

MASTER OF SCIENCE IN ECONOMICS AND DATA ANALYTICS

The Master of Science in Economics and Data Analytics program is driven by the increasing demand for professionals who can apply advanced analytical techniques to economic problems. This program aims to equip students with the necessary skills and knowledge to analyze and interpret complex economic data, make informed decisions, and communicate insights effectively.

Economics and Data Analytics interface in multiple ways. A traditional link has been in Numerical Analysis (or “numerical methods”) – a field within computational data analysis that is also important to econometricians who write their own code. The same can be said for data analytics, which is an increasingly important area as datasets explode in size and availability. More recently, Machine Learning and Artificial Intelligence have become key tools in empirical work in economics, and the drive to link causal inference with Machine Learning brings the fields together tightly. With the advent of Generative Artificial Intelligence and Large Language Models, the opportunities for students who are proficient in both economics and data analytics are greater than ever.

The MS-EDA program taps the strengths of the Stuart School of Business and Illinois Tech’s history of offering economics programs spanning more than a century. Students will have access to faculty and subject matter experts from both disciplines. Students will learn important skills linked to economics and data analytics, with the aim of preparing them for successful careers in economics, finance, government, and business and/or PhD studies.

Stuart School of Business is a global leader in bridging business and technology, offering distinctive education that prepares students to become outstanding professionals in economics, finance, analytics, marketing, business, public administration, operations, and management.

Economics and Analytics at Illinois Tech have a prestigious history that dates back to the late 1800s, offering some of the nation’s first courses in “Family and Consumer Science” (including “Home Economics” and “Household Management”) and the subsequent formation of the Department of Business and Economics in 1926. Over a period of more than 125 years, building on curricular innovations and foundational scholarly works by trailblazing Illinois Tech scholars Herb A. Simon (author of Administrative Behavior, later awarded the Nobel Prize in Economics), Karl Menger (developer of the St. Petersburg paradox in economics) and Abe Sklar (developer of the Copula in financial modeling), the Stuart School of Business has refined education in economics and analytics.

A long-standing leader in curricular innovation, in 1990, building on the foundational works of numerous Illinois Tech scholars and Harold L. Stuart’s own contributions to finance and the broader business community, the Stuart School of Business established quantitative finance as an academic discipline, with a world’s first postgraduate Master’s program in Financial Markets and Trading – a program that highlighted a new model for embedding into a postgraduate academic program the emphases on career readiness

and connectedness with the business community, and transformed business school education.

The Master of Science in Economics and Data Analytics continues Stuart’s tradition of being a frontier innovator in business disciplines, offering students outstanding education and curricular and co-curricular opportunities that prioritize their career success.

Curriculum

Code	Title	Credit Hours
Required Courses		
MBA 505	Microeconomics and Game Theory	3
BUS 550	Business Statistics	3
MSC 511	Mathematical Economics I - Microeconomics	3
MSC 514	Mathematical Economics II - Microeconomics and Macroeconomics	3
MSC 512	Econometrics and Statistics I	3
MSC 515	Econometrics and Statistics II	3
MSC 519	Time Series Analysis	3
MAX 502	Analytics for Decision Making	3
MAX 506	Database Design and SQL	3
MAX 507	Visual Analytics - Data Analytics & Visualization	3
MBA 532	Artificial Intelligence	3
Total Credit Hours		33