

# M.S. in Finance & M.S. in Business Analytics

Joint Degree Plan of Study, Entering Fall 2020

## Fall of 1st year (16 s.h.)

FIN:9400 or BAIS:9400 Professional Development and	1
MBA:8140:0800 Corporate Financial Reporting	3
MBA:8180:0800 Managerial Finance	3
BAIS:6050:0700 or 800 Data Man. & Visual Analytics	3
BAIS:6060:0700 Data Programming in R or BAIS:6040:0700 Data Programming in Python	3
BAIS:9100:0700 or 0800 Data and Decisions	3

## Spring of 1st year (16 s.h.)

FIN:9400 or BAIS:9400 Professional Development and	1
MBA:8130:0701 or 801 Business Communication	1
FIN:9150:0800 Financial Modeling and Firm Valuation	2
FIN:9200:0800 Portfolio Management	3
BAIS:6070 Data Science	3
Elective or FIN experiential course (see below)	3
BAIS:9110 Advanced Analytics or Elective	3

## Fall of 2nd year (16 s.h.)

MBA:8130:0702 or 802 Business Communication	1
MBA:8170:0800 International Environment of the Firm	3
FIN:9210 Derivatives and Risk Management	3
FIN:9220 Fixed Income	3
Elective	3
BAIS:6120 Analytics Experience	3

## Spring of 2nd year (15 s.h.)

FIN:9300:0800 Corporate Investment and Financing	3
FIN experiential course if not yet taken or Elective	3
Elective or BAIS:9110 Advanced Analytics if not taken yet	3
Elective	3
Elective	3

**TOTAL: 63 semester hours**

### Finance experiential elective requirement options:

FIN:9390 Applied Financial Analysis—Industry Project (Fall)
FIN:9225 Applied Fixed Income Analysis (Fall or Spring)
FIN:9250 and FIN:9260 Applied Securities Analysis—Henry Fund (spring and fall enrollment required, 3 sh each)
FIN:9391 Thesis in Business (any semester, individually arranged with a faculty member)

## Course waivers

Waiver of a course does not reduce credit hours; the waived course is replaced by an additional elective. To receive a waiver, contact your advisor prior to the start of the first semester. Waivers may be available as follows:

- MBA:8180 Managerial Finance: finance majors with a minimum 3.3 major GPA or with CFA level 1.
- MBA:8140 Corporate Financial Reporting: accounting or finance majors with a minimum 3.3 major GPA or CPA or CFA level 1.
- MBA:8170 International Environment of the Firm: undergraduate economics majors with a minimum 3.3 major GPA.
- BAIS:9100 Data and Decisions:
  - Tippie undergraduate: the student received a grade of B or better in one of the following courses and an A– or better in at least one:
    - ⇒ MSCI:2800 Business Analytics or ECON:2800 AND
    - ⇒ Another class that uses Excel and statistics, including MKTG:3100 Marketing Research, ACCT:4100 Auditing, MSCI:3500 Data Mining, MSCI:3800 Optimization and Simulation Modeling, or ECON:3355 Econ and Business Forecasting. Request approval for additional coursework from advisor.
  - Students from other colleges or majors, please contact your advisor to inquire about a possible waiver.

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

- MSCI/BAIS:3200 Database Management (minimum grade A-) waives BAIS:6050 Data Management & Visual Analytics
- MSCI/BAIS:3250 Data Wrangling (minimum grade A-) waives BAIS:6060 Data Programming in R
- MSCI/BAIS:3500 Data Mining (minimum grade A-) waives BAIS:6070 Data Science

Finance undergraduate majors:

One waiver from the following is allowed if you had an A– or better in the following Tippie undergrad course:

- FIN:4210 Futures and Options waives FIN:9210 Derivatives
- FIN:4220 Fixed Income Securities waives FIN:9220
- FIN:4250 Applied Equity Valuation waives FIN:9150 if taken in the previous academic year

For non-Tippie students, a similar waiver may be possible if review of a submitted syllabus demonstrates a comparable course and an A-or better is received.



# M.S. in Finance

## Pre-approved electives

### Approved Electives

Consult MyUI to see if a course is offered in any given semester, check that you meet pre-requisites and that electives do not conflict with required course timing. Courses and timing are subject to change.

ACCT:9120 Design and Use of Cost Management Systems  
 ACCT:9130 Financial Reporting: Theory and Practice  
 ACCT:9030 Financial Accounting Standards & Analysis  
 ACCT:9050 Taxes and Business Strategy  
 ACCT:9170 Advanced Accounting Analytics  
 BAIS:6040 Data Programming in Python  
 BAIS:6050 Data Management and Visual Analytics  
 BAIS:6060 Data Programming in R  
 BAIS:6070 Data Science  
 BAIS:6140 Information Visualization  
 BAIS:9110 Advanced Analytics  
 BAIS:9210 Intro to Modeling with VBA  
 CS:4400 Database Systems  
 CS:5110 Introduction to Informatics  
 ECON:4800 Econometric Analysis  
 ECON:5800 Econometrics  
 FIN:4030 Securities Industry Essentials Exam Prep  
 FIN:9140 Enterprise Risk Management  
 FIN:9230 Real Estate Finance and Investments  
 FIN:9240 International Finance  
 FIN:9280 Global Structured Finance  
 FIN:9290 Alternative Investments Port Strategies  
 FIN:9310 Corporate Financial Strategy  
 FIN:9330 Investment Banking  
 FIN:9350 Wealth Management  
 ISE:6760 Pattern Recognition for Financial Data  
 ISE:6780 Financial Engineering and Optimization  
 STAT:4100 Mathematical Statistics I  
 STAT:4101 Mathematical Statistics II

To request that another course not on this list count toward your MFin coursework, please contact your advisor. Note that courses considered for elective hours must be quant/tech courses (i.e. math, stats, accounting, analytics, computer science, physics, engineering, etc.).

### Concentrations

Concentrations do not appear on transcripts, but may be listed on resumes. It may be possible to complete more than one concentration.

#### Corporate Finance

- Experiential course: FIN:9390 Applied Financial Analysis—Industry Project (fall)
- FIN:9330 Investment Banking (fall or spring)
- 3 electives of your choice

#### Investments

- Experiential course: FIN:9225 Applied Fixed Income Analysis (fall or spring) or FIN:9250/FIN:9260 Applied Securities Analysis—Henry Fund (spring and fall enrollment required, 3 sh each)
- FIN:9240 International Finance (fall)
- FIN:9350 Wealth Management (spring)
- 2 electives of your choice (unless in Henry Fund, then 1 elective). Recommended: FIN:4030 Securities Industry Exam Prep (spring/fall, 1sh)

#### Risk Management

- Experiential course: Any
- FIN:9140 Corporate and Financial Risk Management (fall)
- FIN:9240 International Finance (fall)
- 2 electives of your choice (unless in Henry Fund, then 1 elective)

#### Open/no concentration

- Experiential course: Any
- Electives from pre-approved list

**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

**Electives choices:** MFin/MSBA joint degree students can select from any of the pre-approved electives from either master's list to fulfill the elective courses required.



# M.S. in Business Analytics (Career)

Consult MyUI for current course offerings and timing for a given semester, to check restrictions and pre-requisites, 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 elective 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. \*If not taken as a core course**

## Approved Electives

BAIS:4280 Data Security	GEOG:4580 Intro to Geographic Databases
<b>BAIS:6040 Data Programming in Python*</b>	ISE:3600/STAT:3620 Quality Control
<b>BAIS:6060 Data Programming in R*</b>	ISE:4172 Big Data Analytics
<b>BAIS:6100 Text Analytics</b>	JMC:3640 Data Journalism
<b>BAIS:6105 Social Analytics</b>	MATH:4250 Intro to Financial Mathematics
<b>BAIS:6110 Big Data Management and Analytics</b>	ME:4150 Artificial Intelligence in Engineering
<b>BAIS:6130 Applied Optimization</b>	MKTG:9165 Digital Marketing Analytics
<b>BAIS:6140 Information Visualization</b>	MKTG:9310 Marketing Analytics
<b>BAIS:6150 Financial Analytics</b>	POLI:3001 Hawkeye Poll
<b>BAIS:6180 Healthcare Analytics</b>	PSQF:6209 Survey Research and Design
<b>BAIS:6210 Data Leadership and Management</b>	PSQF:6243 Intermediate Statistical Methods
<b>BAIS:9210 Intro to Modeling with VBA</b>	PSQF:6246 Design of Experiments
ACCT:9170 Advanced Accounting Analytics	PSQF:6250 Computer Packages for Statistical Analysis (do not recommend if completed MSCI/BAIS:6060)
BIOS:5120/STAT:5610 Regression Modeling & ANOVA in Health Sciences	STAT:4100 Mathematical Statistics I
BIOS:5310/STAT:5810 Research Data Management	STAT:4101 Mathematical Statistics II
CS:3210 Programming Languages and Tools	STAT:4200 Statistical Methods and Computing
CS:4420 Artificial Intelligence	STAT:4540 Statistical Learning
CS:4470 Health Data Analytics	STAT:4560 Statistics for Risk Modeling
CS:5110 Intro to Informatics	STAT:5100 Statistical Inference I
ECON:4800 Econometric Analysis	STAT:5200 Applied Statistics I
ECON:5800 Econometrics	STAT:5400 Computing in Statistics
EPID:5200 Principles of Public Health Informatics	URP:6200/PBAF:6200 Analytic Methods in Planning I
GEOG:3520 GIS for Environmental Studies	URP:6225 Applied GIS for Planners
GEOG:3540 Intro to Geographic Visualization	
GEOG:4150 Health and Environment: GIS Applications	

## Research/PhD 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 pre-requisites**

ENTR:9800 Entrepren: 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:4325 Team Project Management  
 MGMT:9150 Nonprofit Organizational Effectiveness I  
 MGMT:9160 Nonprofit Org Effectiveness II