

# BUSINESS ANALYTICS

The Master of Science-Business Analytics trains students to create business strategies using data and statistics. Professionals in this rapidly expanding field use algorithms and formulas to uncover patterns and trends in aggregate data, then apply that knowledge to real-world business problems. The degree is open to students with strong quantitative and analytical skills, regardless of their undergraduate major. The program includes a large number of courses involving statistical analysis.

The program is offered on campus, and a few of the courses are also occasionally available on-line. You may enroll on a full- or part-time basis during the fall and winter semesters, and some courses are often available during the summer. The program usually can be completed within 12 months of full-time study.

Admission is rolling, and you may begin the program in September or January. May admission is also usually possible for part-time students.

University of Michigan-Dearborn students who have been admitted to the MS-Business Analytics may take up to 6 graduate credits during the final semester of their undergraduate program.

## MS-Business Analytics Program Goals and Objectives

Goal 1: Students will acquire discipline-specific knowledge in business analytics.

Objectives: MS-Business Analytics students will:

- Evaluate business analytics approaches.
- Evaluate relevant business analytics tools and techniques.

Goal 2: Students will develop analytical skills for business problems.

Objectives: MS-Business Analytics students will:

- Formulate business analytics problems.
- Synthesize relevant business analytics information.
- Evaluate business analytics solution alternatives.

## MS-Business Analytics Admission Prerequisites

- Mathematics admission prerequisite

## MS-Business Analytics Curriculum

Code	Title	Credit Hours
<b>Core Courses</b>		
DS 520	Applied Statistical Modeling	3
DS 570	Management Science	3
DS 630	Applied Forecasting	3
DS 631	Decision Analysis	3
DS 632	System Simulation	3
DS 633	Data Mining for Business Appl	3
<b>Concentration</b>		

Select one of the following concentrations:	12
<b>Total Credit Hours</b>	<b>30</b>

Courses may not be taken off campus except by prior permission of the Academic Standards Committee. Permission is granted only in the case of unusual, extenuating circumstances.

Previous coursework deemed substantially similar to ACC 505, BE 530, DS 520, FIN 531, ISM 525, MKT 515, OB 510 and OM 521 may qualify to exempt students from those courses. Exempt courses must be replaced with other approved courses in the degree program.

In addition, up to 6 transfer credits for previous equivalent graduate coursework can be applied to the degree if those credits have not been counted toward a degree.

Exemptions and transfer credit are granted at the discretion of the program faculty.

## Concentrations

### Financial Analytics

Code	Title	Credit Hours
Select four courses from:		
ACC 505	Devel & Interp Financial Info <sup>1</sup>	12
BE 530	Econ Analysis: Firm & Consumer <sup>1</sup>	
DS 635	Analytics Experience Capstone <sup>2</sup>	
FIN 531	Fin Fundament & Value Creation	
FIN 581	Topics in Corporate Finance	
FIN 650	Corporate Valuation & Strategy	
FIN 651	Invstmnt Proc, Analysis & Mgmt	
FIN 652	Derivatives & Risk Management	
FIN 653	Topics/Investments & Cap Mkts	
FIN 655	International Financial Mgt	
FIN 656	Fixed Income Securities	
BA 690	Graduate Research	
BA 691	Graduate Seminar	
<b>Total Credit Hours</b>		<b>12</b>

### Human Resource Management Analytics

Code	Title	Credit Hours
Required:		
HRM 561	Human Resource Management	9
HRM 580	Compensation and HR Analytics	
OB 510	Organization Behavior	
Select one course from:		
DS 635	Analytics Experience Capstone <sup>2</sup>	3
HRM 613	Legal Issues in Managing People	
OB 610	Intrnatl Dimensions of Managmt	
BA 690	Graduate Research	
BA 691	Graduate Seminar	
<b>Total Credit Hours</b>		<b>12</b>

## Informational Management and Coordination Analytics

Code	Title	Credit Hours
Select one course from:		3
ISM 525	Computer and Info Systems	
ISM 641	Enterprise Architecture Netwrk	
ISM 644	IT Policy and Strategy	
Select three courses from:		9
DS 635	Analytics Experience Capstone <sup>2</sup>	
ISM 575	Information Management	
ISM 642	Information Assurance	
ISM 649	Business Intelligence	
ISM 650	Information System Quality	
BA 690	Graduate Research	
BA 691	Graduate Seminar	
<b>Total Credit Hours</b>		<b>12</b>

## Marketing Analytics

Code	Title	Credit Hours
Required:		6
MKT 515	Marketing Management	
MKT 564	Graduate Marketing Research	
Select two courses from:		6
DS 635	Analytics Experience Capstone <sup>2</sup>	
MKT 534	Sales Management and Personal Selling	
MKT 565	Advanced Marketing Management	
MKT 620	Understanding Customers	
MKT 621	Advertising and Promotion	
MKT 622	Global Marketing	
BA 690	Graduate Research	
BA 691	Graduate Seminar (In order for BA 691 to be an option, it must be a marketing topic. )	
<b>Total Credit Hours</b>		<b>12</b>

## Supply Chain Analytics

Code	Title	Credit Hours
Select four courses from:		12
DS 635	Analytics Experience Capstone <sup>2</sup>	
ISM 525	Computer and Info Systems	
OM 521	Operations Management	
OM 571	Supply Chain Management	
OM 660	Supply Chain Analytics	
OM 661	Supply Chain Logis Mgmt	
OM 662	Product Dvlpmnt & Tech Mgmnt	
OM 663	Lean & Six Sigma	
OM 664	Strategic Sourcing	
OM 665	ERP in SCM	
BA 690	Graduate Research	
BA 691	Graduate Seminar	
<b>Total Credit Hours</b>		<b>12</b>

<sup>1</sup> Students may elect either ACC 505 or BE 530 as credit toward the Financial Analytics concentration but not both.

<sup>2</sup> Students must receive department approval.

## Learning Goals

**Goal 1—Students will acquire discipline-specific knowledge in business analytics.**

- 1a. Students will evaluate business analytics approaches
- 1b. Students will evaluate relevant business analytics tools and techniques.

**Goal 2—Students will develop analytical skills for business problems.**

- 2a. Students will formulate business analytics problems.
- 2b. Students will synthesize relevant business analytics information
- 2c. Students will evaluate business analytics solution alternatives.