BIG DATA. BIGGER OPPORTUNITY.

Data Analysis
Optimization
Risk
Data Warehousing
Network Analysis
Data Mining
Social Media
Business Intelligence
Big Data
Web Analytics

SQL R SAS Python Hadoop MapReduce Pig Hive NoSQL

Master of Science
Business Intelligence & Analytics

School of Business
Making the big decisions with Big Data.

Survival in today’s marketplace demands professionals who combine a passion for innovation with the ability to analyze and interpret large volumes of data. But few managers possess the technical training to successfully lead their organization’s forays into technologies, such as Twitter, Facebook and the “Internet of Things.” That leaves those companies unable to capitalize on the limitless opportunities available through such universally available tools and the endless data they provide.

The BI&A program provides the analytical and professional skills necessary to take advantage of this data, to move organizations from the traditional mode of intuition-based decision making to fact-based decision making. The curriculum covers the concepts and tools at the forefront of the Big Data revolution: database management, data warehousing, data and text mining, web mining, social network analytics, optimization, risk analytics, and technologies such as Hadoop and data stream analytics. Upon earning their degrees, students will have completed a capstone course requiring them to work on a major project, using real data, under the guidance of an industry mentor. Coursework also emphasizes extensive training in traditional business skills, such as oral and written communications skills, analytical thinking, and ethical reasoning.

Developed with industry insight.

The Stevens BI&A program was one of the first of its kind in the U.S. when it launched, and it remains ahead of the competition because of the input we solicit from the industry advisers on the program’s board. We leverage our location just outside of New York to incorporate the knowledge and experience of Fortune 500 executives and key research leaders across industries. The input we receive emphasizes industry’s need for analysts with a deep knowledge of the disciplines underlying data science, strong technical skills, an understanding of the business implications of their analyses and, most importantly, the ability to effectively communicate their findings to management. Our 36-credit, multidisciplinary curriculum reflects the demand for business-oriented, data-driven managers. Full-time students can complete the degree in 15 months.

Professional skills

Business and communication skills are developed through a strong learning culture nurtured by seminars, industry-supported job-skills workshops, talks by industry leaders and an active student club.

Disciplinary knowledge

The centerpiece of the program is a rigorous 12-course curriculum that emphasizes both theory and practice, culminating in a practicum course in which students work on real applications alongside industry mentors in a student’s area of interest.

Technical skills

Strong software skills are a requirement to manipulate, analyze and mine Big Data. To that end, students attend a series of free boot camps that provide training in industry-standard software packages, such as SQL, R, SAS, Python and Hadoop. These intensive boot camps occur over four three-day weekends in the fall and spring semesters.

Infrastructure

Stevens’ Hanlon Financial Systems Lab offers the kind of technology in use on Wall Street, from top-of-the-line data management software to Bloomberg terminals, and a number of large data sets that support research and industry-strength educational exercises.

By 2018, the United States alone could face a shortage of 140,000 to 190,000 people with deep analytical skills, as well as 1.5 million managers and analysts with the know-how to use the analysis of Big Data to make effective decisions.”

— McKinsey Global Institute

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“The strength of the program lies in the combination of rigorous classwork and hands-on team projects. Combining that with a fantastic location, a truly engaged faculty and industry advisers makes the Stevens BI&A degree the perfect jump-start to an analytics position in any business domain.”

— Alex Liskov, BI&A student

“The software tools taught at Stevens are central to industry. A lot of companies use these programs, and knowing them gives you an edge over other people. The way professors teach them, and the fact that they’re teaching them, gives you an advantage over students from other universities.”

— Enrique Lance, data scientist, Collaborative Consulting, Class of 2014
Immediate demand.

Our graduates are hired by companies in a broad range of industries, including financial services, consulting, media, life sciences, information technology and telecommunications. They have begun their careers in both large well-established companies and in small entrepreneurial startups in the field of data analytics. Our graduates have accepted positions at companies such as Affinity Solutions, Apple, Bank of America, Ernst & Young, Morgan Stanley, New York Times, Pricewaterhouse Coopers, SanDisk, TIAA-CREF and Verizon Wireless.

BI&A graduates can immediately apply knowledge learned in the classroom to transform Big Data into business intelligence that can be used to drive efficiency, maximize investments, understand consumer and market data, and leverage overall knowledge for effective decision making.

“Companies are really looking for people who can use analytics to interpret the data, but they also need business acumen — and in this program, they get both.”

Rochelle Lostumbo, business unit executive, IBM Software Solutions

Certificate programs

Stevens also offers four-course, 12-credit graduate certificates for practitioners interested in improving their understanding of specific areas of data, web and social analytics, and their ability to manage data-intensive applications in industry. Certificates are available in:

- Business Intelligence and Analytics
- Marketing Analytics
- Supply Chain Analytics

Please visit stevens.edu/howe/BIA for a listing of the required courses for each.
ABOUT STEVENS INSTITUTE OF TECHNOLOGY

Founded in 1870 and celebrating more than 140 years of innovation, Stevens Institute of Technology, The Innovation University™, lives at the intersection of industry, academia and research. Its students, faculty and partners leverage their collective experience and a culture of innovation, research and entrepreneurship to confront global challenges in engineering, science, systems and business.

ABOUT THE SCHOOL OF BUSINESS

The School of Business is one of the world’s pre-eminent institutions in the education of current and future professionals who lead and manage technological innovation in businesses around the world. Our programs are designed and delivered by leading academic researchers and industry practitioners who are masters of their respective disciplines and important contributors to the creation of new knowledge in the field.

ADMISSION REQUIREMENTS FOR MASTER’S PROGRAM

• A bachelor’s degree in science, mathematics, computer science, engineering or a related field, with a “B” average, from an accredited school.
• Official college transcripts.
• Two letters of recommendation.
• One year of calculus.
• One course covering basic probability, hypothesis testing and estimation.
• TOEFL (for international students).
• A competitive GMAT or GRE score.*
• At least one year of industry experience preferred.

*Not required for graduate certificate programs.

CONTACT

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