

MATHEMATICS COMPREHENSIVE MAJOR: ACTUARIAL SCIENCE EMPHASIS

Program Requirements

The Actuarial Science Emphasis provides a complete major in mathematics while also preparing students for careers in risk management. The curriculum fully covers all of the content for the first professional actuarial exam in probability, while also laying the foundation for success on subsequent exams.

A minimum of 59 credits is required, including the 25-credit Mathematics Core:

Code	Title	Credits
Mathematics Core		
CS 190	Computer Science I	3
MATH 151	Calculus I (GT-MA1)	4
MATH 251	Calculus II	4
MATH 260	Applied Linear Algebra	3
MATH 451	Analysis I	3
MATH 471	Abstract Algebra I	3
MATH 495	Senior Seminar	2
Choose one of the following:		3
MATH 200	Discrete Mathematics	
MATH 220	Introduction to Advanced Mathematics	
Total Credits		25

And the following:

Code	Title	Credits
One of the following:		3
BUAD 220	Spreadsheets and Analysis	
CS 120	Professional Computer Skills	
And all of the following:		
BUAD 311	Business Analytics	3
ECON 201	Macroeconomics (GT-SS1)	3
ECON 202	Microeconomics	3
ECON 316	Econometrics	3
ECON 361	Money, Banking, and Financial Markets	3
MATH 213	Probability and Statistics (GT-MA1)	3
MATH 252	Calculus III	4
MATH 313	Statistical Modeling and Simulation	3
MATH 314	Applied Probability I	3
MATH 414	Applied Probability II	3
Total Credits		34

Course	Title	Credits
Year One		
Fall		
ECON 201	Macroeconomics (GT-SS1)	3
Gen Ed	Arts & Humanities	3

HWTR 100	First Year Seminar	1
MATH 151	Calculus I (GT-MA1)	4
MATH 260	Applied Linear Algebra	3
Credits		14
Spring		
CS 190	Computer Science I	3
ECON 202	Microeconomics	3
ENG 102	Writing and Rhetoric I (GT-CO1)	3
MATH 251	Calculus II	4
MATH 213	Probability and Statistics (GT-MA1)	3
Credits		16
Year Two		
Fall		
ECON 316	Econometrics	3
Gen Ed	Natural Sciences w/lab	4
MATH 252	Calculus III	4
MATH 314	Applied Probability I	3
Credits		14
Spring		
MATH 414	Applied Probability II	3
MATH 313	Statistical Modeling and Simulation	3
ENG 103	Writing and Rhetoric II (GT-CO2)	3
Gen Ed	Arts & Humanities	3
Gen Ed	Social Sciences	3
Credits		15
Year Three		
Fall		
BUAD 220 or CS 120	Spreadsheets and Analysis or Professional Computer Skills	3
ECON 361	Money, Banking, and Financial Markets	3
Elective	Elective	3
Gen Ed	Arts & Humanities	3
MATH 220	Introduction to Advanced Mathematics	3
Credits		15
Spring		
BUAD 311	Business Analytics	3
Elective	Elective	4
Elective	Elective (upper division)	6
Gen Ed	Natural Sciences	4
Credits		17
Year Four		
Fall		
MATH 451	Analysis I	3
Gen Ed	Social Sciences	3
Elective	Elective	3
Elective	Elective (upper division)	6
Credits		15
Spring		
MATH 471	Abstract Algebra I	3
MATH 495	Senior Seminar	2
Elective	Elective	6
Elective	Elective (upper division)	3
Credits		14
Total Credits		120