“Tree is the expression of the seed."

"Thinking is structured in knowledge, knowledge is structured in consciousness."

School of Financial Engineering (SoFE)
The vision

The School of Financial Engineering (SoFE) aims to create a Center of Excellence in education in the field of Financial Engineering in India. Our endeavour is to impart students with state-of-the-art practical skills along with rigorous theoretical knowledge in financial innovations and technologies and create industry-ready professionals equipped with highly sought after skills.

The School of Financial Engineering (SoFE), created in collaboration with Indian Institute of Quantitative Finance, is a Centre of Excellence in education in the field of Financial Engineering in India. It brings together global industry experts in financial engineering and highly acclaimed academicians from the fields of mathematics, statistics, computer science, finance and economics. SoFE provides state-of-the-art facilities to create an eco-system that will nurture talent and build world class professionals.

Financial Engineering is a rapidly growing field in India with state of the art practices moving to India from the Global financial centers of New York, London and Zurich as the worldwide knowledge industry becomes more integrated. The Indian financial markets have seen a rapid growth over the last decade, creating a need for professionals with specialized skills in Mathematics, Statistics, Computer Programming and Finance all woven together. There is a dearth of skilled professionals who have such multi-disciplinary skill-sets. Traditional courses like MBA or CA in India do not teach such skill sets. Industry has been facing a shortage of quality professionals with strong skills in such advanced techniques and SoFE aims to fill this gap by producing industry ready Financial Engineering professionals.
The programmes

We offer two programs, a 3-Year undergraduate programme, “Bachelor of Computational Finance” (BCF), which will form a great foundation for aspiring financial engineers, and a 2-Year postgraduate programme “Master of Financial Engineering” (MFE) which will impart the much sought after combination of strong theoretical knowledge along with extensive practical hands-on implementation skills to produce industry-ready Financial Engineers.

The school aims to build an ecosystem where industry and academia collaborate and benefit from their mutual interactions.

Faculty

Financial Engineering is an applied field and hence is very practice oriented. We take great pride in our faculty which is unmatched in India for teaching Financial Engineering and Quantitative Finance programmes and is comparable with the best.

The faculty is drawn from top-notch Quant Finance practitioners who have worked with some of the top global investment banks and largest global financial institutions and researchers in the field of Quantitative Finance, so that they bring the global best practices and technologies to the academic community in India. They bring with them extensive practical hands-on implementation experience from the industry. This is an immense advantage that students get to learn from some of the best practitioners both the theories and more importantly their practical applications in financial engineering jobs.

Rajat Bhatia - Dean, School of Financial Engineering

Dean Rajat Bhatia has a combined experience of nearly 30 years in the global financial markets. He has worked in New York, London, Hong Kong, Singapore, Sydney, Dubai and India in a wide range of areas which include Derivatives Structuring & Trading, Capital Markets, Alternative Investments, Equity Markets, Fixed Income, Commodity Markets Currencies, Investment Banking, M&A, Strategy Consulting and Academia.


Design your destiny, differently

Career opportunities

The programs are designed to enable students with good numerical and analytical abilities to make a rewarding career as quantitative analysts, risk managers, investment analysts in commercial banks, investment banks, asset management companies, financial analytics firms, hedge funds, financial software companies, investment advisory services, and other financial institutions. Financial Engineers are some of the highest paid professionals globally, earning more than MBAs and CAs. The course enable students with good numerical and analytical abilities to make a rewarding career as Quantitative Analysts, Risk Managers, Investment Analysts in commercial banks, investment banks, asset management companies, financial analytics firms, hedge funds, financial software companies, investment advisory services, and other financial institutions.
Abhijit Biswas - Chairman & Co-Founder
School of Financial Engineering

Abhijit Biswas has more than 18 years of experience in research and development in the field of Financial Engineering and Risk Management product systems. He is the founding Director of Indian Institute of Quantitative Finance, India's pioneering educational institution in the field of Financial Engineering, Financial Risk Management and Investment Banking. He was a pioneer in India in Financial Risk Management systems research and development. He was the co-founder and Head of Product Development at Risk Infotech Solutions, India's pioneering company in Portfolio Risk Management Software Products. He received Venture Capital funding to start up RISPL which was one of India's first software products company to research and develop risk management systems in India, which caters to major financial institutions.

Zhe is also consultant to HPCL, involved in the development of Quantitative Finance solutions and services using High Performance Parallel Computing technologies in Algorithmic Trading, Risk Analytics, etc. He is also consultant to financial institutions for Volatility Trading systems.

Dr. Amit Ram - Adjunct Professor

Dr. Amit Ram, Ph.D. (Statistical Physics and Computational Methods) from Stanford University (USA), B.Tech. (Engineering Physics) from IIT (Bombay), is currently Vice President, Quantitative Risk with a top global investment bank. As a Financial Engineering professional he has extensive experience working in the financial industry on valuation and risk management of financial derivatives encompassing fixed income, credit and hybrid equity derivatives. He has expertise in stochastic calculus based financial mathematics and experience in working with regression based models in mortgage finance and extensive experience applying statistical data analysis methods to financial data. He is well experienced in mentoring quantitative analysts, desk traders and programmers. Previously he was Analyst (Manager), Valuation Control, Standard Chartered Bank (Singapore) responsible for model usage and calibration of Interest Rate/Foreign Exchange and Equity Derivatives desks. Prior to that, he worked as Associate Quantitative Risk Analytics, Lehman Brothers (New York) where he tested and validated Lehman Brothers equity derivatives and credit derivatives pricing analytics. He was Consulting Associate, Fixed Income Strategy Research with J.P. Morgan Chase (New York). He has taught at the Department of Physics, Stanford University where he conducted lectures for the undergraduate and graduate classes on quantum mechanics, classical mechanics and bio-statistics.

Ritesh Chandra - Adjunct Associate Professor

Ritesh Chandra, CFA (Level 3 Pass), MBA from IMC Calcutta and B.Tech from IIT Kharagpur. He is currently working as a Senior Vice President - Corporate Trading Risk, in a large private sector bank. He has more than 11 years of experience and has worked in India, China & Canada in a variety of roles.

Dr. Debashis Guha - Adjunct Professor

Dr. Debashis Guha, has over 25 years of global experience working and teaching as a quantitative finance professional and economist. Having done his Ph.D. (Operations Research) from Columbia University (New York, USA), M.A. (Physics) from Texas Christian University (Texas, USA), B.Tech. (Electronics and Communication Engineering) from IIT (Kharagpur), his work experience spans research and development in quantitative finance, quantitative trading strategy, multi-asset portfolio management for hedge fund, forecasting global macroeconomic conditions, portfolio construction and risk management. His expertise areas are in statistics, machine learning, quantitative trading, econometrics, algorithm development, tactical asset allocation, portfolio construction, asset pricing, macroeconomics and financial economics. He was one of the first to introduce quantitative global macro trading, based on leading indicators. He was also the first to introduce the idea that assets are driven by cycles in growth and inflation, later taken up by other hedge fund researchers. He developed macro themes and new risk management framework for a $250 MM USD hedge fund. He is founder and Managing Director, Big Sky Quantitative Research Pvt. Ltd., Bangalore, a research firm responsible for developing proprietary systematic strategies and risk management protocols for Big Sky Capital LLC, a global macro hedge fund based in Santa Monica, California and now focusing on the Indian equity market and global asset market strategies. He was earlier the Managing Director and Head of Quantitative Research and Risk Management at Big Sky Capital LLC. He was Director of Research at Foundation for International Business and Economic Research, New York, and Director of Research at Foundation for International Business and Economic Research, New York. He was Director, Special Projects and Senior Research Scholar at Economic Cycle Research Institute, New York. He was Director, Senior Projects and Senior Research Scholar at Economic Cycle Research Institute, New York. He was Founder and Managing Director at ESR Software Pvt. Ltd., Kolkata. He was Staff Economist at Center for International Business Cycle Research, Columbia University, New York. He has taught at University of Texas at Dallas, Columbia University, Graduate School of Business and Administrative Staff College of India.

Kalyan Roy - Adjunct Professor

Kalyan Roy, M.Stat. from Indian Statistical Institute (Kolkata), B.Stat. (Hons) from Indian Statistical Institute (Kolkata). He was also a Ph.D. candidate in Statistics and a Statistical Consultant at Indiana University (USA). He is a vastly experienced Financial Engineering professional having a career in the industry spanning over sixteen years where he has played Quantitative Analyst roles at various organisations. He has worked as Statistical Analyst with CitiBank (Chicago, USA). He has worked as Statistical Analyst with Bank One (Delaware, USA). He has worked as Statistical Modeler with IMS America (Pennsylvania, USA). He has worked as Statistical Consultant with Indiana University (USA). He has worked as a Quantitative Analyst with Deep Value Technology, specializing in high-performance algorithmic trading strategy, developing ultra-high frequency trading algorithms, statistical modeling of ultra-high frequency time series. He was Market Research Director with IMBI International and Symphony Services. He has worked with a global investment bank and one of the largest institutional brokerage houses in India as a Quantitative Market Micro-structure Researcher. He has also served as the Head of Quantitative Analytics at Capital Markets & Risk Solutions working on Quantitative Asset Allocation Research. He has taught undergraduate and postgraduate level courses in Probability and Statistics at Indiana University (USA).

Curriculum

The curriculum to be delivered is designed to be at par with some of the best programs of this nature available across the globe. The aim is to make students market-ready for investment finance jobs.

Bachelor Of Computational Finance (BCF)

Semester 1

- Differential Calculus
- Computing – I (Excel)
- Probability and Statistics - I
- Introduction to Linear Algebra
- Introduction to Accounting

Semester 2

- Integral Calculus
- Differential Equations
- Probability and Statistics - II
- Computing – II (MATLAB)
- Introduction to Economics

Semester 3

- Macroeconomics
- Calculus in Three Dimensions
- Partial Differential Equations

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Master Of Financial Engineering (MFE)

Semester 1

- Introduction to Financial Engineering
- Financial Computing – I (Excel VBA)
- Introduction to Financial Mathematics
- Introduction to Financial Statistics
- Probability Theory – I
- Corporate Finance and Financial Modelling

Semester 2

- Probability Theory – II
- Financial Computing – II (R, MATLAB)
- Statistical Analysis of Financial Data
- Introduction to Stochastic Calculus
- Stochastic Calculus for Finance
- The Bourse Game and Currency Markets

Semester 3

- Numerical Computations For Finance
- Computational Finance – I (Equity Derivatives)
- Computational Finance – II (Fixed Income)
- Computational Finance – III (Currency Derivatives)
- Computational Finance – IV (Credit Derivatives)
- Risk Management - I

Semester 4

- Case Studies in Financial Markets - I (Mandatory)
- Case Studies in Financial Markets - II (Mandatory)
- Financial Computing – III (Python, C++)
- Financial Computing – IV (RDBMS)
- Financial Computing – V (SAS)
- Financial Computing – VI (Big Data in Finance)
- Risk Management - II
- Quantitative Trading
- Portfolio Management and Analytics
Eligibility criteria

MASTER OF FINANCIAL ENGINEERING (MFE)
- Undergraduate degree in Engineering, Physics, Mathematics, Statistics, Computer Science or Economics (with Statistics)
- 55% aggregate (or 70% in Mathematics, Physics, Statistics)
- CAT Score or Qualifying in MUIT-SoFE Entrance Test and Interview

BACHELOR OF COMPUTATIONAL FINANCE (BCF)
- Students from Science background in Higher Secondary level (XII)
- 60% aggregate (or 80% in Mathematics, Physics, Statistics)
- Qualifying in MUIT-SoFE Entrance Test and Interview

Admission procedure

Prospective candidates can submit online application at www.muitnoida.edu.in/admission. Alternatively, candidates can visit the Admission Department at MUIT, Noida Campus to submit application form.

In both cases, application fees of INR 1200 has to be submitted along with application. DD/Cheque should be in the name of "Maharishi University of Information Technology" payable at Par. Then they can appear for MUIT-SoFE Entrance Test and Interview.

School of Financial Engineering (SoFE)
Maharishi University of Information Technology

Admissions

Contact us:
Maharishi University of Information Technology
Noida Campus,
Maharishi Nagar, Noida (UP)
Website: www.muitnoida.edu.in
E-mail: SoFE.admissions@muitnoida.edu.in
Contact No: 9599707416, 01202461350-60

INDIAN INSTITUTE OF QUANTITATIVE FINANCE

The Maharishi Group has collaborated with the Indian Institute of Quantitative Finance to establish the School of Financial Engineering. The Indian Institute of Quantitative Finance is a private educational institution founded by pioneers in India and top experts from the field of Financial Engineering, Financial Risk Management and Investment Banking. It exclusively focuses on promoting education and training in the field of Financial Engineering, Quantitative Finance, Risk Management and allied disciplines.

The institute conducts courses for working professionals and students. It has partnered with Thomson Reuters to conduct the Post Graduate Program in Financial Engineering. IIQF conducts training in derivative valuations, risk management, financial modelling, algorithmic trading and other specialised areas of finance. IIQF has conducted training programs at leading financial organizations including Bank of New York Mellon, Societe Generale, NSE, BSE, LIC, ING Vyasa Bank, Globeop, etc. and other non financial organisations like Capgemini, Oil India, ONGC, NTU Muscat, IIT Bombay, NITIE, BITS Pilani, etc. website- www.iiqf.org