What Skills Can You Gain From a Master of Business Analytics and AI Curriculum?

June 9, 2025

Every click, purchase, and online interaction creates a data trail. Increasingly, companies are leveraging this and other types of data to gain a competitive edge and solve complex business problems. To do this, organizations need skilled professionals to translate vast amounts of data into actionable strategies.

With industries from health care to finance leaning heavily on data, professionals trained in business analytics are in demand. Individuals inspired by the opportunity to do everything from improve the customer experience to predict market shifts by harnessing and analyzing data can develop the expertise by pursuing a Master of Business Analytics and AI degree. For those looking into how to get into graduate school, taking a closer look at a Master of Business Analytics and AI curriculum is a smart place to start.

What Do You Learn in a Master of Business Analytics and AI Program?

A Master of Business Analytics and AI program blends technical training with business problem-solving and hands-on experience. Courses in data management and business intelligence teach students how to build and organize databases; write basic code to retrieve information; and develop an understanding of how data is stored, shared, and protected in an organization. These skills form the backbone of how companies use data to make decisions.

Business analytics students typically dive into statistical modeling and decision-making. The coursework focuses on using data to answer questions and make smart choices. Students may learn how to spot patterns in large data sets using tools such as the programming language R and explore how to weigh risks and make decisions backed by evidence.

With these foundations, students advance into courses focused on solving real business problems with data. This requires learning how to clean and prepare raw data, conduct analyses, and test different strategies. The courses help students ask the right questions, think critically about the results, and use data to support smarter business decisions.

A business analytics curriculum may also include digital analytics courses that explore how people behave online and how to use web analytics tools and techniques to measure website traffic, track user behavior, and improve search rankings and online sales.

Practicum courses and fieldwork offer experiential learning opportunities that give students a chance to put their classroom learning into practice by visiting companies, interviewing professionals, or working directly with executives to see how data is used in the real world. Master of Business Analytics and AI programs may also culminate in a capstone project, in which students team up to solve a real business challenge.

Skills Developed From a Master of Business Analytics and AI Curriculum

A strong business analytics curriculum provides students with more than just technical training. It also teaches students how to think through problems and explain what the data actually means. Here are some valuable skills business analytics students build.

Data Management and Querying

Students learn tools such as Structured Query Language (SQL) to design, build, and manage relational databases — systems that store and organize large volumes of business data. The skills allow professionals to retrieve the right information when they need it.

For example, an analyst at a retail company may use SQL to track which products are selling fast in different regions, helping the team adjust inventory and marketing strategies. In finance, a data analyst may track customer transactions to detect unusual patterns that could signal fraud.

Analytical and Statistical Thinking

Courses in analytical modeling and statistics teach students to work with uncertainty, understand probability, and make sound decisions backed by evidence.

Analysts in retail trying to explain a sudden drop in sales will not just look at weekly revenue — they will examine customer behavior, marketing data, and other factors. In health care, an analyst may investigate longer patient wait times by analyzing appointment data, staffing patterns, and average procedure lengths to identify where delays occur.

In both cases, success depends on not only technical skills but also the ability to frame the right problem and interpret what the numbers are really saying.

Predictive Modeling and Machine Learning

Business analytics professionals often need to spot patterns and forecast what is likely to happen next. Predictive modeling and machine learning skills make that possible. These skills help analysts build systems that can, for example, anticipate customer churn, forecast product demand, or detect early signs of equipment failure.

Business analytics students use programming tools such as Python along with tools such as Scikit-learn and TensorFlow, which help analysts build and test these predictive systems.

Communication and Data Storytelling

Analysts need to know how to present data in clear, persuasive ways. In a Master of Business Analytics and AI program, students develop skills to present complex insights in ways that are impactful. This involves learning how to craft compelling stories around data and tailoring presentations for different audiences.

Additionally, business analytics students gain hands-on experience in using visualization tools, creating intuitive reports, and designing dashboards that make key insights easy to understand.

Benefits of Earning a Master of Business Analytics and AI Degree

Earning a master's degree in business analytics prepares graduates for a wide range of opportunities. The skills gained from a business analytics curriculum open doors to a wide range of industries. Graduates work in consulting, technology, health care, finance, and media.

The A. B. Freeman School of Business at Tulane University reports that 91 percent of graduates from its Master of Business Analytics and AI program are employed within six months of graduation. Employers include top companies such as PwC, Ford, Dell, NBCUniversal, and Goldman Sachs. The average salary of graduates is north of $100,000, making the return on investment significant.

The career-focused approach in the business school's Master of Business Analytics and AI program helps students not only develop analytics skills but also navigate the job market with confidence. The business school collaborates directly with employers to design a curriculum that meets the real needs of industry. From strategic planning to risk management, students leave with the skills to lead in data-driven roles.

Get Ready to Lead in a Data-Driven World

A Master of Business Analytics and AI curriculum prepares professionals to lead in a data-powered world. With the right mix of technical expertise, strategic thinking skills, and real-world experience, graduates are equipped to drive smarter decisions across industries.

Tulane's Master of Business Analytics and AI program helps graduates develop the full tool kit of skills that analytics professionals need to thrive in their field. Explore how the business school can help you become an expert in business analytics and attract the attention of top employers.

Sources:

- IBM, What Is Business Analytics?
- Indeed, "11 Business Analysts Skills (With Definition and Examples)"
- Indeed, "How to Become a Business Analyst: A Complete Career Guide"
- LinkedIn, What Are the Key Skills and Competencies of a Successful Data Storyteller?
- TechTarget, "What Is Data Management and Why Is It Important? Full Guide"