

## BUSINESS ANALYTICS CONCENTRATION



Business Analytics is a quantitative approach to business, driven by the intelligent use of data and mathematical models. Practitioners leverage methods from statistics and operations research to form insights and make decisions that improve business performance. Business analytics is crucial to a broad range of industries. Banks need to perform credit risk analysis and analyze streaming transactions in real time to quickly identify potential fraud. Utility companies need to analyze energy usage data to gain a better understanding of demand patterns. Retailers need to perform markdown optimizations, firm-wide liquidity management, and understand the social sentiment around their products and markets to develop more effective campaigns and promotions.

Business Analytics helps such organizations uncover insights from data, build models that relate actions to consequences, and perform optimization and simulation analyses that lead to quality decisions and better outcomes in shorter times. The job opportunities for graduates with data analytical skills have never been more numerous. The business analytics concentration is designed to cater to this need by equipping our undergraduates with the skills needed to crunch huge data sets into meaningful information to further facilitate smart business decision-making.

### Did you know?

According to the U.S. Bureau of Labor Statistics, business-analyst jobs are predicted to increase by 22 percent by 2020. A recent study by McKinsey & Company shows that the United States could face a shortage of 140,000 to 190,000 professionals with deep analytical skills by 2018. Over a third of all business analytics jobs remain on the West Coast working for technology and gaming companies.

The median junior level salaries of \$91,000 on business analytics teams, and up to \$110,000 on the West Coast where competition for entry-level professionals is high.

## BUSINESS ANALYTICS CONCENTRATION REQUIREMENT

### Core Classes

- Statistical Analysis
- Business Analytics

### Elective Classes

- Supply Chain Analytics
- Soft Skills
- Marketing Research
- Decision Making Under Uncertainty
- Data Mining
- Spreadsheet Modeling
- Data Visualization
- Simulation
- Analytic Strategy
- Introduction to Business Programming
- Database Management Systems

# Careers in Business Analytics

## Quantitative Analyst

Many business functions, such as marketing, logistics, and operations management, are becoming more data intensive and mathematically sophisticated. The Business Analytics curriculum will equip students with the quantitative tools to become capable business analysts.

## Business Manager

As the business environment becomes increasingly data-driven, the next generation of business managers will require not only leadership skills, but also analytical skills to succeed. The manager with training in Business Analytics will approach decision making from an optimization perspective and will be an intelligent consumer of data analyses.

## Analytics Bridge

The Business Analytics concentration emphasizes effective communication of technical information, particularly to non-technical audiences. This training will prepare students to be the bridge between an organization's upper management levels and its analytics team or to be the liaison to outside analytics consultants.

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*The Business Analytics concentration provides a very special curriculum to students. I took courses such as data mining, data visualization, and the core business analytics, and they have helped me a great deal in my pursuit of a master's degree. Whether you plan on continuing your education afterwards, or entering the job market right after graduation, the tools and knowledge that you will gain from this the Business Analytics major will definitely help. Everything you will learn is practical and useful in multiple industries.*

— Ken Liang, Business Analytics graduate

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## Spartan Analytics

Founded in March 2018, the Spartan Analytics Club's mission is to further the knowledge of data analytics, enhance professional career skills, and create networking opportunities for SJSU students. We cultivate an environment where colleagues can practice their analytical skills through collaborations alongside like-minded students. For more information, visit <https://www.spartananalytics.org/>



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