

# MATHEMATICAL SCIENCES MAJOR (B.S.)

The abilities to think in quantitative terms, to reason analytically, and to apply mathematical models to real-world problems and communicate results are valuable assets to those entering careers in business and other fields. Mathematical models are used to analyze a wide variety of problems in economics, finance, environmental management, marketing, business planning, and other business fields, as well as traditional applications in science and engineering.

The Mathematical Sciences major requires completion of MA 131 Calculus I (which fulfills a Foundations for Success core requirement) and nine mathematical sciences courses.

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

## Major Requirements

Course	Title	Credits
<b>Required Courses</b>		
MA 139	Calculus II	3
or MA 139L	Calculus II with Lab	
MA 214	Intermediate Applied Statistics	3
MA 233	Calculus III	3
MA 239	Linear Algebra	3
MA 252	Regression Analysis	3
MA 263	Continuous Probability for Risk Management	3
Select three additional 200-level or higher mathematical sciences electives. Students are advised to choose electives that create an area of specialty that they can market to future employers, such as actuarial science, modeling, mathematical finance, or statistics.		9
<b>Total Credits</b>		<b>27</b>

## General Degree Requirements Foundations for Success (15 Credits)

Course	Title	Credits
FDS 100	Falcon Discovery Seminar	3
<b>Communications and Writing</b>		
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	
<b>Information Technology</b>		
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	
<b>Total Credits</b>		<b>15</b>

## 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)	
<b>Total Credits</b>		<b>18</b>

## 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
<b>Total Credits</b>		<b>18</b>

## 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 (42 Credits)

Course	Title	Credits
Select 14 elective courses		42
<b>Total Credits</b>		<b>42</b>

**Total: 120 Credits**