Business Analytics

Zicklin's specialized Master's in Business Analytics (MSBA) equips business professionals with the tools necessary to manage data ethically for business success. Students will become expert data analysts who can explore patterns, reveal trends, uncover relationships, and transform data into a catalyst for business growth. More critically, they will also gain the knowledge needed to initiate and evaluate projects that harness this deluge of data.

The MSBA opens the door to exciting new careers in the fast-growing fields of data science and business analytics. The degree is designed for students who are analytically capable and have taken at least one statistics course at the college level in the last five years. The program introduces students to core concepts in Business Analytics with a set of required courses. Students then have the flexibility to specialize in one of the three tracks – accounting analytics, data analytics, or marketing analytics.

MS in Business Analytics Program Learning Goals

Data Management	Students will be able to apply methods, tools, and software for acquiring, managing/storing, and accessing structured and unstructured data. Students will also demonstrate knowledge of the strategic uses of data.
Foundational Statistical /Quantitative Skills	Students will be able to prepare data for statistical analysis, perform basic exploratory and descriptive analysis as well as employ foundational statistical techniques needed to analyze data.
Advanced Statistical /Quantitative Skills	Students will be able to build and interpret advanced predictive models. Students will be able to combine business rules and mathematical models to optimize business decisions from data.
Ethical Awareness	Students will be able to articulate an understanding of ethical issues in all phases of business analytics with particular emphasis on the new possibilities afforded by the emergence of big data.
Professional Communication	Students will be able to explain complex analytical models and their results orally and in writing to technical and non-technical/lay audiences.
Knowledge Integration	Students will be able to apply the three key types of analytics (descriptive, predictive, and prescriptive) in a business domain to add value to business decision-making.

MS in Business Analytics Curriculum *(Effective Spring 2022 entry; Fall 2021 entry students are recommended to follow the Spring 2022 curriculum; Students entering prior to Fall 2021 should scroll down for prior curriculum)*

Preliminary Courses (3 Credits)Students with appropriate background will be able to reduce the number of preliminary requirements.		
STA 9708	Managerial Statistics	3 credits
Courses in Specialization (33 - 34 credits)		
Required (21 credits)		
BUS 9551	Business Communication I	1.5 credits
BUS 9425	Ethics in Business Analytics	1.5 credits
STA 9661 (OR) STA/OPR 9750	Applied Statistics for Business Analytics OR Software Tools for Data Analytics	3 credits
CIS 9340	Principles of Database Management Systems	3 credits

CIS 9650	Programming for Business Analytics	3 credits
CIS 9660	Data Mining for Business Analytics	3 credits
OPM 9500 (formerly MGT 9500)* (OR) OPR 9721	Management Science (OR) Intro to Quantitative Modeling	3 credits
BUS 9430**	Business Analytics Project Lifecycle Management	3 credits
*MGT 9500 is now being offered as OPM 9500. Credit is given for MGT 9500, OPM 9500, or OPR 9721; students may not receive credit for more than one of these courses. ** Required Capstone course		
Concentration in Data Analytics (12 Credits: 6 credits in required courses below, 6-7 credits in Free Electives) Required Courses for the Data Analytics concentration (select two courses to complete the concentration):		
CIS 9760*** (OR) CIS 9440	Big Data Technologies (OR) Data Warehousing and Analytics	3 credits
CIS 9655	Data Visualization	3 credits
CIS 9665	Applied Natural Language Processing	3 credits
***Students who completed STA 9760 may count this course in place of CIS 9760. STA 9760 is no longer offered.		
Concentration in Marketing Analytics (12 Credits: 6 credits in required courses below, 6-7 credits in Free Electives) Required Courses for the Marketing Analytics concentration (select two courses to complete the concentration):		
MKT 9737	Marketing Analytics	3 credits
MKT 9738 (OR) MKT 9741	Web Analytics and Intelligence (OR) Marketing Analytics with Big Data	3 credits
Concentration in Accounting Analytics (13 Credits: 6-7 credits in required courses below, 6 credits in Free Electives) Required Courses for the Accounting Analytics concentration (select two courses to complete the concentration):		
ACC 9886	Data Analytics in Accounting	4 credits

ACC 9806	Financial Statement Analysis and Reporting	3 credits
OR	OR	
ACC 9993	Special Topics in Accounting	

Free Electives (6 credits)
Choose 6 credits of 9000-level courses from the graduate offerings of the Zicklin School of Business, except for courses applied towards a prior master's degree. Students may take up to 3 credits of internship (BUS 9801-9803 or BUS 9811-9813) toward their business electives. Please see program website for a full list of recommended electives. Students may also review the prior version of the curriculum below for elective suggestions.

MS in Business Analytics Curriculum *(Effective Fall 2021 and prior; Fall 2021 entry students are recommended to follow the Spring 2022 curriculum)*

Preliminary Courses (3 Credits)Students with appropriate background will be able to reduce the number of preliminary requirements.		
STA 9708	Managerial Statistics	3 credits

Courses in Specialization (33 - 34 credits)		
Required (21 credits)		
BUS 9420	Communications and Ethics for Business Analytics	3 credits
STA 9661	Applied Statistics for Business Analytics	3 credits
(OR)	OR	
STA/OPR 9750	Software Tools for Data Analytics	
CIS 9340	Principles of Database Management Systems	3 credits
CIS 9650	Programming for Business Analytics	3 credits
CIS 9660	Data Mining for Business Analytics	3 credits
MGT 9500*	Management Science	3 credits
(OR)	(OR)	
OPR 9721	Intro to Quantitative Modeling	
BUS 9430**	Business Analytics Project Lifecycle Management	3 credits
*MGT 9500 is now being offered as OPM 9500. Credit is given for MGT 9500, OPM 9500, or OPR 9721; students may not receive credit for more than one of these courses.		
** Required Capstone course		

Concentration in Data Analytics (12 Credits: 6 credits in required courses below, 6-7 credits in Free Electives)		
Required Courses for the Data Analytics concentration (select two courses to complete the concentration):		
CIS 9760*** (OR) CIS 9440	Big Data Technologies (OR) Data Warehousing and Analytics	3 credits
CIS 9655	Data Visualization	3 credits
CIS 9665	Applied Natural Language Processing	3 credits
***Students who completed STA 9760 may count this course in place of CIS 9760. STA 9760 is no longer offered.		
Concentration in Marketing Analytics (12 Credits: 6 credits in required courses below, 6-7 credits in Free Electives)		
Required Courses for the Marketing Analytics concentration (select two courses to complete the concentration):		
MKT 9737	Marketing Analytics	3 credits
MKT 9738 (OR) MKT 9741	Web Analytics and Intelligence (OR) Marketing Analytics with Big Data	3 credits
Concentration in Accounting Analytics (13 Credits: 7 credits in required courses below, 6 credits in Free Electives)		
Required Courses for the Accounting Analytics concentration (select two courses to complete the concentration):		
ACC 9886***	Data Analytics in Accounting	4 credits
ACC 9806*** OR ACC 9993***	Financial Statement Analysis and Reporting OR Special Topics in Accounting	3 credits
Free Electives (6 credits)		
BUS 9801- 9803	Graduate Internship I, II, III	3 credits
CIS 9310	Object-Oriented Programming I	3 credits
CIS 9440	Data Warehousing and Analytics	3 credits
CIS 9558	IT Audit	3 credits
CIS 9655	Data Visualization	3 credits

CIS 9665	Applied Natural Language Processing	3 credits
CIS 9760**	Big Data Technologies	3 credits
STA 9700	Applied Regression Analysis	3 credits
STA 9701***	Times Series: Forecasting and Statistical Modeling	3 credits
STA 9705	Multivariate Statistical Methods	3 credits
STA 9891***	Machine Learning for Data Mining	3 credits
STA 9701***	Times Series: Forecasting and Statistical Modeling	3 credits
OPR 9730***	Simulation Modeling and Analysis	3 credits
MKT 9737	Marketing Analytics	3 credits
MKT 9738	Web Analytics and Intelligence	3 credits
MKT 9740	Data-driven Marketing Strategy	3 credits
MKT 9741	Marketing Analytics with Big Data	3 credits
MKT 9780	Digital Marketing	3 credits
MKT 9782	Search Engine Marketing	1.5 credits
MKT 9783	Social Media Marketing	1.5 credits
MKT 9796	Special Topics in Marketing Analytics	1.5 credits
MKT 9797	Special Topics in Marketing Analytics	3 credits
MGT 9700	Managing Business Operations	3 credits
MGT 9967 (OR) MGT 9973	Technology, Innovation, and Design in High Growth Ventures (OR) Managing Creativity, Ideation, and Innovation in Startups and Corporations	3 credits
ECO 9723***	Econometrics - Theory and Applications I	3 credits
FIN 9770***	Corporate Finance	3 credits
FIN 9781***	Intermediate Corporate Finance	3 credits
FIN 9783***	Investment Analysis	3 credits
ACC 9806***	Financial Statement Analysis and Reporting	3 credits
ACC 9886***	Data Analytics in Accounting	3 credits
TAX 9861***	Federal Income Taxation: Theory and Practice	3 credits

**Students who completed STA 9760 may count this course in place of CIS 9760. STA 9760 is no longer offered.

***Electives have additional prerequisites but may be of interest to students who have the necessary background. Students may substitute elective courses with ACC/TAX designation with other advanced accounting or tax courses based on their background.