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# Master of Science in Business Analytics

Quantic School of Business and Technology

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## Lead with Analytic Precision

Our accredited MSBA degree uniquely blends advanced data analytics with strategic business insights in our award-winning interactive curriculum. You'll delve into courses like Strategic Leadership, Machine Learning, Cloud-based Big Data, and AI-enhanced analytics, all while participating in a Capstone Project that brings this learning to life. This program sharpens your analytical skills and ability to use modern data collection and visualization tools, preparing you to navigate the complexities of business decision-making with confidence.

[MORE ON OUTCOMES →](#)



**CAREER STAGE**  
Early to Mid Career



**CLASS SIZE**  
<100 students



**FORMAT**  
Online Cohort



**DURATION**  
13 months



**TUITION**  
\$950 per month  
[\(learn more\)](#)

Ready to start?

Apply for free!

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## The Active Learning Edge

Our learning approach transcends traditional lecture-based education, blending intuitive active learning with guidance from expert faculty, and honed with the precision of artificial intelligence. Our time-tested interactive methodology is paired with AI Advisor, offering tailored support and opportunities to further explore any topic. This approach ensures learning is interactive, deeply relevant, and always evolving to suit your needs.

[OUR EDUCATIONAL METHOD →](#)

## Master of Science in Business Analytics Curriculum

The curriculum consists of **8 required concentrations**, **2 specializations**, and **1 Capstone Project** during the course of study.

CORE CURRICULUM

SPECIALIZATIONS

CAPSTONE PROJECT



### Business Analytics Foundations

(3 credit hours)

5 Courses

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## Relational Databases



## Big Data and NoSQL



Develop effective data management strategies by exploring big data, including its storage methods in NoSQL databases and the rationale behind these approaches.[VIEW COURSE](#)

*Big Data*

*Intro to NoSQL Databases*

*Properties of NoSQL Databases*



## The ETL Process



Assess methods for managing and manipulating data while examining each step of the Explore-Transform-Load (ETL) pipeline.[VIEW COURSE](#)

*Data Extraction*

*Basic Data Transformations*

*Advanced Data Transformations*

*Data Loading*

*Data Description*

Close ^



## Statistics for Business Analytics

(3 credit hours)

4 Courses



## One-Variable Statistics



Summarize and visualize one-variable datasets using descriptive statistics, boxplots, and histograms to reveal key insights at a glance.[VIEW COURSE](#)

*Data Types*

*Measures of Center and Spread*

*Boxplots and Z-Scores*

*Histograms*

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*Correlation*

*Scatterplots and Regression Lines*

*Covariance and the Correlation Coefficient*



## Regression Analysis



Quantify the strength and explore the nature of relationships between independent and dependent variables.[VIEW COURSE](#)

*Intro to Regression Analysis*

*Simple Linear Regression*

*Linear Regression Equations*

*Residual and Outlier Analysis*

*Multiple Regression and Data Transformation*

*Dummy Variables and Logistic Regression*

*Variable Selection*

*Interpolation and Extrapolation*

*Linear Regression and Finance*



## Statistical Inference: Making Data-Driven Decisions



Close ^



## Strategy and Analytics

(3 credit hours)

6 Courses



## Decision-Making with Analytics



Assess strategies to combat bias and effectively integrate analytics into decision-making processes.[VIEW COURSE](#)

*The Decision-Making Process*

*Cognitive Bias*

*The Lifecycle of an Analytics Project*

*Data Mining Methodologies*

*CRISP-DM in Practice*

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*Defining Strategic Leadership*  
*Qualities of Effective Strategic Leaders*  
*Leading People*  
*Leading Strategic Thinking*  
*Operations and Oversight*



### Design Thinking and Innovation



Use design thinking and innovation to create more effective products and tackle complex problems.[VIEW COURSE](#)

*What Is Design Thinking?*  
*The Process: Empathize and Define*  
*Ideate and Prototype*  
*Test and Repeat*  
*Why Innovate?*  
*Types of Innovation*



### Decision Analysis



Discover how to quantify the predicted effectiveness of various actions, empowering you to make informed decisions in uncertain conditions.[VIEW COURSE](#)

*Intro to Decision Analysis*  
*Core Problem Formulation Techniques*  
*Decision Analysis without Probabilities*  
*Decision Analysis with Probabilities*  
*Decision Analysis with Sample Information*  
*Utility Theory and Decision Analysis*



### Balanced Scorecard



Create, implement, and monitor a successful business strategy using the Balanced Scorecard approach.[VIEW COURSE](#)

*The Balanced Scorecard*  
*The Strategy Map*  
*Key Performance Indicators and Targets*  
*Strategic Initiatives*

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*An Ethical Framework for Business Analytics*

*Six Principles of Data Ethics*

*Ethical Algorithms*

*Regulating Data Protection*

*US Data Privacy Regulations*

Close ^



## Analytics in Business

(3 credit hours)

4 Courses



## Information Systems



Identify various types of information systems and assess how they enhance decision-making to create a competitive advantage.[VIEW COURSE](#)

*What are Information Systems?*

*Information Systems and Business Processes*

*Types of Information Systems*

*Adding Value with Information Systems*



## Analytics in Finance



Acquire a solid grasp of finance fundamentals while exploring how business analytics is transforming financial data analysis.[VIEW COURSE](#)

*The Cost of Money*

*Stocks and Bonds*

*Derivatives*

*Portfolio Management*

*The New Frontier of Financial Data Analysis*

*Analytics in Corporate Finance*

*Analytics in Financial Services*



## Analytics in Marketing



Examine how business analytics can transform an organization's marketing strategy by exploring a diverse range of data-driven applications in the marketing field.[VIEW COURSE](#)

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## Supply Chain Management



Explore the inner workings of supply chains and design analytics strategies that promote efficient production and timely delivery of products to customers.[VIEW COURSE](#)

*Intro to Supply Chain Management*

*Building a Supply Chain*

*Product Sourcing and Purchasing*

*Production at Construction Junction*

*Inventory Management Systems*

*Crafting the Coffee Supply* SMARTCASE

*Forecasting Demand*

*Production Planning*

*Inventory Control*

*Supply Chain Network Design*

Close ^



## Communicating with Data

(3 credit hours)

5 Courses



Data Visualization



Storytelling with Data



Business Intelligence



Meeting User Needs



Effective Business Writing



Close ^

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### Analytics with Big Data and AI

(3 credit hours)

6 Courses

[Learn more](#) ▾

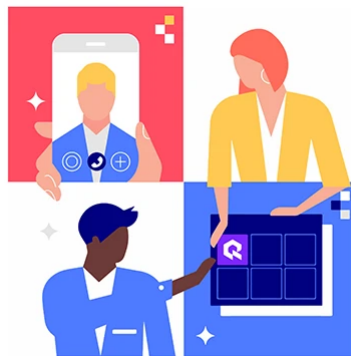


### Advanced Analytics Methods and Frameworks

(2 credit hours)

3 Courses

[Learn more](#) ▾



## Social Learning

Experience online social learning that's truly social! Collaborate with peers globally on data-driven case studies, group projects, and enriching discussions. The journey peaks with an impactful Capstone Project, blending theory with practical application showcasing your readiness for a data-centric world.

[OUR GLOBAL EVENTS](#) →



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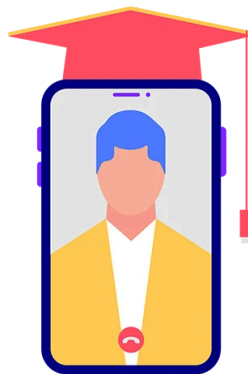
Admissions



## Global Events

Enrich your education with optional extended weekend conferences and meetups held online and in cities globally. Conferences offer opportunities to engage in corporate site visits, workshops, and unparalleled networking that connects you with exceptional peers and Quantic faculty.

[MORE ABOUT EVENTS →](#)



## The MSBA Degree

The Master of Science in Business Analytics degree is awarded by Quantic School of Business and Technology, a DEAC accredited, degree granting institution of higher education, licensed by the Office of the State Superintendent of Education (OSSE) of Washington, DC.

[LEARN MORE ABOUT ACCREDITATION →](#)

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See what students have to say about the rigor and flexibility of our programs.



Weichao Rachel Zhai

**STANFORD UNIVERSITY**

Senior Associate, Investment, Vertex  
Ventures

"Really informative classes  
and intuitive online platform.

Great learning and  
networking opportunity, I  
would highly recommend it!"



Tom Garvey

**UNIVERSITY OF OXFORD**

Head of Regional Business Performance,  
Google

"Quantic was a great  
experience. Highly engaging  
content delivered  
thoughtfully and in an  
interactive way. It feels like  
the future of education!"

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*Commission (DEAC). The DEAC is listed by the United States Department of Education as a recognized accrediting agency and is also recognized by the Council for Higher Education Accreditation (CHEA).*

*Please note that the Quantic Executive Education programs are non-credit continuing education or professional development programs that are approved by the District of Columbia Higher Education Licensure Commission. Distance Education Accrediting Commission accreditation is not available for continuing education and professional development programs.*

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