

# MATHEMATICS: ACTUARIAL SCIENCE OPTION

## Bachelor of Science (BS)

This is a guide based on the 2024-2025 Undergraduate Bulletin and is subject to change. The time it takes to earn a degree will vary based on several factors such as dual enrollment, remediation, and summer enrollment. Students will meet with an academic advisor each semester and use Degree Works to monitor their individual progress.

### CURRICULUM CHECKLIST

#### 85 Hour Major – No Minor Required

- \_\_\_ AC221 Principles of Accounting I (3)
- \_\_\_ AC222 Principles of Accounting II (3)
- \_\_\_ EC215 Principles of Microeconomics (3)
- \_\_\_ EC225 Principles of Macroeconomics (3)
- \_\_\_ FI361 Financial Management (3)
- \_\_\_ MA140 Analytic Geometry & Calculus I (5)
- \_\_\_ MA145 Analytic Geometry & Calculus II (4)
- \_\_\_ MA160 Introduction to Mathematical Ideas (3)
- \_\_\_ MA223 Elementary Probability and Statistics (3)
- \_\_\_ MA244 Analytic Geometry & Calculus III (4)
- \_\_\_ MA250 Foundations of Mathematics (3)
- \_\_\_ MA323 Statistical Methods (3)
- \_\_\_ MA345 Linear Algebra (3)
- \_\_\_ MA375 Theory of Interest (3)
- \_\_\_ MA385 Financial Mathematics (3)
- \_\_\_ MA425 Applied Regression Analysis (3)
- \_\_\_ MA523 Probability & Statistics I (3)
- \_\_\_ MA524 Probability & Statistics II (3)
- \_\_\_ MA526 Actuarial Seminar (3)
- \_\_\_ MA530 Statistical Learning (3)
- \_\_\_ MA575 Time Series & Forecasting (3)
- \_\_\_ MA585 Fundamentals of Actuarial Mathematics I (3)

#### Choose 3 hours - programming course:

- \_\_\_ CS101 Introduction to Computer Programming (3)
- \_\_\_ MA334 Mathematical Programming (3)

#### Choose 12 hours:

- \_\_\_ EC351 Applied Economic Models (3)
- \_\_\_ EC490 Business Forecasting (3)
- \_\_\_ FI351 Principles of Insurance (3)
- \_\_\_ FI362 Advanced Financial Management (3)
- \_\_\_ FI368 Investments (3)
- \_\_\_ MA350 Differential Equations I (3)
- \_\_\_ MA475 Multivariate Methods (3)
- \_\_\_ MA550 Differential Equations (3)
- \_\_\_ MA580 Experimental Design and Analysis of Variance (3)
- \_\_\_ MK301 Principles of Marketing (3)
- \_\_\_ MK348 Brand Marketing (3)

**General Education Requirements** – some requirements may be fulfilled by coursework in major program

- Social and Behavioral Sciences – 6 hours
- Constitution Requirement – 3 hours
- Written Communication – 6 hours
- Oral Communication – 3 hours
- Natural Sciences – 7 hours (from two disciplines, one to include a lab)
- Mathematics – 3 hours
- Humanities & Fine Arts – 9 hours (from at least two disciplines)
- Additional requirements – 5 hours (to include UI100 for native students)
- Civics examination

### SAMPLE FOUR-YEAR PLAN

	Fall Semester		Spring Semester	
	Course #	Hrs	Course #	Hrs
<b>FIRST YEAR</b>	UI100	1	AC222	3
	EN100	3	MA145	4
	AC221	3	MA223	3
	MA140	5	General Education	3
	MA160	3	General Education	3
	<b>Total</b>	<b>15</b>	<b>Total</b>	<b>16</b>
<b>SECOND YEAR</b>	EC215	3	EC225	3
	MA244	4	MA345	3
	MA250	3	CS101/MA334	3
	MA323	3	General Education	3
	General Education	3	General Education	3
	<b>Total</b>	<b>16</b>	<b>Total</b>	<b>15</b>
<b>THIRD YEAR</b>	MA375	3	FI361	3
	MA425	3	MA385	3
	MA523	3	MA524	3
	MA530	3	MA526	3
	General Education	3	MA575	3
	<b>Total</b>	<b>15</b>	<b>Total</b>	<b>15</b>
<b>FOURTH YEAR</b>	Major elective	3	MA585	3
	Major elective	3	Major elective	3
	General Education	3	Major elective	3
	General Education	3	General Education	3
	General Education	3	General Education	3
	<b>Total</b>	<b>15</b>	<b>Total</b>	<b>15</b>

**Degree requirements for all students:** a minimum of 120 credit hours, completion of the General Education program, and completion of 39 senior division hours (300-599). Refer to the Undergraduate Bulletin or Degree Works for additional graduation requirements for your program.

*A minimum 2.0 GPA in the major and overall are required to graduate with a BS degree.*



Revised  
2/2/2024

2024-2025 *degree map*

