finance theory. The risk management stream allows students to delve deeper into credit, market, and operational risk. Both streams share the same core courses and all students are exposed to the fundamental finance theory and practice.

You also have the opportunity to join the SIAS Fund team during of the program to add an extra practical component to your learning experience

The program will commence with two courses held online in mid-July. These courses will require approximately 3-4 hours of total work per week. The first portion of the two courses will run for four weeks online. The latter half of the courses will be completed in-person during the Fall 2018 semester. Only these two courses will be held partially online.

ONLINE COURSES

Mathematics for Computational Finance

Part 1: Review the mathematical tools essential for the study of finance, including linear algebra, differential equations and optimization.

Statistics for Financial Economics

Part 1: Review elements of probability and statistics employed in finance, including probability models, inference and basic time series analysis.

SEMESTER 1 - FALL

Mathematics for Financial Economics

Part 2: Complete the 2nd half of the class in-person and enhance your understanding of the content learned online in the study of finance, including linear algebra, differential equations and optimization.

Statistics for Financial Economics

Part 2: Complete the 2nd half of the class in-person and enhance your understanding of the content learned online about the elements of probability and statistics employed in finance, including probability models, inference and basic time series analysis.

Financial Modelling Tools

Get an introduction to commonly used software programming languages used for mathematical analysis, with a focus on VBA (Visual Basic for

Applications) and MATLAB. Learn through hands-on laboratory sessions and practice problems drawn from topics such as linear regression, asset allocation and option pricing.

Financial Economics I

Delve into the idea of “no-arbitrage”—one of the most important concepts defining Financial Economics.

Derivative Securities I

Gain an understanding of derivative securities, such as options, forward contracts, futures contracts and swaps. The course focuses mainly on hedging, replication, and pricing.

Equity Security Analysis and Portfolio Management I

Learn about the valuation of equity securities, including company and industry analysis, financial statement analysis and valuation models.

SEMESTER 2 – SPRING

Financial Econometrics

Learn about the econometric skills and tools commonly needed in the financial industry. You will focus on time-series methods such as autoregressive and moving average processes (ARIMA), and generalized autoregressive conditional heteroscedasticity models (GARCH).

Fixed Income Security Analysis and Portfolio Management

Review the current models and techniques required to value, analyze and risk manage portfolios of fixed income instruments and their derivatives. Develop a set of tools to deal with realistic problems.

Derivative Securities II

Learn about the use of analytical methods for valuation, replication, and hedging. This course builds upon the empirical and numerical methods covered in other courses, and covers mathematical and finance topics.

Market Risk Management

Study the fundamentals of market risk of traded financial products (basic interest rate products, equities and options) from the perspective of a trader and a risk manager. You will gain a clear perspective of how trading and risk control work together in the capital markets.

Portfolio Theory and Asset Pricing

The course covers five main topics: portfolio theory, asset pricing, market efficiency, performance measurement, and behavioral finance.

Equity Security Analysis and Portfolio Management II

Study advanced valuation of equity securities, including company and industry analysis, financial statement analysis, and valuation models.

SEMESTER 3 – SUMMER**Financial Economics II**

Get an introduction to the theory of corporate finance. Students review relevant equilibrium concepts and solution techniques in game theory, before studying selected topics in corporate finance.

Numerical Methods In Risk Management

Study the underlying mathematics and software implementation of the fundamental analytic methods used to price equity and fixed-income derivatives. You will derive the methods theoretically and then implement them in MATLAB.

Financial Statement Analysis

Gain an understanding of the linkages between financial statements, such as annual reports and prospectuses—including the three principal financial statements (balance sheet, income statement and cash flow statement)—and how to extract useful information about a company from them.

Credit Risk Management

Gain a solid knowledge and understanding of fundamental credit risk concepts and master the basics of quantitative modelling of credit risk.

Strategic Asset Allocation

Develop a good understanding of the theoretical and practical issues relating to the setting of investment policy, as well as mean-variance software. Students analyze investors' return objectives, risk tolerance, investment horizon, tax considerations, liquidity needs, and other unique circumstances.

SEMESTER 4 – FALL**Enterprise Risk Management**

Gain a thorough overview of the enterprise risk management practices. Begin with a risk assessment framework and then apply it through decision-making exercises within a case-based context. Learn enterprise risk management best practices, including risk architecture, risk communication, and disclosure within the organization.

Ethics

Forge critical philosophical thinking around finance and finance practices. Students discuss, classical and modern libertarianism, contractarianism (social contract theory), deontology, consequentialism (utilitarianism), and virtue ethics. In each case, students will apply these schools of thought to concrete finance situations.

Final Project

Complete a supervised research project in the areas of risk management, investment management or a closely related field of inquiry.

MANAGE A REAL-LIFE PORTFOLIO

Acquire real world investment, risk management and compliance experience through the Student Investment Advisory Service (SIAS) Fund. Managing the SIAS Fund helps you prepare to hit the ground running on day one within sought-after careers in the Finance industry.

With a current market value of \$18.28 million (as of January 1, 2018), the SIAS Fund is Canada's largest student-run investment fund—and one of the largest such funds in North America.

The fund follows a balanced investment style with four asset classes that are semi-actively managed: Canadian Equity, Global Equity, Fixed Income and Cash. Senior representatives from the financial sector act as mentors during your SIAS activities.



FACULTY PROFILES



CHRISTINA ATANASOVA, PHD (LEEDS)

Associate Professor, Finance

Professor Atanasova joined the Beedie School of Business in 2007. Her research interests include empirical corporate finance, corporate governance, capital structure, corporate risk management, and pension economics and finance. She teaches Derivative Securities.



AVI BICK, PHD (BERKELEY)

Associate Professor, Finance

Professor Bick's areas of specialization include the valuation of options and futures contracts, models of financial market equilibrium and mathematical finance. His research has been published in leading academic journals in finance, management science and mathematics. He teaches Derivative Securities II.



PETER KLEIN, PHD (TORONTO)

Professor, Finance

Prior to joining the Beedie School of Business, Professor Klein held senior positions at CIBC/Wood Gundy Financial Products, including chief trader for capital markets and vice-president of investment banking. Professor Klein's research interests include return anomalies, taxation, credit risk, derivative securities and corporate governance. He has published in a number of leading academic journals in finance and economics.



ANDREY PAVLOV, PHD (UCLA)

Professor, Finance

Professor Pavlov's research interests include mortgage backed securities pricing and commercial and residential market risk management. He has also worked on the modelling of aggressive lending practices, risk management for publicly traded real estate companies, mortgage and equity securitization, and mortgage default risk modelling using non-parametric methods and spatial statistics. He consults for both the public and private sectors. He teaches Financial Econometrics.

VISITING INDUSTRY PROFESSIONALS

Guest speakers from financial institutions around the globe share their knowledge and stimulate interest in a wide variety of topics for research projects. We encourage visitors to work with promising candidates on research projects. Successful research cooperation often leads to an offer of employment. Visitors to the Master of Science in Finance program include:

- Alliance Bernstein, New York
- Bank of America / Merrill Lynch, New York
- Bank of Montreal Financial Group, Toronto
- BlackRock, New York
- Cairn Capital, Greenwich
- Citibank Canada, Vancouver
- Deutsche Bank, New York
- FINCAD, Vancouver
- KPMG, Vancouver
- QuIC, Vancouver
- Royal Bank of Scotland Securities, Greenwich
- SGS Asset Management, Toronto
- Swiss Re, New York
- ZE PowerGroup Inc., Vancouver

PREPARE FOR A CAREER IN FINANCE

In addition to careers in investment management and risk management, MSc Finance graduates can expect to build careers in any area of finance that calls for a thorough understanding of financial theory and well developed quantitative and analytical skills.

Typical career paths include:

- Risk modeling, and investment management
- Equity and Fixed Income Analysis
- Compliance
- Valuation validation
- Treasury positions at financial and non-financial firms

CAREER SERVICES

As an MSc Finance student, you'll have access to the Beedie Career Management Centre, a team of professionals committed to providing you with one-on-one career advising, mentorship and networking opportunities, and a robust collection of online resources.

MENTORSHIP AND NETWORKING

SFU Beedie has the largest business mentorship program in Western Canada, with over 300 mentors available every year to help you expand your network and uncover opportunities.

MSc FIN ALUMNI PROFILES



TIM DINGER

2016 Cohort, Summer Internship - Chief Investment Officer, Student Investment Advisory Service (SIAS)

"Taking part in SIAS allows students to expand their experience beyond what is taught in class. It not only prepares them for challenges in their professional career it also puts students in the driver seat of a large investment fund to keep up with the fast pace of the stock market."



LEONIE WILCKE

2016 Cohort, Rest of the World Analyst, Student Investment Advisory Service (SIAS)

"I am thankful for all the great connections I made through Beedie. The school is right in downtown which makes it easy to meet industry professionals for a coffee. Before I knew it, one of the SFU events resulted in a collaboration for my final project with a company in Vancouver."



MAHAD FARRUKH

2015 Cohort, ESG Integration intern, British Columbia Investment Management Corporation

"The instructors for the MSc Finance program bring a wide variety of experience in financial markets and research to the classroom. Students get to leverage this experience through coursework, assignments and projects which are designed to simulate real problems faced by finance professionals today."

LIFE AS AN MSc STUDENT

Classes take place at the Segal Graduate School of Business campus in the heart of Downtown Vancouver.

Its 60,000 square feet accommodates the finest in meeting and classroom facilities, and the central location makes commuting easy. It also provides easy access to Vancouver's dining and entertainment scene for those all-important post class get-togethers.

DOWNTOWN ACCOMMODATION

If admitted into the program, you will have the opportunity to apply for SFU's new Vancouver Graduate Residence, located in the SFU Downtown Business Innovation Centre. You will be able to choose between:

- A Studio apartment
- A two-bedroom shared apartment
- A two-bedroom + study shared apartment

NETWORKING AND COMPETITIONS

Each year our students participate in various competitions where you get to apply and demonstrate what you've learned in the classroom. Competitions include:

- National Investment Banking Competition
- CFA Global Investment Research Challenge
- ENGAGE International Investment Education Symposium



ARE YOU THE RIGHT FIT?

We want to hear from numerate, critical thinkers with an undergraduate degree in mathematics, sciences, engineering, economics or business seeking to develop technical and analytical skills.

HOW TO APPLY

To connect with an advisor, register for an information session, connect with Beedie alumni, or arrange to visit a class, please contact us at 778.782.3552 or email mscfin@sfu.ca.

APPLICATION PROCESS

- Complete online application form
- Required supporting documents:
 - » Official transcripts
 - » GMAT or GRE
 - » Self-evaluation
 - » Resume
 - » 3 letters of reference from supervisors or colleagues
 - » If applicable, English language scores
- Interview if shortlisted

ADMISSION REQUIREMENTS

- Undergraduate degree: min 3.0 CGPA in a quantitative discipline, which may include business, economics, mathematics, engineering or the sciences
- Relevant work experience in financial services is preferred
- GMAT: 550 or GRE: 150 in each section
- Proficiency in English for ESL candidates: TOEFL 93+ or IELTS 7+
- International applicants will require a valid Canadian student visa

APPLICATION DEADLINES:

- Round 1: October 20th, 2017
- Round 2: February 2nd, 2018
- Final Round: April 20th, 2018

TUITION

- Tuition: \$34,200*
 - International Students: \$42,700*
- * Subject to Board of Governors approval.

FEES

- Additional costs for textbooks and related materials: approximately \$2,500 (CAD).



STUDY IN THE HEART OF THE CITY.

Bulkyard

Waterfront



Vancouver
City Centre

Granville

Stadium
Chinatown

Yaletown
Roughnecks

Main Street
Science World

Olympic
Village

SFU Beedie School of Business

Segal Graduate School
Simon Fraser University
500 Granville Street
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