

Applied Business Analytics Concentration

An Applied Business Analytics concentration in the Bachelor of Science degree will provide students with the opportunity to specialize in an area of applied business analytics that is extremely relevant in public, for-profit, or non-profit organizations that require the skills of business analytics. The concentration will build upon the strengths of the UIS undergraduate general education requirements, existing CBM foundation and existing CBM college core coursework to develop competencies that will prepare students for success in diverse areas of business such as business analysts. Students will complete all UIS general education requirements (37+), CBM college foundation coursework (11-15 hours), college core requirements (27 hours), one course of BS MIS (3 hours) and five additional courses to earn the BS in MIS with a concentration in Applied Business Analytics.

Objectives for BS MIS– Business Analytics:

1. Acquire knowledge of the history, evolution, current development, and the basic concepts central to business analytics.
2. Apply data visualization, machine learning, artificial intelligence for effective business problem solving.
3. Conduct business analytics using data mining techniques and know where to find qualified data/resources to interpret the impact on business and institutions.
4. Obtain hands-on experience in business analytics processes from problem identification, data collection, data exploration, descriptive, predictive and prescriptive analysis, and result interpretation

Degree requirements

All majors in the College of Business and Management require foundation knowledge in accounting, economics, mathematics, and statistics. Several of these courses also fulfill UIS general education requirements. Students must earn a minimum grade of C- in each course and a cumulative GPA of at least 2.00 across all foundation courses. UIS courses that satisfy the foundation knowledge requirements include:

Foundation Requirements

ACC 311	Administrative Uses of Accounting	4-6
or ACC 211 & ACC 212	Introduction to Financial Accounting and Introduction to Managerial Accounting	
ECO 213	Statistics for Business and Economics	3
or MAT 121	Applied Statistics	
ECO 201 & ECO 202	Introduction to Microeconomics and Introduction to Macroeconomics	4-6
or ECO 315	Economics for Administration	

Course work equivalent to the above may be accepted upon approval by the student’s advisor and the College of Business and Management by Student Petition form

Total Hours	11-15
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College Core Requirements:

The College core is required of all undergraduate College of Business and Management students. Students must earn a minimum grade of C- in each course and a cumulative GPA of at least 2.0 across all college core courses.

College Core Requirements

BUS 312	Principles of Marketing	3
BUS 322	Principles of Operations Management	3
BUS 331	ECCE: Business, Ethics, and Society	3
FIN 302	Principles of Financial Management	3
MGT 310	Managing Organizational Behavior	3
MGT 330	Business and Managerial Communication	3
MGT 488	Strategic Management: The Capstone ¹	3
MIS 352	Principles of Management Information Systems	3
MIS 376	Business Analytics	3
Total Hours		27

¹ Prerequisite: All college core courses, and within 12 hours of graduation or during the student's last semester. A minimum grade of C (2.0) is required in MGT 488 (a grade of C- or lower will not be accepted).

Program requirements BS MIS - Business Analytics

To earn a Bachelor's of Science in Management Information Systems with Applied Business Analytics a student must:

- Complete at least 48 hours of upper-division (300-400 level) course work;
- Complete at least one half of his or her business course work at UIS (college core and major); and
- Earn a cumulative grade point average of at least 2.0 across all courses required for the major.

All MIS undergraduate majors must complete 18 core credit hours to fulfill the degree requirements as follows:

Core Course Requirements - Concentration

MIS 377	Visual Analytics for Business	3
MIS 385	Data and Information Management	3
MIS 471	Artificial Intelligence and Machine Learning	3
MIS 473	Data Mining and Predictive Analytics	3
MIS 476	Business Analytics Practicum	3

One Elective Course (Select from the following) 3

- MGT 475 Human Resource Analytics
- MKT 432 Research Methods and Analytics in Marketing

Other subject-oriented analytics courses approved by MIS Department (e.g., Python, Marketing Analytics; Financial Analytics; Accounting Analytics)

Total Hours	18
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Other Requirements include:

Engaged Citizenship Common Experience (ECCE) ¹	10
Total Hours	10

¹ The Management Information System degree requires a minimum of three hours of internship course work consisting of an individualized field experience (IPL 300) or an individual project (IPL 301) in the area of Applied Business Analytics. Students are encouraged to complete six hours of internship. Internship hours will be used to fulfill the Engagement Experience ECCE category. Students must complete course work in at least one of the other ECCE categories including U.S. Communities and Global Awareness. The one hour UNI 301 speaker Series course fulfills the last hour of the ECCE requirement (10 total ECCE hours required)

- Only in exceptional cases, using a **Student Petition**, with appropriate College of Business and Management approvals, students may request to waive the three-hour internship requirement and substitute an alternative ECCE course.
- Credit for Prior Learning (IPL 305) may not be used by College of Business and Management students to fulfill degree requirements.