

DATA ANALYTICS MAJOR (B.S.)

The ability to work with numbers and data is critical to the modern workforce. Every area of business, science, entertainment and, increasingly, the non-profit sector, is becoming more data-driven. The Data Analytics Major prepares graduates to add value to any organization through quantitative decision-making from both structured and unstructured data. As more industries embrace big data and analytics, skills in areas such as data science, statistics, programming, modeling, and data mining are becoming more important. Through a combination of mathematics, statistics, and computing courses - including intensive, hands-on work with R, Python, and SQL - our Data Analytics graduates will not only understand key concepts and techniques, but will also know how to apply them and communicate results to the modern business world.

For further information about degree requirement policies and guidelines, see the Degree Requirements (catalog.bentley.edu/undergraduate/degree-requirements/) page.

Major Requirements

Prerequisite Course

| Course | Title | Credits |
|------------|---------------------|---------|
| MA 131 | Calculus I | 3 |
| or MA 131L | Calculus I with Lab | |

Program Requirements

| Course | Title | Credits |
|-------------------------|---|-----------|
| Required Courses | | |
| MA 214 | Intermediate Applied Statistics | 3 |
| MA 252 | Regression Analysis | 3 |
| MA 255 | Design of Experiments | 3 |
| CS 230 | Introduction to Programming with Python | 3 |
| CS 350 | Database Management Systems | 3 |
| MA 346 | Data Science | 3 |
| MA 347 | Data Mining | 3 |
| MA 380 | Introduction to Generalized Linear Models and Survival Analysis in Business | 3 |
| Total Credits | | 24 |

General Degree Requirements

Foundations for Success (15 Credits)

| Course | Title | Credits |
|---------|--------------------------|---------|
| FDS 100 | Falcon Discovery Seminar | 3 |

Communications and Writing

Select one from:

| | | |
|-------------|--|---|
| EMS 101 | Critical Reading and Writing | 3 |
| or EMS 101L | Critical Reading and Writing with Lab | |
| or EMS 102 | Critical Reading and Writing for ESOL | |
| or EMS 102L | Critical Reading and Writing for ESOL with Lab | |

And one from:

| | | |
|------------|-----------------------------------|---|
| EMS 104 | Multimodal Communication | 3 |
| or EMS 105 | Multimodal Communication for ESOL | |

Information Technology

| | | |
|--------|---|---|
| CS 100 | Solving Business Problems with Information Technology | 3 |
|--------|---|---|

Mathematical Sciences

Select one from:

| | | |
|------------|--|---|
| MA 105 | Mathematical Foundations for Business | 3 |
| or MA 105L | Mathematical Foundations for Business with Lab | |
| or MA 107 | Applied Calculus for Business | |
| or MA 107L | Applied Calculus for Business with Lab | |
| or MA 131 | Calculus I | |
| or MA 131L | Calculus I with Lab | |

| | | |
|----------------------|--|-----------|
| Total Credits | | 15 |
|----------------------|--|-----------|

Context and Perspectives (18 Credits)

| Course | Title | Credits |
|--------|-------|---------|
|--------|-------|---------|

Students must take six courses, one in each category of Context and Perspectives:

Culture, Change, and Behavior (catalog.bentley.edu/undergraduate/degree-requirements/context-and-perspectives/#culturechangeandbehavior)

Globalization (catalog.bentley.edu/undergraduate/degree-requirements/context-and-perspectives/#globalization)

Institutions and Power (catalog.bentley.edu/undergraduate/degree-requirements/context-and-perspectives/#institutionsandpower)

Race, Gender, and Inequality (catalog.bentley.edu/undergraduate/degree-requirements/context-and-perspectives/#racegenderandinequality)

Scientific Inquiry (catalog.bentley.edu/undergraduate/degree-requirements/context-and-perspectives/#scientificinquiry)

Values, Ethics, and Society (catalog.bentley.edu/undergraduate/degree-requirements/context-and-perspectives/#valuesethicsandsociety)

| | | |
|----------------------|--|-----------|
| Total Credits | | 18 |
|----------------------|--|-----------|

Business Dynamics/Business Administration Minor (18 Credits)

| Course | Title | Credits |
|--------|-------|---------|
|--------|-------|---------|

All courses are required:

| | | |
|--------|--|---|
| AC 115 | Introduction to Financial Reporting and Analysis | 3 |
| EC 111 | Principles of Microeconomics | 3 |
| FI 118 | Introduction to Finance | 3 |
| LA 100 | Business Law | 3 |
| MG 116 | Human Dynamics in Organizations | 3 |
| ST 113 | Business Statistics | 3 |

| | | |
|----------------------|--|-----------|
| Total Credits | | 18 |
|----------------------|--|-----------|

Communication Intensive

All students are required to take a three-credit course designated as a Communication Intensive. This requirement can be met within a variety of course subjects in both Arts & Sciences and Business. Communication Intensive courses are designated with a "CI" in the course

schedule. *Transfer students with a minimum of 30 credits will be waived from the Communication Intensive requirement.*

Please note that certain majors have an additional three-credit Communication Intensive built into their major requirements, separate from the general CI requirement.

Additional Requirements

Unrestricted Electives (45 Credits)

| Course | Title | Credits |
|----------------------------|--------------|----------------|
| Select 15 elective courses | | 45 |
| Total Credits | | 45 |

Total: 120 Credits