# M.S. in Business Analytics

## Undergraduate to Graduate (MSBA U2G)

**Plan of Study, Effective for Entering Class Fall 2023**

### U2G Shared Hours:

- **Up to 14 semester hours** of MSBA coursework could be applied to the undergraduate semester hours needed for your bachelor’s degree. MSBA courses count as business elective hours.
- If a BAIS student has not taken a major core course by the U2G year, then the equivalent graduate level course should be taken and count toward the undergraduate and graduate degrees. If the BA or IS elective has not been completed, it could be fulfilled by taking a BAIS:6000+ course in the U2G year. Consult your advisor for complete details.

### 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.

<table>
<thead>
<tr>
<th>Fall (UG/Grad)</th>
<th>10sh</th>
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<tbody>
<tr>
<td>BAIS:9100:0700 Data and Decisions</td>
<td>3sh</td>
</tr>
<tr>
<td>BAIS:6050:0700 or 800 Data Management and Visual Analytics</td>
<td>3</td>
</tr>
<tr>
<td>BAIS:6040:0700 Data Programming in Python</td>
<td>3</td>
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<tr>
<td>BAIS:9400:0700 Professional Development Business Acumen</td>
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<th>Spring (UG/Grad)</th>
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<tr>
<td>BAIS:6070:0700Data Science</td>
<td>3sh</td>
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<tr>
<td>BAIS:8130:0701 Business Communication</td>
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<tr>
<th>Fall (Grad)</th>
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<tbody>
<tr>
<td>BAIS:6120:0700 Analytics Experience or Elective</td>
<td>3sh</td>
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<tr>
<td>BAIS:8130:0702 Business Communication (repeated)</td>
<td>1</td>
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<tr>
<td>Elective 1</td>
<td>3</td>
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<tr>
<td>Elective 2</td>
<td>3</td>
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<tr>
<td>Elective 3</td>
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<tr>
<th>Spring (Grad)</th>
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<tbody>
<tr>
<td>BAIS:9110:0700 Advanced Analytics</td>
<td>3sh</td>
</tr>
<tr>
<td>BAIS:9400:0700 Professional Development Business Acumen (Repeated)</td>
<td>1</td>
</tr>
<tr>
<td>BAIS:6120:0700Analytics Experience if not yet taken or Elective</td>
<td>3</td>
</tr>
<tr>
<td>Elective 5</td>
<td>3</td>
</tr>
<tr>
<td>Elective 6</td>
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**Total: 40 semester hours**

This form is a planning tool only for on-campus, full-time MSBA (Career) students. It does not apply to off–campus professional MSBA students.
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.
M.S. in Business Analytics (Career)

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 required for review. Courses in BOLD are strongly recommended. Note that not all BAIS courses are offered every year.

Approved Electives

BAIS:4280 Cybersecurity
BAIS:6060 Data Analysis with R
BAIS:6100 Text Analytics
BAIS:6105 Social Analytics
BAIS:6110 Big Data Management and Analytics
BAIS:6130 Applied Optimization
BAIS:6140 Information Visualization
BAIS:6400 Cloud Computing
BAIS:6210 Data Leadership and Management
BAIS:9210 Intro to Modeling with VBA
ACCT:9170 Advanced Accounting Analytics
BIOS:5120/STAT:5610 Regression Modeling & ANOVA in Health Sciences
BIOS:5310/STAT:5810 Research Data Management
CS:3210 Programming Languages and Tools
CS:4420 Artificial Intelligence
CS:4470 Health Data Analytics
CS:5110 Intro to Informatics
CS:5430 Machine Learning
CS:5980 Deep Learning
ECE:5450 Machine Learning
ECON:4800 Econometric Analysis
ECON:5800 Econometrics
Epid:5200 Principles of Public Health Informatics
FIN:9160 Quantitative Finance and Deep Learning
GEOG:3520 GIS for Environmental Studies
GEOG:3540 Intro to Geographic Visualization
GEOG:4150 Health and Environment: GIS Applications
GEOG:4580 Intro to Geographic Databases
GEOG/IGPI:5540 Geographic Visualization
ISE:3600/STAT:3620 Quality Control
ISE:4172 Big Data Analytics
ISE:6350 Computer Intelligence
JMC:3640 Data Journalism
MATH:4250 Intro to Financial Mathematics
ME:4150 Artificial Intelligence in Engineering
MKTG:9165 Digital Marketing Analytics
MKTG:9310 Marketing Analytics
POLI:3001 Hawkeye Poll
PSQF:6209 Survey Research and Design
PSQF:6243 Intermediate Statistical Methods
PSQF:6246 Design of Experiments
PSQF:6250 Computer Packages for Statistical Analysis
(not recommend if completed BAIS:6060)
STAT:4100 Mathematical Statistics I
STAT:4101 Mathematical Statistics II
STAT:4200 Statistical Methods and Computing
STAT:4540 Statistical Learning
STAT:4560 Statistics for Risk Modeling
STAT:5100 Statistical Inference I
STAT:5200 Applied Statistics I
STAT:5400 Computing in Statistics
URP:6200/PBAF:6200 Analytic Methods in Planning I
URP:6225 Applied GIS for Planners

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

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

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