

Business Analytics (career), M.S.

Requirements

The full-time Master of Science program in business analytics requires a minimum of 40 s.h. of graduate credit. Transfer credit may be accepted with approval from the program. A major g.p.a. and a cumulative g.p.a. of at least 2.75 is required in all coursework.

The M.S. with a major in business analytics requires the following coursework.

Code	Title	Hours
Core Courses		19
Experience Course/Project		3
Electives		18
Total Hours		40

Core Courses

Code	Title	Hours
All of these:		
BAIS:6050	Data Management and Visual Analytics	3
BAIS:6070	Data Science	3
BAIS:9100	Data and Decisions	3
BAIS:9110	Advanced Analytics	3
BAIS:9400	Professional Development and Business Acumen (taken fall and spring semester for 1 s.h. each)	2
MBA:8130	Business Communication (taken fall and spring semester for 1 s.h. each)	2
One of these:		
BAIS:6040	Data Programming in Python	3
BAIS:6060	Data Programming in R	3

Experience Course/Project

The experience course consists of a group project that solves a semester-long business problem.

Code	Title	Hours
This course:		
BAIS:6120	Analytics Experience	3

Electives

Elective coursework allows students to deepen or broaden their skills. Additional electives may be available for credit but must be preapproved.

Code	Title	Hours
18 s.h. from these:		
BAIS:4280	Cybersecurity	3
BAIS:6040	Data Programming in Python (if not taken as core course)	3
BAIS:6060	Data Programming in R (if not taken as core course)	3
BAIS:6100	Text Analytics	3

BAIS:6105	Social Analytics	3
BAIS:6110	Big Data Management and Analytics	3
BAIS:6130	Applied Optimization	3
BAIS:6140	Information Visualization	3
BAIS:6150	Financial Analytics	3
BAIS:6170	Directed Readings - Graduate Business Analytics	arr.
BAIS:6180	Healthcare Analytics	3
BAIS:6190	Forecasting	3
BAIS:6210	Data Leadership and Management	3
BAIS:6220	Business Analytics Certification Workshop	3
BAIS:6280	Cybersecurity	3
BAIS:9210	Introduction to Modeling with VBA	3
ACCT:9170	Advanced Accounting Analytics	3
BIOS:5120/ IGPI:5120/ STAT:5610	Regression Modeling and ANOVA in the Health Sciences	3
BIOS:5310/ IGPI:5310/ STAT:5810	Research Data Management	3
CS:3210	Programming Languages and Tools	arr.
CS:4420	Artificial Intelligence	3
CS:4470	Health Data Analytics	3
CS:5110/IGPI:5110	Introduction to Informatics	3
CS:5430	Machine Learning	3
ECE:5450/IGPI:5450	Machine Learning	3
ECE:5490	Multi-Dimensional Image Analysis Tools and Techniques	3
ECON:4800	Econometric Analysis	3
ECON:5800	Econometrics	3
ECON:5805	Statistics for Economics	3
EPID:5200/ IGPI:5220	Principles of Public Health Informatics	3
FIN:9160	Quantitative Finance and Deep Learning	0,3
GEOG:3520/ IGPI:3520	GIS for Environmental Studies	3
GEOG:3540/ IGPI:3540	Geographic Visualization	3
GEOG:4150/ GHS:4150/ IGPI:4150	Health and Environment: GIS Applications	3
GEOG:4580/ IGPI:4581	Introduction to Geographic Databases	3
GEOG:5540/ IGPI:5540	Geographic Visualization	3
GEOG:5055/ IGPI:5055	Geospatial Programming	3
ISE:3600/CEE:3142/ STAT:3620	Quality Control	3
ISE:4172	Big Data Analytics	3
ISE:6380	Deep Learning	3
ISE:6760	Pattern Recognition for Financial Data	3

ISE:6780	Financial Engineering and Optimization	3	MGMT:9150/ HMP:6360/ PBAF:6278/ RELS:6070/ SPST:6010/ SSW:6247/ URP:6278	Nonprofit Organizational Effectiveness I	3
JMC:3640	Information and Data Visualization	3-4			
MATH:4250	Introduction to Financial Mathematics	3			
ME:4111/CEE:4511	Scientific Computing and Machine Learning	3	MGMT:9160/ HMP:6365/ PBAF:6279/ RELS:6075/ SPST:6020/ SSW:6248/ URP:6279	Nonprofit Organizational Effectiveness II	3
ME:4150	Artificial Intelligence in Engineering	3			
MKTG:9165	Digital Marketing Analytics	3			
MKTG:9310	Marketing Analytics	3			
POLI:3001	Hawkeye Poll	3			
PSQF:6209/ EPLS:6209	Survey Research and Design	3	PSQF:5165/ EPLS:5165	Introduction to Program and Project Evaluation	3
PSQF:6243/ STAT:6513	Intermediate Statistical Methods	3			
PSQF:6246/ STAT:6516	Design of Experiments	4			
PSQF:6250	Computer Packages for Statistical Analysis (not recommended if completed BAIS:6060)	1-3			
STAT:4100/ IGPI:4100	Mathematical Statistics I	3			
STAT:4101/ IGPI:4101	Mathematical Statistics II	3			
STAT:4200/ IGPI:4200	Statistical Methods and Computing	3			
STAT:4540/ IGPI:4540	Statistical Learning	3			
STAT:4560	Statistics for Risk Modeling	3			
STAT:5100	Statistical Inference I	3			
STAT:5200/ IGPI:5199	Applied Statistics I	4			
STAT:5400/ IGPI:5400	Computing in Statistics	3			
STAT:6560	Applied Time Series Analysis	3			
STAT:7400/ IGPI:7400	Computer Intensive Statistics	3			
URP:6200/ PBAF:6200	Analytic Methods I	1-3			
URP:6225/ PBAF:6225	Applied GIS for Planning and Policy Making	1,3			
May include 6 s.h. from these:					
ENTR:9800	Entrepreneurship: Advanced Business Planning	1-3			
MBA:8140	Corporate Financial Reporting	3			
MBA:8170	International Economic Environment of the Firm	3			
MBA:8180	Managerial Finance	3			
MGMT:3200	Individuals, Teams, and Organizations	3			
MGMT:4325	Team and Project Management	3			