

B.S. IN MATHEMATICS - MATHEMATICAL FINANCE CONCENTRATION

College of the Sciences and Mathematics

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
	Humanities requirement	6
	Arts requirement	3
ADDITIONAL BACCALAUREATE REQUIREMENTS (https://catalog.wcupa.edu/undergraduate/general-education-requirements/)		
University Requirements		
	Writing Emphasis requirement	9
	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	3
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
MAT 443	Applied Analysis I	3
Cognate Requirements		
	Select one of the following: ⁴	3
	ENG 368 Business and Organizational Writing	
	ENG 371 Technical Writing	
	ENG 375 Strategies for Writing in the Workplace	
ACC 201	Financial Accounting	3
CSC 141	Computer Science I ²	3

ECO 111	Principles of Economics (Macro) ³	3
ECO 112	Principles of Economics (Micro)	3
FIN 325	Corporate Finance	3
FIN 337	Financial Markets and Institutions	3
	or FIN 344 Investments	

Free Electives or Internship		
	Complete 17 credits chosen under advisement.	17
Capstone Requirement		
MAT 479	Financial Calculus ^{4,5,6}	3
Total Minimum Required Credits		120

- ¹ Indicates course satisfies the general education Mathematics requirement.
- ² This course satisfies the general education Science requirement.
- ³ This course satisfies the general education Behavioral and Social Sciences requirement.
- ⁴ This course satisfies the University Writing Emphasis requirement
- ⁵ This course satisfies the University Speaking Emphasis requirement
- ⁶ This course fulfills the Capstone requirement and must be passed with a C or better

All math 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 Progress Report (DPR) via myWCU regularly. For more information, visit wcupa.edu/DegreeProgressReport (<http://wcupa.edu/degreeprogressreport/>).

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
CSC 141	Computer Science I	3
WRT 120	Effective Writing I	3
	or Effective Writing with Supplemental	
	WRT 123 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
STA 200	Introduction to Statistics II	3
	Science Gen Ed	3
Credits		16
Year Two		
Fall		
MAT 261	Calculus III	4
MAT 311	Linear Algebra	3
ACC 201	Financial Accounting	3
WRT 2XX	200-Level WRT Course	3
	Free Elective ¹	3
Credits		16

Spring		
MAT 343	Differential Equations	3
STA 319	Applied Statistics	3
ECO 112	Principles of Economics (Micro)	3
Humanities Gen Ed		3
Behavioral & Social Science Gen Ed		3
Credits		15
Year Three		
Fall		
MAT 371	Mathematics of Finance	3
MAT 421	Mathematical Statistics I	3
FIN 325	Corporate Finance	3
JW Course		3
Free Elective ¹		3
Credits		15
Spring		
MAT 422	Mathematical Statistics II	3
FIN 337	Financial Markets and Institutions	3
or	or Investments	
FIN 344		
I Course		3
Humanities Gen Ed		3
Free Elective ¹		3
Credits		15
Year Four		
Fall		
MAT 423	Applied Probability	3
MAT 491	Internship in Applied Mathematics ²	3
	or Free Elective ¹	
ENG 368	Business and Organizational Writing	3
or	or Technical Writing	
ENG 371	or Strategies for Writing in the	
or	Workplace	
ENG 375		
Ethics Gen Ed ¹		3
Arts Gen Ed		3
Credits		15
Spring		
MAT 443	Applied Analysis I	3
MAT 479	Financial Calculus	3
Free Elective ¹		3
Free Elective ¹		3
Credits		12
Total Credits		121

¹ Must be approved by advisor.

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