JAI HIND COLLEGE

Basantsingh Institute of Science & J.T. Lalvani Institute of Commerce
and
Sheila Gopal Raheja College of Management
(Empowered Autonomous)

Bachelors in Actuarial Science & Quantitative Finance (BAQF)

A Premier Interdisciplinary Program for Careers in Finance, Analytics, Risk Management and Actuaries.

Course Brochure

Master Numbers **Manage Risk** **Build Wealth**

About the Program

The Bachelors in Actuarial Science & Quantitative Finance (BAQF) is an interdisciplinary undergraduate program designed to prepare students for careers in finance, analytics, risk management, insurance and related domains. The key features involve integration of quantitative reasoning with core financial concepts to enable solving real-world challenges in the financial, banking and insurance sectors.

Who Should Pursue BAQF?

Anyone with a strong aptitude for logical reasoning, analytical mindset and mathematical abilities

Program Goals

- Develop expertise in actuarial science and quantitative finance for resolving financial and risk management challenges
- Foster adaptability with emerging technologies like data science, AI, and fintech in financial contexts
- Enhance analytical and problem-solving skills using mathematical and statistical methods
- Promote data-driven decision-making and proactive risk assessment in the financial and insurance sectors
- Develop strategic and leadership potential through experiential learning
- Master business writing, professional communication for documentation and stakeholder engagement

What You'll Gain

Build an integrated skill set to excel in academic and professional certifications.

Excel & VBA
Financial Modelling & Valuation

R Programming
Statistical & Actuarial Analysis

Python
Data Analytics & Automation

SQL
Database Querying & Management

Bloomberg Terminal
Market Data & Investment Research

Power BI
Interactive Data Visualization

Risk Management
Risk Assessment & Management

Team Collaboration
Professional Communication

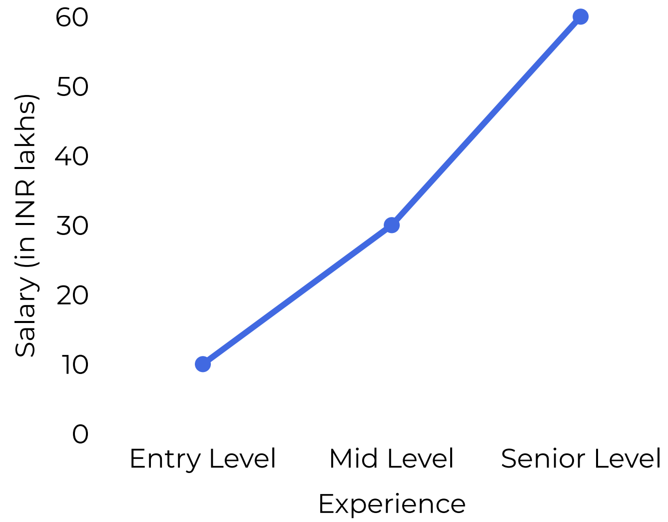
Research Skills
Financial & Actuarial Research

Actuarial Science

Actuarial Science is a specialised field that applies mathematical and statistical models to evaluate financial risks in banking, investments, insurance, pension funds,and other industries.

Scope

- India will require over 25,000 new actuaries by 2030, with global demand projected to grow by 300%.
- Top recruiters include: EY, Pwc, Deloitte, Swiss Re, Milliman, JP Morgan, Goldman Sachs, ICICI Lombard and other global leaders in banking, insurance, consulting, and financial services.



Actuarial Salary Progression

Growth Curve

Graduates typically begin their careers as Actuarial or Risk Analysts moving further towards positions such as Appointed Actuary, Chief Risk Officer or Consultants.

Exam Session	Year	Subject
April 2026	1	CS1 + CB2
Sept 2026	2	CB1 + CB3
April 2027	2	CM2
Sept 2027	3	CP2
April 2028	3	CS2
Sept 2028	4	CP1 + CM1

Proposed timeline for clearing actuarial papers in course of our BAQF program.

In India, the actuarial profession is governed by the Institute of Actuaries of India (IAI) and globally by bodies like the Institute and Faculty of Actuaries (IFoA), UK. To become a fully qualified actuary with either body, a student must clear a total of 13 professional exams.

Our BAQF program is carefully curated to cover 100% academic content of 9 out of the 13 exams.

Quantitative Finance

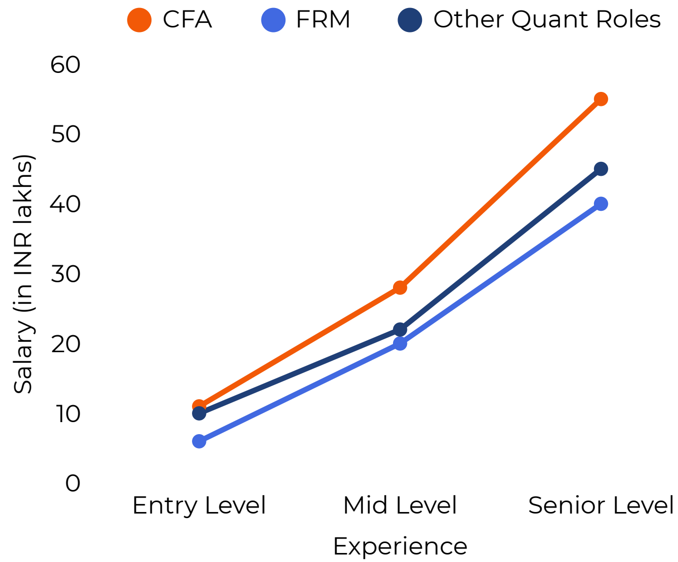
Quantitative Finance combines mathematics, statistics, and computational tools to model financial markets, optimise investments, and manage risk in global financial systems.

Scope

- India will require over 1.5–2 lakh new professionals in Quantitative Finance, Risk, and Analytics by 2030, with global demand projected to grow 25%+ in the next 5 years.
- Top recruiters include Goldman Sachs, JPMorgan, BlackRock, Citibank, Axis AMC, and leading global investment firms and hedge funds.

Growth Curve

Graduates begin as Quant Analysts, Investment Analysts, or Risk Analysts, progressing to roles like Portfolio Manager, Quant Strategist, or Chief Investment Officer.



Salary Trajectory Across Quant Roles

Exam Session	Year	Certification
May 2027	2	CFA Level 1
May 2028	3	CFA Level 2 / FRM Part 1
Nov 2028	4	FRM Part 2 / CFA Level 3

Proposed Timeline for CFA and FRM Exams in the course of our BAQF program

The Quantitative Finance track is academically mapped to **CFA®** and **FRM®** certifications—global benchmarks in finance and risk management. Students gain deep exposure to core topics across all 3 CFA levels and both parts of FRM, covering up to 99% of the syllabi, empowering them to attempt these qualifications during the course of the program.

Semester-wise Curriculum Overview

The BAQF program follows a structured semester-wise progression in alignment with NEP 2020.

Semester 1

Fundamentals of Finance	1
Economic Principles and Market Dynamics	2
Principles of Corporate Finance and Governance	3
Fundamentals of Statistics and Probability	4
Mathematical Foundations for Quantitative Analysis	5
Introduction to Basic Excel	6
Introduction to R Programming and Python	7
General Communication	8

Semester 2

Essentials of Quantitative Finance	1
Inference and Credibility Analysis	2
Macroeconomic Analysis	3
Corporate Financial Insight	4
Business Management	5
Advanced Excel with VBA	6
Statistical Computing with R	7
Business Communication	8
Ethics & Professionalism	9

Semester 3

Asset-Liability Management and Valuation	1
Introduction to Risk Management and Uncertainty	2
Behavioral Finance and Investment Decision-Making	3
Portfolio Management and Wealth Optimization	4
Financial Regulation and Compliance	5
Financial Modeling with Excel	6
Communication Skills - I	7
Co-Curricular Course	8
Project Work	9

Semester 4

Derivatives and Financial Instruments	1
Advanced Risk Management Techniques	2
Investment Banking and Capital Markets	3
Strategic Portfolio Management	4
Financial Engineering in Excel	5
Model Documentation and Reporting Standards	6
Machine Learning for Financial Applications	7
Communication Skills - II	8
Community Engagement	9

Semester 5

Specialisation in Actuarial Science

Life Contingencies and Actuarial Mathematics	1
Advanced Statistical Modeling for Insurance	2
Statistical Methods for Actuarial Science	3
Actuarial Risk Management and Solvency	4
Advanced Ethics and Governance in Finance and Insurance	5
Excel Applications in Actuarial Science	6
Internship	7

OR

Specialisation in Quantitative Finance

Mergers, Acquisitions, and Corporate Restructuring	1
Portfolio Optimization and Risk Management	2
Time Series Analysis for Financial Markets	3
Quantitative Risk Management for Finance	4
Advanced Ethics and Governance in Finance and Insurance	5
Alternative Investments and Hedge Fund Strategies	6
Internship	7

Semester 6

Specialisation in Actuarial Science

Advanced Life Contingencies	1
Stochastic Processes in Actuarial Science	2
Survival Analysis and Mortality Modeling	3
Financial Analysis for Actuarial Practice	4
Excel Applications in Actuarial Science	5
R Programming for Actuarial Data Analysis	6
Project Work	7

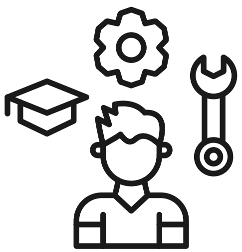
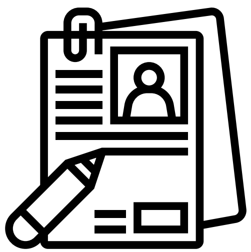
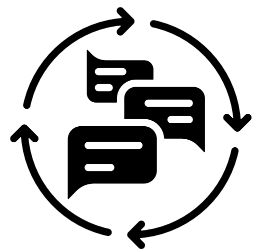
OR

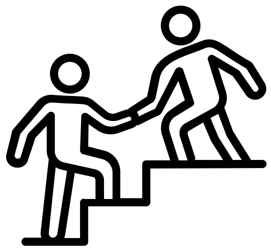
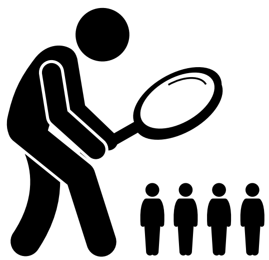
Specialisation in Quantitative Finance

Financial Engineering and Derivatives Strategies	1
Global Financial Markets and Currency Risk	2
Behavioral Finance and Wealth Management	3
Financial Statement Analysis for Investment	4
Advanced Programming for Financial Data Analysis	5
Python & SQL	6
Project Work	7

Teaching-Learning Strategy

Judicious integration of interactive lecture sessions by expert faculty and i**ndustry professionals** with hands-on training through **simulations, case studies, and real-world projects**. Use of the **flipped classroom** model maximises engagement with foundational content online, reserving in-person sessions for discussions, problem-solving, and **collaborative teamwork**. Field visits, **mentorship** programs, and tools like **R, Python, and Excel VBA** through **coding and software BootCamp** ensure practical mastery, while continuous feedback and research-driven **capstone projects** cultivate critical thinking and innovative ideas essentials for mastery in actuarial science and quant analysis.

Sample Live Projects

- Portfolio Optimisation Under Real-World Constraints
- Impact of Behavioural Finance on Retirement Planning
- Credit Risk Analytics Using Machine Learning
- Valuation of Exotic Derivatives
- Predictive Analytics for Policy Lapse in Life Insurance
- Back-testing Basic Investment Strategies Using Python
- Designing an Insurance Product with Actuarial Pricing
- Behavioural Biases in Financial Decision-Making Among Students
- Introduction to ESG Investing: Creating a Basic Risk Scorecard
- Risk Modelling in Health Insurance Portfolios

Meet Your Mentor

Chitra Jayasimha

Fellow Actuary, Gold Medalist in Statistics, Chairperson of NPS Trust and Founder of Universal Actuaries; formerly held leadership roles at Aon Hewitt, Mercer, Swiss Re, and ING Vysya

Vamsidhar Ambatipudi

Fellow Actuary, FRM, MBA (IIM Indore), Computer Science Graduate, Professor at BITS Pilani (WILP)

Rushabh Shethiya

Fellow Actuary, CFA Level III, LLB (Government Law College); formerly worked at PWC, EY and WTW

Yash Prahladka

Fellow Actuary, CFA Charterholder, Manager at SBI Life, Formerly worked at ICICI Prudential.

Pawan Kumar Agrawal

FRM , M.Tech (Data Science, NMIMS), Dep. Vice President at a RBL bank with 20+ years of experience.

Meet Your Mentor

Priya Agarwal
Fellow Actuary (AIR 1 in SA3), SRCC Alumnus, Asst. VP at Swiss Re, formerly worked at RSA

Dr. Richa Kothari
Semi Qualified Actuary, PhD in Economics, Asst. Professor at IILM, formerly worked at Bhawanipur Education Society and Presidency University.

Dr. Vijay Tiwari
PhD in Mathematics; Assistant Professor and BAQF Program Coordinator at Jai Hind College.

Gajanan Kharche
Senior Actuarial professional, B.E. (IT); formerly worked with Swiss Re as Asst VP and WNS Global as Group Manager

Tanvee Dedhia
Semi-Qualified Actuary, Analyst at WTW, Formerly worked with Marsh McLennan

Career Sectors

Investment Banking and Portfolio Management
Asset and Wealth Management
Credit Rating and Treasury
Consulting and Analytics

Health, Life and General Insurance
Reinsurance and Pension Funds
Regulatory and Policy Institutions
Fintech and Innovation

ADMISSION OPEN for academic year 2025-26

Applicants must have completed Class XII with Mathematics or Statistics. Selection is based on performance in the Jai Hind College Common Entrance Exam (JHC-CEE) and a personal interview.

For more details and to apply:

- Register for the Entrance Exam
- View Entrance Exam Notice (PDF)
- More about the BAQF Program

Q1: Is this course only for those pursuing Actuarial exams?
No. BAQF supports CFA and FRM aspirants as well.

Q2: Can I attempt CFA/FRM while in college?
Yes. The structure allows time for certification prep.

Q3: Is prior programming knowledge needed?
No. Programming tools are taught from the basics.

Q4: Will I be placement-ready after graduation?
Yes. The program includes internships, projects, and job readiness training apart from placement support.

Q5: What are the eligibility criteria?
Class XII with Math/Stats. Jai Hind CEE + Interview.

Q6: What is the level of math required?
Comfort with school-level math and logical reasoning is essential. The course progressively builds complexity.

Q7: Is the course open to students from Arts or Commerce background?
Students must have taken Mathematics or Statistics in Class 12, irrespective of stream.

Q8: Will I get support for applying to international universities after graduation?
Yes. Faculty mentors and the placement cell guide students on applications, SOPs, and recommendation letters.

Q9: Can I pursue higher studies abroad after BAQF?
Absolutely. The curriculum provides a strong foundation for MSc, MFE, or MBA programs globally.

Enquiry Form
https://forms.gle/zSeKVhF8jFSGJHDh9
+91-9892018903
admissions.baqf@jaihindcollege.edu.in
www.jaihindcollege.edu.in

Visit our Campus
Jai Hind College,
A Road, Churchgate,
Mumbai - 400020

Connect with us on Social Media
https://linktr.ee/BAQF