

B.S. IN MATHEMATICS - ACTUARIAL SCIENCE CONCENTRATION

Curriculum

Code	Title	Credits
GENERAL EDUCATION REQUIREMENTS (https://catalog.wcupa.edu/undergraduate/general-education-requirements/)		
Academic Foundations		
	First Year Experience requirement	4
	English Composition requirement	6-7
	Mathematics requirement	3-4
	Interdisciplinary requirement	3
	Diverse Communities requirement	3
	Ethics requirement	3
Distributed Disciplinary Foundations		
	Science requirement	6-8
	Behavioral & Social Science requirement	6
ECO 111	Principles of Economics (Macro)	
	Humanities requirement	6
	Arts requirement	3
ADDITIONAL BACCALAUREATE REQUIREMENTS (https://catalog.wcupa.edu/undergraduate/general-education-requirements/)		
University Requirements		
	Writing Emphasis requirement	9
ENG 368	Business and Organizational Writing	
or ENG 371	Technical Writing	
or ENG 375	Client-Based Writing	
	Speaking Emphasis requirement	9
Degree Requirements		
	Capstone requirement	1-15
MAJOR REQUIREMENTS		
Mathematics Core		
MAT 161	Calculus I	4
MAT 162	Calculus II	4
MAT 200	The Nature of Mathematics	3
MAT 261	Calculus III	4
MAT 311	Linear Algebra ¹	3
Concentration Requirements		
MAT 125	Introduction to Statistics and Probability	
STA 200	Introduction to Statistics II	3
STA 319	Applied Statistics	3
MAT 343	Differential Equations	3
MAT 371	Mathematics of Finance	3
MAT 421	Mathematical Statistics I	3
MAT 422	Mathematical Statistics II	3
MAT 423	Applied Probability	3
STA 419	Basics of Statistical Learning	
Cognate Requirements		
	Select one of the following: ³	3
ENG 368	Business and Organizational Writing	
ENG 371	Technical Writing	
ENG 375	Client-Based Writing	

ACC 201	Financial Accounting	3
ECO 111	Principles of Economics (Macro) ²	3
ECO 112	Principles of Economics (Micro)	3
ECO 340	Intermediate Microeconomics	3
FIN 325	Corporate Finance	3
FIN 330	Principles of Insurance	3

Free Electives or Internship

Chosen under advisement	14
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Capstone Requirement

MAT 478	Fundamentals of Actuarial Science _{3,4,5}	3
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Total Minimum Credits Required 120

- ¹ Indicates course satisfies the general education Mathematics requirement.
- ² This course satisfies the general education Behavioral and Social Sciences requirement
- ³ This course satisfies the University Writing Emphasis requirement
- ⁴ This course satisfies the University Speaking Emphasis requirement
- ⁵ This course fulfills the Capstone requirement and must be passed with a C or better.

All mathematics core and concentration courses must be passed with a C or better.

Sample Course Plan

To track their individual degree progress, students are advised to access their Degree Audit via RamPortal regularly. For more information, visit the Degree Audit FAQ webpage (<https://www.wcupa.edu/academicEnterpriseSystems/student-system-modernization/degree-audit-faqs.aspx>).

The following is a sample suggested course sequence for this program; course offerings and availability are not guaranteed. Students should consult their academic advisor with any questions.

Course	Title	Credits
Year One		
Fall		
MAT 125	Introduction to Statistics and Probability	3
MAT 161	Calculus I	4
ECO 112	Principles of Economics (Micro)	3
WRT 120	Effective Writing I	3
or WRT 123	or Effective Writing with Supplemental Writing Workshop	
FYE 100X	First Year Experience	4
		Credits 17
Spring		
MAT 162	Calculus II	4
MAT 200	The Nature of Mathematics	3
ECO 111	Principles of Economics (Macro)	3
Science Gen Ed		3
Behavioral/Social Science Gen Ed		3
		Credits 16
Year Two		
Fall		
MAT 261	Calculus III ¹	4
MAT 311	Linear Algebra	3
MAT 371	Mathematics of Finance	3
ACC 201	Financial Accounting	3
WRT 2XX	200-Level WRT Course	3
		Credits 16

Spring		
MAT 421	Mathematical Statistics I ¹	3
STA 319	Applied Statistics	3
FIN 325	Corporate Finance	3
Science Gen Ed		3
Free Elective ³		3
Credits		15
Year Three		
Fall		
STA 419	Basics of Statistical Learning	3
FIN 330	Principles of Insurance	3
IW Course		3
Humanities Gen Ed		3
Free Elective ³		3
Credits		15
Spring		
MAT 343	Differential Equations	3
MAT 422	Mathematical Statistics II	3
ECO 340	Intermediate Microeconomics	3
JW Course		3
Free Elective ³		3
Credits		15
Year Four		
Fall		
ENG 368	Business and Organizational Writing (W)	3
or		
ENG 371	or Technical Writing	
or	or Strategies for Writing in the	
ENG 375	Workplace	
Arts Gen Ed		3
Humanities Gen Ed		3
Free Elective ³		3
Free Elective ³		3
Credits		15
Spring		
MAT 478	Fundamentals of Actuarial Science	3
MAT 491	Internship in Applied Mathematics ²	2-4
or Free Elective		
Free Elective ³		3
Free Elective ³		3
Credits		11-13
Total Credits		120-122

¹ MAT 421 should be taken immediately after MAT 261.

² May be taken for variable credit and repeated for credit.

³ Must be approved by advisor.