

BUSINESS ANALYTICS

Graduate Program Head	Kevin Linderman
Program Code	BAN
Campus(es)	University Park (M.B.An.)
Degrees Conferred	Master of Business Analytics (M.B.An.)
The Graduate Faculty	View (https:// secure.gradsch.psu.edu/gpms/? searchType=fac&prog=BAN)

The Master's in Business Analytics program focuses on developing the business analytics skills of professionals entering and engaged in business, non-business, and STEM career fields. Advances in technology have greatly enhanced the ability of organizations to capture large sets of structured and unstructured data; however, society's ability to organize, prepare, analyze, and exploit such data has not kept pace with these developments. Companies, governments, and nongovernmental organizations now seek qualified employees who can apply mathematics, statistics, computer science, and operations research techniques to small and large data sets to develop insights that will enhance business decision-making capabilities.

In order to develop highly-skilled business analysts capable of supporting data-driven business decisions, the M.B.An. program is built upon the widely-recognized progression of analytics development: descriptive, predictive, and prescriptive analytics. Through descriptive analytics (i.e., "What *has* happened?"), students develop skills in acquiring, organizing, cleaning, visualizing, and analyzing data from a wide range of business and non-business scenarios to help organizations understand their current operations. Advancing to predictive analytics (i.e., "What *will* happen?"), students use cutting-edge techniques (e.g., data mining) to detect patterns in data and project future outcomes based on past events. The M.B.An. program culminates with students learning prescriptive analytics (i.e., "What *should* happen?") skills, where students practice advanced analytics techniques such as simulation and optimization to help develop the best data-driven courses of action for complex business problems. Throughout the program, the curriculum requires students to apply theories, quantitative techniques, and academic research while thinking critically to solve "real" business problems. Group and individual assignments will challenge students to analyze case studies, build models, and communicate their solutions in both written and verbal form.