Business Analytics and Information Systems, B.B.A.

Requirements

The Bachelor of Business Administration with a major in business analytics and information systems requires a minimum of 120 s.h., including 22 s.h. of work for the major. Students must have a cumulative g.p.a. of at least 2.00 in all college coursework attempted, all college coursework attempted in the major, all college coursework attempted at the University of Iowa, all business coursework attempted at the University of Iowa, and all coursework in the major attempted at the University of Iowa.

The program provides a variety of educational experiences that develop students’ knowledge of managerial decision-making systems. Students acquire skill in applying this knowledge by constructing quantitative models, using computer technology, and creating database systems.

Students choose one of two tracks: business analytics or information systems.

The B.B.A. with a major in business analytics and information systems requires the following coursework. For common B.B.A. requirements, see the Bachelor of Business Administration in the Catalog.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Major Common Required Courses</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Required Track Courses</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Required Electives</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Total Hours</td>
<td>22</td>
</tr>
</tbody>
</table>

Major Common Required Courses

Students in both tracks must complete these three courses.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAIS:3020</td>
<td>Computational Thinking</td>
<td>3</td>
</tr>
<tr>
<td>BAIS:3050</td>
<td>Business Analytics and Information Systems Preparation</td>
<td>1</td>
</tr>
<tr>
<td>BAIS:3200</td>
<td>Database Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Required Track Courses

Students complete the requirements from one of the two tracks below.

Business Analytics Track

Students in the business analytics track complete all of the following.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAIS:3250</td>
<td>Data Wrangling</td>
<td>3</td>
</tr>
<tr>
<td>BAIS:3500</td>
<td>Data Mining</td>
<td>3</td>
</tr>
<tr>
<td>BAIS:3800</td>
<td>Optimization and Simulation Modeling</td>
<td>3</td>
</tr>
<tr>
<td>BAIS:4150</td>
<td>Business Analytics Capstone</td>
<td>3</td>
</tr>
</tbody>
</table>

Information Systems Track

Students in the information systems track complete all of the following.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAIS:3120</td>
<td>Application Development</td>
<td>3</td>
</tr>
<tr>
<td>BAIS:3300</td>
<td>Software Design</td>
<td>3</td>
</tr>
<tr>
<td>BAIS:3400</td>
<td>Data Communications</td>
<td>3</td>
</tr>
<tr>
<td>BAIS:4350</td>
<td>Information Systems Capstone</td>
<td>3</td>
</tr>
</tbody>
</table>

Required Electives (Both Tracks)

All students complete at least 3 s.h. from the following.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAIS:3025</td>
<td>VBA Spreadsheet Programming</td>
<td>3</td>
</tr>
<tr>
<td>BAIS:3030</td>
<td>Business Process Analysis</td>
<td>3</td>
</tr>
<tr>
<td>BAIS:3100</td>
<td>Accounting Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>BAIS:3140</td>
<td>Information Visualization</td>
<td>3</td>
</tr>
<tr>
<td>BAIS:3920</td>
<td>Supply Chain Management</td>
<td>3</td>
</tr>
<tr>
<td>BAIS:4220</td>
<td>Advanced Database Management and Big Data</td>
<td>3</td>
</tr>
<tr>
<td>BAIS:4280</td>
<td>Data Security</td>
<td>3</td>
</tr>
<tr>
<td>CS:1210</td>
<td>Computer Science I: Fundamentals</td>
<td>4</td>
</tr>
<tr>
<td>ECON:3355</td>
<td>Economic and Business Forecasting</td>
<td>3</td>
</tr>
<tr>
<td>MKTG:3102</td>
<td>Marketing Analytics</td>
<td>3</td>
</tr>
<tr>
<td>Any computer science course for which CS:1210 is a prerequisite</td>
<td>3-4</td>
<td></td>
</tr>
<tr>
<td>Any course required for the nonelected track</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Academic Plans

Sample Plans of Study

Sample plans represent one way to complete a program of study. Actual course selection and sequence will vary and should be discussed with an academic advisor. For additional sample plans, see MyUI.

Business Analytics and Information Systems, B.B.A.

- Business Analytics Track [p. 1]
- Information Systems Track [p. 3]

Business Analytics Track

Course  Title  Hours

Academic Career

Any Semester

Students are required to complete 52 s.h. of non-business coursework. Courses with a prefix of ACCT, BAIS, BUS, ECON, ENTR, FIN, MGMT, MSCI, and MKTG will not count towards non-business hours.

Check degree audit for non-business hours or confer with academic advisor.
To fulfill the Tippie RISE experiential learning requirement, complete an approved course in at least one of the following categories: research with faculty, internship course, study abroad, experiential course. Students who need to complete the World Language requirement should consult with their academic advisor about when to add courses to their plan of study. World Language counts as non-business coursework.

Students must satisfy the Tippie College of Business residence requirement: 45 s.h. of UI coursework after admission to Tippie.

Completion of BAIS:2800 Foundations of Business Analytics, BAIS:3000 Operations Management, and BAIS:3005 Information Systems by the end of the second year or no later than the first semester of the third year is essential for major course sequencing.

### First Year

**Fall**

- MATH:1350 Quantitative Reasoning for Business 4
- RHET:1030 Rhetoric 4
- GE: Historical Perspectives 3
- GE: Social Sciences 3
- CSI:1600 Success at Iowa 2

### Spring

- STAT:1030 Statistics for Business 4
- ECON:1100 Principles of Microeconomics 4
- BAIS:1500 Business Computing Essentials 2
- ENGL:1200 The Interpretation of Literature 3
- GE: Diversity and Inclusion or GE: Values and Culture 3

**Hours** 16

### Second Year

**Fall**

- ACCT:2100 Introduction to Financial Accounting 3
- ECON:1200 Principles of Macroeconomics 4
- BAIS:3000 Operations Management 2
- BAIS:3005 Information Systems 2
- BUS:2200 Foundations for Success in Business 1
- GE: Natural Sciences without Lab 3

### Spring

- BAIS:3050 Business Analytics and Information Systems Professional Preparation 1
- BUS:3000 Business Communication and Protocol 3
- BAIS:2800 Foundations of Business Analytics 3
- MGMT:2100 Introduction to Management 3
- GE: International and Global Issues 3
- Minor, certificate, or non-business elective 3

**Hours** 15

### Third Year

**Fall**

- ACCT:2200 Managerial Accounting 3
- MGMT:2000 Introduction to Law 3
- BAIS:3200 Database Management 3
- Minor, certificate, or non-business elective 3
- Minor, certificate, or non-business elective 3

**Hours** 15

**Spring**

- BAIS:3020 Computational Thinking 3
- Major: BAIS elective course 3
- FIN:3000 Introductory Financial Management 3
- Minor, certificate, or non-business elective 3
- Minor, certificate, or non-business elective 3
- Minor, certificate, or non-business elective 1

**Hours** 16

### Fourth Year

**Fall**

- BAIS:3250 Data Wrangling 3
- BAIS:3500 Data Mining 3
- MKTG:3000 Introduction to Marketing Strategy 3
- Minor, certificate, or non-business elective 3
- Minor, certificate, or non-business elective 3
- Minor, certificate, or non-business elective 1

**Hours** 13

**Spring**

- BAIS:4150 Business Analytics Capstone 3
- BAIS:3800 Optimization and Simulation Modeling 3
- Minor, certificate, or non-business elective 3
- Minor, certificate, or non-business elective 3
- Minor, certificate, or non-business elective 1

**Hours** 13

**Degree Application:** apply on MyUI before deadline (typically in February for spring, September for fall)

**Total Hours** 120-123

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a See degree audit for course options.
b Enrollment in math courses requires completion of a placement exam.
c GE courses may be completed in any order unless used as a prerequisite for another course. Students should consult with an advisor about the best sequencing of courses.
d Complete BUS:2200 by the end of the second year, before enrolling in BAIS:3050.
e BUS:3000 should be taken the first semester after admission to the Tippie College of Business; may be deferred one semester. Direct admits take BUS:3000 in their second year.
f Select from list of approved courses in the General Catalog or on degree audit.
g Students should consider in their planning that ACCT:2200, BAIS:3250, BAIS:3500, and BUS:3000 are prerequisites for the capstone course.
h Please see Academic Calendar, Office of the Registrar website for current degree application deadlines. Students should apply for a degree for the session in which all requirements will be met. For any questions on appropriate timing, contact your academic advisor. For more information visit [http://commencement.uiowa.edu/](http://commencement.uiowa.edu/)
## Information Systems Track

### Course  | Title  | Hours
---|---|---
### Academic Career  
### Any Semester  
Students are required to complete 52 s.h. of non-business coursework. Courses with a prefix of ACCT, BAIS, BUS, ECON, ENTR, FIN, MGMT, MSCI, and MKTG will not count towards non-business hours. Check degree audit for non-business hours or confer with academic advisor.

To fulfill the Tippie RISE experiential learning requirement, complete an approved course in at least one of the following categories: research with faculty, internship course, study abroad, experiential course. 

Students who need to complete the World Language requirement should consult with their academic advisor about when to add courses to plan of study. World Language counts as non-business coursework.

 Students must satisfy the Tippie College of Business residence requirement: 45 s.h. of UI coursework after admission to Tippie. Completion of BAIS:2800 Foundations of Business Analytics, BAIS:3000 Operations Management, and BAIS:3005 Information Systems by the end of the second year or no later than the first semester of the third year is essential for major course sequencing.

### First Year  
**Fall**  
- MATH:1350 Quantitative Reasoning for Business  
- RHET:1030 Rhetoric  
- GE: Historical Perspectives  
- GE: Social Sciences  
- CSI:1600 Success at Iowa  

**Spring**  
- STAT:1030 Statistics for Business  
- ECON:1100 Principles of Microeconomics  
- BAIS:1500 Business Computing Essentials  
- ENGL:1200 The Interpretation of Literature  
- GE: Diversity and Inclusion or GE: Values and Culture  

### Hours  
0-3  

### Second Year  
**Fall**  
- ACCT:2100 Introduction to Financial Accounting  
- ECON:1200 Principles of Macroeconomics  
- BAIS:3000 Operations Management  
- BAIS:3005 Information Systems  
- BUS:2200 Foundations for Success in Business  
- GE: Natural Sciences without Lab  

**Spring**  
- BAIS:3050 Business Analytics and Information Systems Professional Preparation  
- BUS:3000 Business Communication and Protocol  
- BAIS:2800 Foundations of Business Analytics  
- MGMT:2100 Introduction to Management  
- GE: International and Global Issues  
- Minor, certificate, or non-business elective  

### Hours  
0 - 3  

### Third Year  
**Fall**  
- ACCT:2200 Managerial Accounting  
- MGMT:2000 Introduction to Law  
- BAIS:3000 Database Management  
- Minor, certificate, or non-business elective  
- Minor, certificate, or non-business elective  

**Spring**  
- BAIS:3020 Computational Thinking  
- Major: BAIS elective course  
- FIN:3000 Introductory Financial Management  
- Minor, certificate, or non-business elective  
- Minor, certificate, or non-business elective  
- Minor, certificate, or non-business elective  

### Hours  
0 - 3  

### Fourth Year  
**Fall**  
- BAIS:3120 Application Development  
- BAIS:3300 Software Design  
- MKTG:3000 Introduction to Marketing Strategy  
- Minor, certificate, or non-business elective  
- Minor, certificate, or non-business elective  
- Minor, certificate, or non-business elective  

**Spring**  
- BAIS:4350 Information Systems Capstone  
- BAIS:3400 Data Communications  
- Minor, certificate, or non-business elective  
- Minor, certificate, or non-business elective  
- Minor, certificate, or non-business elective  

### Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall)  

### Hours  
0 - 3  

### Total Hours  
120-123  

a. See degree audit for course options.  
b. Enrollment in math courses requires completion of a placement exam.  
c. GE courses may be completed in any order unless used as a prerequisite for another course. Students should consult with an advisor about the best sequencing of courses.  
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Career Advancement

The business analytics and information systems major prepares students for careers in data mining, supply chain management, and the design and management of information technology. The major prepares students for career opportunities in both manufacturing and service organizations. Graduates find entry-level work as computer programmers, systems analysts, sales representatives with computer companies, and management trainees. Entry-level work in operations management is found in materials management, line supervision, purchasing, and manufacturing systems.

Over 90 percent of students reported that they found permanent employment, were accepted to graduate school, or were not seeking employment within six months of graduation.

The Pomerantz Career Center offers multiple resources to help students find internships and jobs. For more information about careers, visit the Pomerantz Career Center website.