

#### **OVERVIEW**

The confluence of the availability of big data, methodological developments and explosion in computing power and storage capacity has given rise to the popularity of business analytics in a wide range of industries across the public and private sectors. Business analytics encompasses approaches that transform data into information and insights, thereby allowing for informed data-driven decision-making. Today's organizations seek professionals with business analytics skills to gain and maintain their competitive advantage.

The B.S. in Business Administration (BSBA) with an option in Business Analytics focuses on preparing students for careers in a very fast-growing field of business analytics. The program provides a strong foundation in business analytics that addresses the opportunities and challenges opened up by massive amounts of data, methodological developments and the explosion in computing power and storage capacity. The program ensures that students build and develop the ability to apply their knowledge and skills to business problems for data-driven decision-making.

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# CAREERS IN BUSINESS ANALYTICS

Employers are currently experiencing a shortage of job candidates with skills in business analytics, and it is expected that the increase in potential employment opportunities in this field will continue to rise. Business analytics job categories include data/business analytics, business intelligence and business analytics in various functional areas (operations research, supply chain, finance, marketing, human resources, healthcare, etc.). The employment of operations research analysts is projected to grow 24.6 percent from 2020 to 2030, according to the Bureau of Labor Statistics. In that period, an estimated 25,600 jobs should open up. The US News and World Report has also recently ranked operations research analysts #5 in best business job, and also reported a median salary of \$86,200.



#### **FACULTY**

The Systems and Operations Management Department faculty are committed to excellence in teaching and research. Our faculty members have advanced degrees in business analytics, operations management, supply chain management, management science or a closely related area. They have published in a wide range of fields, including business analytics, operations, transportation, supply chain management and operations research. Additionally, the faculty have extensive business experience that is incorporated into their classroom-teaching.



#### PROGRAM REQUIREMENTS

Total Units in the Major/Option: 70 General Education Units: 33

Additional Units: 17

Total Units Required for the B.S. Degree: 120

To enter the BSBA program with an option in Business Analytics, students must complete SOM 120 (Basic Business Statistics) or MATH 140 (Introductory Statistics) with a grade of "C" or higher.

#### 1. Common Lower Division Business Core (27 units)

ACCT 220 Introduction to Financial Accounting (3)
ACCT 230 Introduction to Managerial Accounting (3)

BLAW 280 Business Law I (3)

ECON 160 Principles of Microeconomics (3)

ECON 161 Principles of Macroeconomics (3)

ENGL 205 Business Communication in Its Rhetorical Contexts (3)

IS 212 Information Systems for Business Users (3)

MATH 103 Mathematical Methods for Business (3)\*

SOM 120 Basic Business Statistics (3)\*\*

\* MATH 103 or a higher-level mathematics course (e.g., Calculus: MATH 150A or MATH 255A) must be completed with a grade of "C" or better.

\*\*The 4-unit MATH 140 course also satisfies this requirement. Either of them must be completed with a grade of "C" or better. MATH 140 is cross-listed with MATH 140BUS, MATH 140SCI, and MATH 141/L.

#### 2. Common Upper Division Business Core (19 units)

BUS 302 The Gateway Experience (3)
BUS 302L The Gateway Experience Laboratory (1)

BUS 497A or BUS 497B Capstone (3)

FIN 303 Financial Management (3)

MGT 360 Management and Organizational Behavior (3)

MKT 304 Marketing Management (3)

SOM 306 Operations Management (3)

### 3. Upper Division Required Courses for the Option in Business Analytics (15 units)

BANA 320 Predictive Analytics for Business (3)

BANA 410 Machine Learning for Business (3)

BANA 420 Prescriptive Analytics for Business (3)

IS 312 Systems and Technologies for Managers (3) SOM 307 Data Analysis and Modeling for Business (3)\*\*\*

\*\*\* Students must complete SOM 307 (Data Analysis and Modeling for Business) with a grade of "C" or higher.

### 4. Communication Course (3 units): Select 3 units from the following:

BLAW 368 Law, Business, and Ethics (3)

BLAW 372 Ethical and Legal Aspects of Managing Technology (3) ENGL 306 Report Writing (3)

PHIL 305 Business Ethics and Public Policy (3)

### 5. Electives: Select 6 additional units from the following: (at least 3 units from the BANA courses):

BANA 310 Data Visualization for Business (3)

BANA 430 Text Mining and Analytics for Business (3)

BANA 440 Supply Chain Analytics (3)

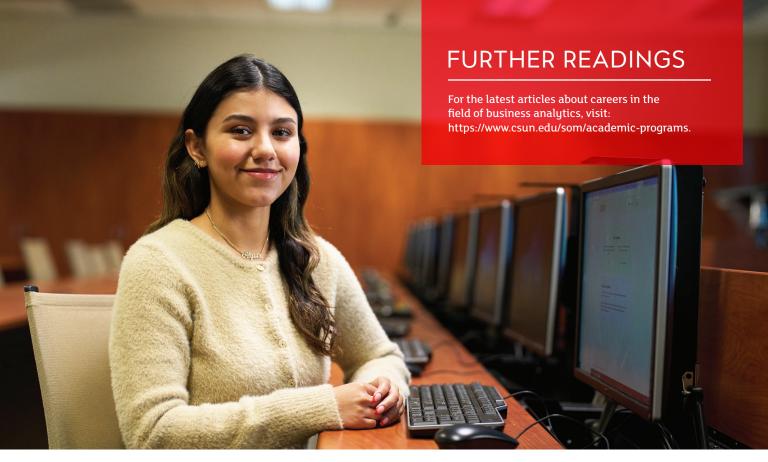
IS 441 Database Management Systems (3)

MKT 356 Marketing Metrics and Insights (3)

SOM 485 Decision Support Systems (3)

#### 6. General Education (48 units)

Undergraduate students must complete 48 units of General Education. 15 units are satisfied by the following courses in the major: MATH 103 satisfies Basic Skills B4 Mathematics/ Quantitative Reasoning; FIN 303 satisfies B5 Scientific Inquiry and Quantitative Reasoning; ECON 160 and ECON 161 satisfy D1 Social Sciences; and IS 212 satisfies E Lifelong Learning and fulfills the Information Competence requirement.



## For more INFORMATION

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