

## M.S. in Business Analytics (Career)

Plan of Study, Effective for Entering Class Fall 2023

<b>Fall</b>	<b>13sh</b>
BAIS:9100:0700 Data and Decisions	3sh
BAIS:6050:0700 or 800 Data Management and Visual Analytics	3
BAIS:6040:0700 Data Programming in Python	3
BAIS:9400:0700 Professional Development Business Acumen	1
Elective 1	3
<b>Spring</b>	<b>14sh</b>
BAIS:9110:0700 Advanced Analytics	3sh
BAIS:6070:0700 Data Science	3
BAIS:9400:0700 Professional Development Business Acumen (repeated)	1
BAIS:8130:0701 Business Communication	1
Elective 2	3
Elective 3	3
<b>Fall</b>	<b>13sh</b>
BAIS:6120:0700 Analytics Experience	3sh
BAIS:8130:0702 Business Communication (repeated)	1
Elective 4	3
Elective 5	3
Elective 6	3
<b>Total: 40 semester hours</b>	

**Registering:** Log into MyUI (<https://myui.uiowa.edu/my-ui/home.page>) with your HawkID and password. Click on *Courses/Registration* in the yellow bar at the top and search for courses. Click the *Enroll* button to register.

**Schedule Advising Meeting:** MyUI / Student Information / My Appointments / Select Advisor and Choose a Time

**Degree Audit:** Academic planning tool to review progress toward degree completion. MyUI / Student Information / Degree Audit. IP means in progress. + will show once completed.

**Course waiver:**

Waiver of a core course does not reduce credit hours required for the degree—the waived course is replaced by an additional elective. To receive a waiver, contact your advisor at least two weeks prior to the start of the semester of the course you are seeking to waive.

A student may waive BAIS:9100 Data and Decisions if as a Tippie undergrad the student received a grade of B or better in one of the following courses and an A– or better in at least one:

- BAIS:2800 Business Analytics or ECON:2800 **AND**
- Another class that uses Excel and statistics, including MKTG:3100 Marketing Research, ACCT:4100 Auditing, BAIS:3500 Data Mining, BAIS:3800 Optimization and Simulation Modeling, or ECON:3355 Econ and Business Forecasting. Request approval for additional coursework from advisor.

Tippie Business Analytics and Information Systems (BAIS) undergraduate majors may be able to waive the following:

- BAIS:3020 Computational Thinking (minimum grade A-) waives BAIS:6040 Data Programming in Python
- BAIS:3200 Database Management (minimum grade A-) waives BAIS:6050 Data Management & Visual Analytics
- BAIS:3500 Data Mining (minimum grade A-) waives BAIS:6070 Data Science

\*Students from other colleges or majors, please contact your advisor to inquire about a possible waiver.

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Consult MyUI for current course offerings and timing for a given semester, to check restrictions and prerequisites, and for course descriptions: <https://myui.uiowa.edu/my-ui/courses/dashboard.page>

To request that a course not on this list be approved for MSBA credit, contact your advisor at least two weeks prior to the start of the semester; a syllabus will likely be requested for review. Courses in BOLD are strongly recommended.

Note that not all BAIS courses are offered every year.

### Approved Electives

<b>BAIS:4280 Cybersecurity</b>	GEOG:4580 Intro to Geographic Databases
<b>BAIS:6060 Data Analysis with R</b>	GEOG/IGPI:5540 Geographic Visualization
<b>BAIS:6100 Text Analytics</b>	ISE:3600/STAT:3620 Quality Control
<b>BAIS:6105 Social Analytics</b>	ISE:4172 Big Data Analytics
<b>BAIS:6110 Big Data Management and Analytics</b>	ISE:6350 Computer Intelligence
<b>BAIS:6130 Applied Optimization</b>	JMC:3640 Data Journalism
<b>BAIS:6140 Information Visualization</b>	MATH:4250 Intro to Financial Mathematics
<b>BAIS:6400 Cloud Computing</b>	ME:4150 Artificial Intelligence in Engineering
<b>BAIS:6210 Data Leadership and Management</b>	MKTG:9165 Digital Marketing Analytics
<b>BAIS:9210 Intro to Modeling with VBA</b>	MKTG:9310 Marketing Analytics
ACCT:9170 Advanced Accounting Analytics	POLI:3001 Hawkeye Poll
BIOS:5120/STAT:5610 Regression Modeling & ANOVA in Health Sciences	PSQF:6209 Survey Research and Design
BIOS:5310/STAT:5810 Research Data Management	PSQF:6243 Intermediate Statistical Methods
CS:3210 Programming Languages and Tools	PSQF:6246 Design of Experiments
CS:4420 Artificial Intelligence	PSQF:6250 Computer Packages for Statistical Analysis (not recommend if completed BAIS:6060)
CS:4470 Health Data Analytics	STAT:4100 Mathematical Statistics I
CS:5110 Intro to Informatics	STAT:4101 Mathematical Statistics II
ECE:5490 Multi-Dimensional Image Analysis Tools	STAT:4200 Statistical Methods and Computing
ECON:4800 Econometric Analysis	STAT:4540 Statistical Learning
ECON:5800 Econometrics	STAT:4560 Statistics for Risk Modeling
EPID:5200 Principles of Public Health Informatics	STAT:5100 Statistical Inference I
FIN:9160 Quantitative Finance and Deep Learning	STAT:5200 Applied Statistics I
GEOG:3520 GIS for Environmental Studies	STAT:5400 Computing in Statistics
GEOG:3540 Intro to Geographic Visualization	URP:6200/PBAF:6200 Analytic Methods in Planning I
GEOG:4150 Health and Environment: GIS Applications	URP:6225 Applied GIS for Planners

#### Business Courses

MSBA Career students may take up to 6 hours of electives from the following list of approved non-analytics business electives. Additional electives in Finance are available for those that complete MBA:8180 or have an undergraduate finance degree with a 3.33 major GPA; contact your advisor.

#### No prerequisites

ENTR:9800 Entrepre: Advanced Business Planning  
MBA:8140 Corporate Financial Reporting (Fall)  
MBA:8170 International Environment of the Firm (Fall)  
MBA:8180 Managerial Finance (Fall)  
MGMT:3200 Individuals, Teams, and Organizations  
MGMT:9150 Nonprofit Organizational Effectiveness I  
MGMT:9160 Nonprofit Org Effectiveness II  
PSQF:5165 Intro to Program and Project Evaluation

#### Research Oriented

CS:5430 Machine Learning  
CS:5980 Deep Learning  
ECE:5450 Machine Learning  
ECON:5805 Statistics for Economics  
ISE:6380 Deep Learning  
ISE:6720 Nonlinear Optimization  
ISE:6760 Pattern Recognition for Financial Data  
ISE:6780 Financial Engineering and Optimization  
ME:4111 Scientific Computing and Machine Learning  
STAT:6560 Applied Time Series Analysis  
STAT:7400 Computer Intensive Statistics