

# Master of Science in Business Analytics

Be on the forefront of big data in only nine months with the W. P. Carey Master of Science in Business Analytics (MS-BA). From smart phones to social media and the emerging Internet of Things, companies need to manage more and more complex data every day.

This explosion of big data impacts every part of the global economy, making business analytics specialists one of the fastest-growing careers in our economy.



“Data scientists do the processing, cleaning, and modeling. But to explain those things to a manager or executive, you need someone who can understand both sides of the coin. Emphasizing that need to communicate the value of data — that is the art of this program.”

Sai Giridhar Tata, MS-BA 2016

## Leverage analytics and data to deliver business-critical solutions.

**\$260** billion

worldwide revenue estimate  
for big data and business  
analytics in 2022

— IDC, 2018

**\$75,214**

median salary of 2020  
domestic and permanent  
resident MS-BA graduates

**3** billion



2014

**4.5** billion



2020

Over half the world's population  
now uses the internet, a 50%  
increase in just six years.

— Domo, Data Never Sleeps 8.0, 2020



**U.S. News & World Report**  
No. 1 Most innovative schools  
No. 10 Business analytics,  
graduate

# Master of Science in Business Analytics curriculum

The W. P. Carey MS-BA will deepen your quantitative and analytical skills, allowing you to derive value from data and modeling, lead data-driven analyses, and create a business advantage.

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## Introduction to Enterprise Analytics

Understand contextualized analytics and how data flows and is managed across business processes.

## Data Mining I

Extract predictive analytics and patterns from numeric data.

## Career Leadership (elective)

Apply best practices of career management to make an informed career choice and develop career management skills.

## Analytical Decision-making Tools I

Learn linear, nonlinear, and integer programming, network models, and metaheuristics.

## Introduction to Applied Analytics

Solve modern supply chain problems, from forecasting demand to inventory management to manufacturing cycle times.

## Data-driven Quality Management

Improve processes with Six Sigma and Design for Six Sigma, and use DMAIC to implement Six Sigma projects.

## Analytical Decision-making Tools II

Model situations where uncertainty is a major factor, using decision trees, queuing theory, Monte Carlo simulation, and more.

## Data Mining II

Support informed decision-making and extract predictive analytics and patterns from non-numeric, unstructured data.

## Business Analytics Strategy

Align, plan for, direct investments in, and provide governance of processes for renewal of analytic deployments.

## Marketing Analytics

Analyze product purchase decisions, configure new products, develop market segments, forecast market share, and determine optimal pricing strategies.

## Applied Project

Address a problem in a domain where the use of your analytics skills yields real-world experience through projects drawn from real business settings that represent important aspects of organizations' deployment of analytics in their business model.

## STEM-designated program

The STEM designation — administered by the U.S. Immigration and Customs Enforcement agency within the Department of Homeland Security — allows eligible graduates on student visas access to an Optional Practical Training (OPT) extension, up to 36 months, as compared to 12 months for non-STEM degrees.

The longer work authorization term may help international students gain additional real-world skills and experience in the U.S.