

Full Time

Post Graduate Diploma in Quantitative Finance (PGDQF)

(Jointly offered by Department of Economics (Autonomous), University of Mumbai and NISM)

About PGDQF

The Post Graduate Diploma in Quantitative Finance (PGDQF) is one of a kind course in India, because of the blend of two colossal educational pillar of this country. The two colossal educational pillars are NISM is a initiative by Securities and Exchange Board of India, and Department of Economics (DoE) of The University of Mumbai (Est. 1857). PGDQF is nourished with academic contributions DoE and practicing experience from NISM already established Quantitative Finance Faculty. This course main aim is to create practitioners in the field of Quantitative finance, mainly for India and the Indian sub-continent, however empowering the students with the current methods practice in western countries.

PGDQF is a one-year full time Post-Graduate Diploma aimed at creating the next generation Quant, Financial Engineers and Risk management specialist. For students interested in banks, broker dealers, hedge funds, pension funds, asset managers, technology firms, regulators, accounting, consulting and law firms, and universities across the globe. PGDQF is an extremely unique opportunity to obtain first-hand knowledge, both theoretical and practical, from an institute established by SEBI, the market regulator and prestigious Department of Economics (University of Mumbai). The faculty, consisting of academicians and practitioners, has the capability to deliver a high-quality and cutting-edge programme to the students looking for knowledge and skill-sets as a solid foundation.

Informal estimates indicate that the financial markets/Banks would require about 5,000 professionals every year. The required skill-sets could be grouped as follows: (1) Fund Management, Analysis and Dealings (2) Structuring and Financial Product Management (3) Operations and Services in the Field of Treasury (4) Information Technology for high end Algorithmic research (5) Consulting and Analytics and (6) Alternate Investment and Wealth Management.

Course Architecture

The Postgraduate Diploma in Quantitative Finance (PGDQF) is designed principally for postgraduates who are working professionals in banks and other financial institutions those requiring knowledge of statistical and quantitative approaches to risk and derivatives. Graduates with strong previous quantitative training and graduates with lower levels of previous training can both benefit from the programme by choosing this course. The architecture of the course is constructed from basic travelling to advance and then progressing to advance applications for implementation in the real world.

COURSE STRUCTURE

TRIMESTER I (BASIC)

QF101: Introduction to Mathematics for Finance
QF102: Statistics and Data Analysis for Finance
QF103: Financial Computing Using R and Excel-VBA
QF104: Introduction to Financial Economics

TRIMESTER II (*ADVANCE*)

QF201: Stochastic Calculus and Optimization for Finance
QF202: Introduction to Econometrics
QF203: Introduction to Derivatives
QF204: Fixed Income Securities

TRIMESTER III (*ADVANCE APPLICATION*)

QF301: Financial Time Series Modelling
QF302: Introduction to Financial Engineering
QF303: Portfolio Optimization
QF304: Financial Risk Management

TRIMESTER IV (*IMPLEMENTATIONS*)

QF401: Algorithmic Trading and Quantitative Strategies
QF402: Machine learning techniques in Finance
QF403: Game Theory for Financial Engineering
QF404: Industry Internship and Projects

Patrons of the Programme

Mr. Sandip Ghose, Director

Prior to joining NISM, Mr. Sandip Ghose was Head of Human Resource Management Department, Reserve Bank of India (RBI), overseeing the Strategic Management, Human Resource Development and Administrative Affairs of about 18,000 employees across the country.

A central banker by profession, Mr. Ghose has previously held positions such as Regional Director of the RBI, Delhi and Secretary to the Bank's Local Board of Directors in North India. Besides, he has also served as Chief General Manager and Principal of the College of Agricultural Banking in Pune, Chief of Staff and Advisor to three successive RBI Governors - Dr. C. Rangarajan, Dr. Bimal Jalan, and Dr. Y.V. Reddy - over a period of nine years, i.e.1996-2004.

Mr. Ghose was instrumental in setting up the Human Resources Department in RBI in the year 1995, and went on to head the same, between 2004 and 2007, where he oversaw recruitment, training and development, performance and talent management, as also compensation, welfare and industrial relations. During this time, he was also the Principal, Bankers' Training College, Mumbai (now known as the Centre for Advanced Financial Learning) where he was responsible for grooming and capacity building of the top management of the commercial banks in India.

During his career, Mr. Ghose has received several prestigious awards. Among them are the Jagdeep Khandpur Award for Outstanding HR Leadership, Pride of HR Profession Award by the Institute Of Public Enterprises and HR Leader of the Year Award by the Asia Pacific HRM Congress. For his contribution to the field of HR and the Society at large, he has been conferred with an Honorary Doctoral Degree by the Eastern Institute of Integrated Learning and Management, Sikkim University.

Mr. Ghose holds a postgraduate degree in History and has had exposure to executive education at the top business schools in India and abroad. He continues to serve as Director/Member on the boards of national and international training institutions and business schools.

Mr. G. P. Garg, Registrar

Mr. Garg has held several assignments in SEBI since 1994. He has been closely associated with SEBI and Government of India initiatives on Financial Literacy and Investor Education in the country. He initiated several investor protection and educational activities in SEBI such as launching of SCORES, Toll Free Helpline and Financial Education through Resource Persons. He has worked as the SEBI nominee on Advisory Committee on NISM campus and Technical Group on Financial Inclusion & Financial Literacy under FSDC.

He has been actively associated with establishment of National Institute of Securities Markets (NISM) by SEBI. Mr. Garg also Heads National Centre for Financial Education (NCFE), a joint initiative by all Financial Sector regulators comprising of RBI, SEBI, IRDA, PFRDA and FMC to implement National Strategy for Financial Education (NSFE).

Mr. Garg is Chief General Manager with SEBI and presently on deputation with NISM. Mr. Garg holds Bachelor degree in Engineering and Law and Masters in Business Administration.

NISM Faculty

Prof. Sunder Ram Korivi,

Dean & Chair Professor -NISM

Prof. Sunder Ram Korivi is an MA (Economics & Political Science) and PhD (Business Policy & Administration) from the University of Mumbai. He is a CA Rank-holder and Fellow of the Institute of Chartered Accountants of India. Additionally, he is also an Associate member of the Institute of Cost & Management Accountants of India and the Insurance Institute of India. He was a full-time faculty member at SP Jain Institute of Management, and later, a Professor at NMIMS University, where he also served as the Head of the Departments of Finance and Economics. His interests are in the fields of Financial Institutions & Markets and Fixed Income Securities. He has been nominated to the Board of

Advanced Studies, ICMAI and as a subject expert at LNJP Institute of Criminology and Forensic Science and the Board of Studies – Finance at the University of Kashmir. He has conducted policy-oriented research for the Central and State Governments and for SEBI. An adjunct faculty at IIM Kozhikode, he has also lectured at IIT Bombay, NIBM, NIA, NITIE, BSE and other institutes of national importance. He has been with NISM since 2008. He has prior work experience with Business India as a Corporate Researcher, Tata Industrial Finance Corporation as a Merchant Banker and also with Axiomé as a Merchant Banker.

Dr. Latha Chari

Chair Professor - NISM

Dr. Latha S Chari is a doctorate in Finance from BITS Pilani, Post Graduate in commerce and a FCMA (Fellow member of the Institute for Cost Accountants of India). She has a total experience of about two decades of which is equally divided between academia and Industry. She started her academic career as a Fellow with IILM, New Delhi. Before joining NISM, she has worked with Institute for Technology and Management and ITM Institute of Financial Markets for more than a decade. She joined ITM as lecturer and grew up the hierarchy to become the Deputy Director, heading ITM Institute of Financial Markets. During her academic tenure she has published papers in various national and international journals and has conducted MDP's in the areas of financial asset valuation, strategic cost management, trading and operations in equity markets, performance evaluation of mutual funds and the like. Her areas of research interests include strategic cost management, corporate valuations, shareholder value enhancement and similar studies. She has special interests in establishing finance labs and design, development and delivery of lab based courses in the areas of banking and financial markets.

Mr. Akhlaque Ahmad

Lecturer and Programme Director

Mr. Akhlaque Ahmad is pursuing his Ph.D from the Department of Economics (Centre of Advance Studies), on the evolving topic of Complex Adaptive Systems in financial Markets. He is trained in the field of Mathematics with his Masters in Philosophy in Cryptography from the prestigious Department of Mathematics, University of Mumbai. He completed his Master in Mathematics and Post Graduate Diploma in Financial Engineering. He was awarded research fellow form the Ministry of Science and Technology, Government of India, New Delhi.

Prior to joining NISM, he was associated with the undergraduate programme of the London School of Economics & Political Sciences conducted at Mumbai. He has delivered talks and presented papers at University of Oxford, UK, National University Singapore, Singapore, Royal Flemish Society of Belgium, Belgium, Bradley University, Boston University, USA, National Research University, St. Petersburg, Steklov Mathematical Institute, Moscow State University (Russia), University of Zurich, ETH Zurich, Switzerland, IIT Bombay, IISc Bangalore and University of Mumbai, India. He has published work in the area of financial

engineering, financial economics and derivatives. Also, he teaches executive programs and SEBI Induction Program. His areas of interest include Financial Engineering, Financial Cryptography, Mathematical Finance and Financial Derivative. He is visiting faculty at NITIE, and various B-Schools of University of Mumbai and India. He has industrial experience as consultant with financial software companies and advertising companies. He teaches Mathematical Finance, Computational Finance and Financial Engineering related subjects at NISM. He extensively uses R- Language, Matlab, and Excel-VBA for computational and modelling purpose.

Dr Rachana Baid

Adjunct Associate Professor

Dr. Rachana Baid is an M.Com (Gold medallist) and PhD. She specializes in Financial Systems and Regulatory Policy. She has undertaken consulting assignments with multilateral agencies such as the World Bank and has been a visiting faculty at IIM Indore and SP Jain Institute of Management. She has also served as an Assistant Professor at the UTI Institute of Capital Markets, Mumbai for about a decade.

Visiting Faculty

Mr. G. Mahalingam

Mr Mahalingam is Executive Director and former regional director of Reserve Bank of India. He is associated with RBI from last 30 years with various roles as Inspecting officer, Chief Forex dealer, Chief Investment Dealer, Head of Internal Debt Management Department. He was also advisor to Central Bank of Oman for monetary operations. Currently, he is involved with RBI in monitoring and surveillance of money/Forex/G-Sec/Derivative Markets Intervention Operations and conduct of Liquidity Operations, Forex Intervention Operations and Open Market Operations. Moreover, he was six years faculty in Reserve Bank Officers Training College. He is M.Sc. in Statistics and Operations research from IIT, Kanpur and an MBA in International Banking and Finance from Birmingham Business School, UK. He teaches various financial engineering and risk management issues in Indian Market context.

Prof. Neeraj Hatekar

Prof. Neeraj, M.A. and Ph.D., is a Professor at Department of Economics (Autonomous), Centre of Advance Studies, University of Mumbai. His area of interest is Econometrics, Game Theory and Experimental Economics. He has been visiting fellow at University of Cambridge and University of Ulster, UK. He has several publications in the journals of international repute. He teaches Game Theoretic Applications in Financial Engineering and Applied Financial Econometrics at NISM.

Mr. Suneel Sarswat

Mr. Suneel Sarswat is an MSc in Statistics and Informatics from the Department of Mathematics, IIT Bombay. Before joining NISM, he worked on Financial Analytics at Bank of America (now BoFA Merrill Lynch). He has keen interest in Mathematics, Computational Finance and Financial Computing. He has done vital projects such as the application of neural networks in financial analysis, credit ratings and trading algorithms involving pattern recognition. He has participated in national and international workshops and conferences. Currently, he is pursuing his doctorate in Computer Science from TIFR. He teaches Computational Finance at NISM.

Dr. Sushil. Torne

He is a Ph.D in economics with specialization in Infrastructure finance, Financial Economics, Urban Economics, Quantitative Economics, Econometrics, having research interest in Structured Financial Products and Machine Learning. He was a Fellow in the Department of Economics, University of Mumbai. His recent research flows in the topics on Machine learning techniques for Big Data application. Prior to his Ph.D he has three years experience in Commodity and FOREX markets on the advisory panel for the trading room.

Mr. Harjeet Singh,

He is CFA, FRM, PRM, CAIA, CMT and M.S. (Financial Mathematics) from Stanford University, USA and PGDBM (Finance & Economics), XLRI School of Business. He is currently working with Nomura Securities, as Associate, Global Markets & Risk Management Group – Fixed Income. He has over 5 years of industry experience. Previously he had worked as Associate, Global Risk - Model Validation Group with Nomura Securities, Dealer, Global Markets – Treasury, Corporate Sales with Standard Chartered Bank.

Mr. Chirag Shah

He is a Derivatives expert, and has worked for 6 years as a fund manager and advisor. He has worked with some prominent brokerage houses like Axis Securities and Angel Broking. He has conducted workshops and seminars on derivatives across 30 cities in India. He is also a visiting faculty for derivatives at Mumbai University and other B Schools. He is postgraduate in Finance and pursuing his PhD. He has developed many derivatives strategies and algorithms. He teaches Trading Aspects of Derivatives at NISM.

Mr. Sanjoy Choudhury

He is Principal – Radiant Consulting spearheading its Treasury and Risk Consulting, Training and Research business including product and services offering to clients across all asset classes. He is an experienced financial market professional in the Banking & Financial Services Industry with over 16 years of experience spread across various organizations. He is a multi-skilled OTC Derivatives and Financial Risk professional with extensive knowledge and experience of Pricing, Valuation, Financial Derivatives Modelling, Hedging and Risk of Interest Rate, FX, Equity and Credit Derivatives including financial research, analysis and training. He teaches Risk Management at NISM.

Mr. Chandresh Shah

He has more than 15 years of experience in Banks and Financial Institutions. He is currently working with Aviva as the Head of Risk Management. His past assignments include Risk Management and Compliance role with Tata Capital, Standard Chartered, HSBC and SEBI. He is a qualified accountant and a post graduate in management from the University of Mumbai. He also holds CFA charter and FRM designation. He teaches Risk Management at NISM.

Mr. Kalyan Roy,

He is Master of Statistics Indian Statistical Institute, Kolkata, Bachelor of Statistics Indian Statistical Institute, Kolkata. He is the Head of Quantitative Analytics at Capital Metrics & Risk Solutions. He is a vastly experienced professional. In a career spanning over sixteen years he has held various positions in the industry. Previously he worked as a Quantitative Analyst with Deep Value Technology, an innovative firm specializing in high-performance algorithmic trading strategy vehicles where he was involved in studying stochastic models of equity market microstructure, developing ultra high frequency trading algorithms, statistical modelling, estimation of volatility based on ultra high frequency data, building factor models for the S&P500 stocks, statistical modelling of market and limit order arrival times and cancellation times and ultra high frequency equity price time series.

Prior to that he had worked as Statistical Consultant with Indiana University, U.S.A. where he was involved in modelling for researchers in physical, biomedical and social sciences. He had worked as Statistical Analyst with CITIBANK, Chicago, U.S.A. where he worked on consumer response modelling. He worked as Statistical Analyst with BANK ONE, Delaware, U.S.A. where he worked on consumer credit risk modelling. He had worked as Statistical Modeller with IMS America, Pennsylvania, U.S.A. He had been a Lead Consultant with Symphony Services, Bangalore, India and Market Research Director with IMRB International, New Delhi.

Placements

NISM provides placement assistance to all students who successfully complete its courses. We have an active placement program in place to provide job opportunities to our students in relevant areas.

NISM receives enquiries from investment banks, investment analytics firms, hedge funds, broking houses, financial software companies and other financial institutions for placement of our students in their Quant teams.

Past NISM placements

- Anand Rathi Securities

- Asit C Mehta Intermediates
- Bank of America (Continuum)
- Canara Bank Securities Ltd.
- Capgemini
- CARE Ratings
- Credit Suisse
- E Clerx
- Federal Bank
- JMN Investment Research
- J M Financial
- Hansa Solutions
- HDFC Bank
- ICICI Bank
- ICRA Management Services
- India Nivesh
- I-Peritus
- IRIS Business Solutions
- Kotak Securities Ltd
- LKP Securities Ltd.
- Markit
- Mata Securities
- New Berry Advisors Ltd
- Nomura
- Punjab National Bank
- PNB GILTS
- Reserve Bank of India
- SES Governance

- SBI Mutual Fund
- State Bank of India
- SWIFT
- Syntel
- Tariff Authority for Major Ports
- TCS
- Thomson Reuters
- Yes Bank
- Universal Sompo General Insurance
- UTI Mutual Fund
- Zephyr Financial

Awards and Sponsorships

Degree Awards

The degree will be awarded jointly with NISM and Department of Economics, University of Mumbai.

Scholarships

Sponsored candidates are those whose application forms are forwarded to NISM through their respective employers, being eligible organizations, as described in the next paragraph. The employer should furnish an undertaking to grant study leave to the said candidates and also undertake to bear all the fees. Eligible organizations would include

1. Government Departments/ Public Sector Undertakings
2. Public companies or Trusts registered with SEBI
3. Banks/NBFCs recognized by RBI
4. Insurance Companies/Intermediaries recognized by IRDA.

A maximum of five seats are reserved for sponsored candidates. However, the sponsored candidates have to participate in the admission processes as applicable to other candidates. If the number of sponsored candidates is inadequate then the seats reserved for the sponsored candidates may be offered to other candidates. Sponsored candidates are not allowed to participate in campus placement process.

Admission Procedure

Eligibility Criteria

Minimum qualification

A bachelor's degree from a recognised Indian university or equivalent with a minimum of 50% in aggregate with the exposure of mathematics at 10+2 level

Age

There is no age limit for the programme, but it is desirable that the candidate is below 30 years of age.

Personal Interview

Candidates will be shortlisted on the basis of profile for a personal interview. The shortlisted candidates will be intimated through email and/or through NISM website. Personal interviews are likely to be held at Mumbai direct/telephonic in July 2015. NISM will intimate the exact date, time and venue of the personal interview to the shortlisted candidates.

All expenses related to appearing for personal interview shall be borne by the candidate. The Institute will not bear or reimburse any expenditure in this regard. The Institute reserves the right to postpone or cancel the dates of personal interview. Candidates are also advised to visit the Institute's website for any updates and other information. The maximum class strength will be 30 students. NISM reserves the right to increase or decrease the number, depending on the quality of the applications received for consideration. Hostel accommodation may be offered depending upon availability. Preference will be given to outstation and lady candidates as may be decided by the Institute.

Announcement of Selected Candidates

The list of selected candidates will be displayed on the Institute's website on July-August, 2015. Selected candidates would be required to pay the first instalment of fees (see table of fees) on or before July 30th 2015. Provisional admission offered to selected candidates who do not pay the fees on or before the stipulated date would automatically stand cancelled.

Fee Structure

NO.	PARTICULARS	FEE AMOUNT `
01	Tuition Fee ¹	1,90,000
02	Examination Fee	10,000
03	Library Fee	10,000

Refundable Deposits

In addition, the admitted students are required to pay refundable deposits, subject to terms and conditions as detailed below:

NO.	PARTICULARS	AMOUNT `
01	Library Deposit	10,000
02	Hostel Room Deposit*	10,000

Non-Refundable Deposits

The students are also required to pay the following charges which are not-refundable.

NO.	PARTICULARS	AMOUNT `
01	Alumni Association Fund (Annual)	2,000
02	Hostel Rent (monthly)	3,000
03	Boarding Charges*	To be paid on monthly basis
04	Lunch & Tea charges per month **	To be paid on monthly basis

Educational Loan

The Institute facilitates students in securing educational loans. At present, the Institute has arrangements to direct applicants to Credila and HDFC Bank. Arrangements with more

¹ These fees are tentative and subject to change

*Applicable for students availing of hostel facility. All hostel rooms are non-A/C. Deposits are refundable subject to adjustment of any dues from the students. These are paid separately and directly to the care-taker in cash every month.

**Applicable to day-scholars only.

institutions are underway. It is to be understood that NISM does not recommend or guarantee the loans. In the event of any delay in securing loans, students have to arrange for their own funds to pay all the fees, deposits and charges as per the payment schedule provided at the time of joining the programme. However, on a later date, if the loan is secured, the amounts paid by the student will be refunded without any interest on receipt of the amounts from the entity that has offered the loan to the student

Commencement of online registration	June 1, 2015
Last date for online registration	July 15, 2015
Announcement of selected candidates for interview	July 20, 2015
*Personal interviews	July 25 – 26, 2015
Announcement of list of selected candidates	July 30, 2015
Last date for payment of term I fees	August 7, 2015
Programme commencement and orientation	August 10, 2015