Master of Science in Quantitative Economics

The Master of Science in Quantitative Economics at Ahmedabad University is a cutting-edge two-year fully residential postgraduate programme that has been developed keeping in mind the changing environment of both academia and the world of industry. It aims to emphasise on advanced qualitative and quantitative techniques fine-tuned with a delicate blend of rigour, depth, and breadth.

The grand challenges of the modern economic world include data handling with advanced statistical and computational techniques. The objective of the Programme is to prepare a student who is able to use economic theory and contemporary quantitative skills to analyse and solve these grand challenges of the 21st century.

The Programme aims to prepare a student with a sound theoretical background of the principles of economics along with rigorous training on analytical tools, techniques and technologies to address real world issues. The thrust on big data analytics will prepare students to address complex economic problems with greater precision. These challenges include poverty eradication, unemployment, income inequality, financial inclusion, and more recently, healthcare management amid a pandemic. To this effect, the Programme successfully integrates contemporary approaches to complex economic problems that are understood to pose the biggest future challenges to economic policy making across the globe.

Social and economic problems in real life are changing rapidly, thereby requiring new economic solutions through data and technology. To fill up this gap, this Programme offers Artificial Intelligence, Machine Learning, and Experimental Methods, among others, as essential skills to analyse economic situations and develop their solutions at the market and policy level. This requires an integrated understanding of theoretical conceptualisation of economic issues and their underlying theoretical constructs, methods and tools, and their application on contemporary grand challenges that face the society. For instance, the student will engage with grand challenges (like climate change costs) using economic theory and through analysis of large data via AI and ML. The student will become well versed with several such analytical tools and several economic challenges in a contemporary setting.

The Programme aims to lay a strong foundation of theory and integrate the same with practice. It stands in sharp contrast to conventional ways of teaching and learning economic theory. It covers a wide spectrum of courses that witnesses a unique amalgamation of historical perspectives pertaining to the evolution of economics as a discipline and deeper exposition of fundamentals with mathematical underpinnings. Students will learn alternative approaches to economics, such as economics as an art, economics as a science, and most certainly, economics as a social science. In essence, the Programme aims to offer a holistic development of the knowledge base of the aspirants.

The pedagogy of the Programme consists of, but is not limited to, faculty-led classroom discussions, simulation exercises, case analysis/group activities, workshops, and practitioner interactions.

Programme Must Knows

Minimum Programme Credits: 73

Programme Structure

Foundation Module	7
Programme Core	31.5
Disciplinary Core	16.5
Summer Internship	3
Disciplinary Electives	15 or more
Total Credits	**73**

Foundation Module

- Programming using R and Python
- Communication and Writing Skills
- Modelling for Managerial Decisions

Programme Core

- Microeconomics I and II
- Macroeconomics I and II
- Quantitative Methods I and II
- Mathematics for Economics and Finance
- Foundation
- Econometrics
- Applications of Machine Learning
- Economic History and Indian Economic Problems

Disciplinary Core

- Applied Econometrics
- Financial Time Series Analysis
- Big Data for Economics; Policy Evaluations
- Information Economics
- Advanced Econometrics

Disciplinary Electives

- Game Theory
- International Trade
- Behavioural Economics
- Data and Ethics
- Stochastic Processes

- Mergers, Acquisitions, and Private Equity
- Financial Derivatives and Risk Management
- International Finance; Fintech and Financial Services
- Environmental Economics
- Public Economics
- International Macroeconomics
- Models of Economic Development
- Applications of Geographic
- Information System (GIS) in Economics
- Network Economics
- Advanced Game Theory
- Climate Change Economics
- Financial Analytics
- Fixed Income Securities and its Derivatives
- Asset Pricing
- Technical Analysis
- Research in Quantitative Finance
- Behavioral Finance

Eligibility

Admission

Faculty

Ahmedabad University

Commerce Six Roads
Navrangpura, Ahmedabad 380009
Gujarat, India

info@ahduni.edu.in
+91.79.61911000/200/201