BUSINESS ANALYTICS

This program utilizes skills, technologies, and practices to explore business performance and support data-driven decision-making. It employs descriptive, prescriptive, and predictive modeling, along with other techniques, to extract valuable insights. By combining elements of data analysis, business intelligence, and management science, Business Analytics optimizes organizational strategies and addresses complex challenges.

The program focuses on applying mathematical statistics to business data analysis and prediction, including long- and short-term forecasting methods and market performance analysis. The core courses—Machine Learning for Business (DS 310), Prescriptive Analytics (DS425), Business Forecasting with Python (DS 430), Business Applications Programming (ISM 301), and Data and Information Visualization (ISM 347)—emphasize the application of statistics, machine learning, optimization, programming, and data-driven decision-making.

Bachelor of Business Administration (BBA) Degree Requirements

Dearborn Discovery Core (General Education)

All students must satisfy the University's Dearborn Discovery Core requirements (https://catalog.umd.umich.edu/undergraduate/gen_ed_ddc/), in addition to the requirements for the major.

BBA Foundation Requirements

Code	Title	Credit Hours
Minimum grade of C is required for each of the ten foundation courses.		
BA 101	Business in Action - Detroit Edition [1]	3
BA 102	Brains, Bots, and Business [2]	3
ACC 298	Financial Accounting	3
ACC 299	Managerial Accounting	3
COMP 105	Writing & Rhetoric I	3
COMP 280	Business Writing & Rhetoric	3
ECON 201	Prin: Macroeconomics	3
ECON 202	Prin: Microeconomics	3
MATH 104	College Algebra	4
or MATH 1040	College Algebra with Studio	
or MATH 105	Pre-Calculus	
or MATH 101	Trigonometry for Calculus	
DS 301	Introductory Business Statistics using Excel	3
Total Credit Hours		**31**

[1] BA 101 is not required for Fall 2026, Winter 2027 and Summer 2027 transfer students. BA 100 will substitute for BA 101.

[2] BA 102 is not required for Fall 2026, Winter 2027 and Summer 2027 transfer students. ISM 120 will substitute for BA 102.

Critical Thinking Requirement

Code	Title	Credit Hours
PHIL 233	Critical Thinking	3
Total Credit Hours		**3**

Business Administration Core Requirements

Code	Title	Credit Hours
BA 215	Career Planning and Development I [1]	1
BA 315	Career Planning and Development II [2]	1
BA 330	Managerial Communication	3
BA 400	Corporate Responsibility	3
BE 401	Managerial Economics	3
BPS 451	Strategic Management	3
DS 302	Advanced Business Statistics	3
FIN 401	Corporate Finance	3
Select one:		3-4
ISM 310	Info Systems in Management	3
ACC 380 & ACC 381	Accounting Information Systems and Accounting Info Sys Lab [3]	
LE 253	Business Law	3
MKT 352	Mktg Principles and Policies	3
OB 354	Behavior in Organizations	3
OM 300	Intro to Operations Management	3
Total Credit Hours		**35-36**

[1] BA 215 is not required for transfer students admitted Fall 2026, Winter 2027 and Summer 2027. BA 300 must be taken in place of BA 215 in the BBA Core.

[2] BA 315 is not required for transfer students admitted Fall 2026, Winter 2027 and Summer 2027. BA 320 must be taken in place of BA 315 in the BBA Core.

[3] ACC 380/ACC 381 is a requirement for students pursuing an Accounting major. Finance majors may elect either ISM 310 or ACC 380/381. All other majors must elect ISM 310.

Major Requirements

Code	Title	Credit Hours
Required		
DS 310	Machine Learning for Business	3
DS 425	Prescriptive Analytics	3
DS 430	Business Forecasting with Python	3
ISM 301	Bus Application Programming	3
ISM 347	Data and Information Visualization	3
Electives		
Select a minimum of 6 credit hours from the following:		6
BA 462	Experiential Projects	
CIS 1501	CS I for Data Scientists	
CIS 2001	CS II for Data Scientists	
FIN 407	Investment Fundamentals	
FIN 445	Corporate Finance Capstone – Advanced Financial Analysis	

FIN 447	Derivative Markets
HRM 407	Compensation, Performance Management, and HR Analytics
ISM 321	Database Systems I
ISM 431	Database Systems II
MKT 363	Digital Consumer Srch&Mktg
MKT 454	Marketing Research
MKT 463	Digital Analytics&Content Marketing
OM 470	Analytics & Design of Supply Chains
Total Credit Hours	**21**

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The minor focuses on applying mathematical statistics to business data analysis and prediction, including long- and short-term forecasting methods and market performance analysis. The core courses—Machine Learning for Business (DS 310), Prescriptive Analytics (DS 425), Business Forecasting with Python (DS 430), Business Applications Programming (ISM 301), and Data and Information Visualization (ISM 347)—emphasize the application of statistics, machine learning, optimization, programming, and data-driven decision-making.

Code	Title	Credit Hours
Business Analytics Minor [1]		
Select five courses (15 credits) from the following: [1]		15
DS 301	Introductory Business Statistics using Excel	
DS 302	Advanced Business Statistics	
DS 310	Machine Learning for Business	
DS 425	Prescriptive Analytics	
DS 430	Business Forecasting with Python	
ISM 301	Bus Application Programming [2]	
ISM 347	Data and Information Visualization [2]	
Total Credit Hours		**15**

1 Minors requiring 12 credits may share one course with a major. Minors requiring 15 credits or more may share two courses with a major.

2 The ISM major can only have one of ISM 301 and ISM 347 share with the Business Analytics minor.

Goal: Students will acquire discipline-specific knowledge and develop analytical skills for addressing business problems.

- Objective 1: Students will explain and evaluate business analytics approaches and functions.
- Objective 2: Students will analyze business analytics problem-solving approaches.