

# B.S. IN MATHEMATICS - MATHEMATICAL FINANCE CONCENTRATION

## Curriculum

Code	Title	Credits
<b>GENERAL EDUCATION REQUIREMENTS</b> ( <a href="https://catalog.wcupa.edu/undergraduate/general-education-requirements/">https://catalog.wcupa.edu/undergraduate/general-education-requirements/</a> )		
<b>Academic Foundations</b>		
	First Year Experience requirement	4
	English Composition requirement	6-7
	Mathematics requirement	3-4
	Interdisciplinary requirement	3
	Diverse Communities requirement	3
	Ethics requirement	3
<b>Distributed Disciplinary Foundations</b>		
	Science requirement	6-8
CSC 141	Computer Science I	
	Behavioral & Social Science requirement	6
ECO 111	Principles of Economics (Macro)	
	Humanities requirement	6
	Arts requirement	3
<b>ADDITIONAL BACCALAUREATE REQUIREMENTS</b> ( <a href="https://catalog.wcupa.edu/undergraduate/general-education-requirements/">https://catalog.wcupa.edu/undergraduate/general-education-requirements/</a> )		
<b>University Requirements</b>		
	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
<b>Degree Requirements</b>		
	Capstone requirement	1-15
<b>MAJOR REQUIREMENTS</b>		
<b>Mathematics Core</b>		
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 <sup>1</sup>	3
<b>Concentration Requirements</b>		
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
MAT 443	Applied Analysis I	3
<b>Cognate Requirements</b>		
	Select one of the following: <sup>4</sup>	3
ENG 368	Business and Organizational Writing	
ENG 371	Technical Writing	

ENG 375	Client-Based Writing	
ACC 201	Financial Accounting	3
CSC 141	Computer Science I <sup>2</sup>	3
ECO 111	Principles of Economics (Macro) <sup>3</sup>	3
ECO 112	Principles of Economics (Micro)	3
FIN 325	Corporate Finance	3
FIN 337	Financial Markets and Institutions	3
or FIN 344	Investments	
<b>Free Electives or Internship</b>		
	Complete 17 credits chosen under advisement.	17
<b>Capstone Requirement</b>		
MAT 479	Financial Calculus <sup>4,5,6</sup>	3
<b>Total Minimum Required Credits</b>		<b>120</b>

- <sup>1</sup> Indicates course satisfies the general education Mathematics requirement.
- <sup>2</sup> This course satisfies the general education Science requirement.
- <sup>3</sup> This course satisfies the general education Behavioral and Social Sciences requirement.
- <sup>4</sup> This course satisfies the University Writing Emphasis requirement
- <sup>5</sup> This course satisfies the University Speaking Emphasis requirement
- <sup>6</sup> 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 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
<b>Year One</b>		
<b>Fall</b>		
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 WRT 123	or Effective Writing with Supplemental Writing Workshop	
FYE 100X	First Year Experience	4
<b>Credits</b>		<b>17</b>
<b>Spring</b>		
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
<b>Credits</b>		<b>16</b>
<b>Year Two</b>		
<b>Fall</b>		
MAT 261	Calculus III	4
MAT 311	Linear Algebra	3
ACC 201	Financial Accounting	3
WRT 2XX	200-Level WRT Course	3

Free Elective <sup>1</sup>		3
<b>Credits</b>		<b>16</b>
<b>Spring</b>		
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
<b>Credits</b>		<b>15</b>
<b>Year Three</b>		
<b>Fall</b>		
MAT 371	Mathematics of Finance	3
MAT 421	Mathematical Statistics I	3
FIN 325	Corporate Finance	3
JW Course		3
Free Elective <sup>1</sup>		3
<b>Credits</b>		<b>15</b>
<b>Spring</b>		
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 <sup>1</sup>		3
<b>Credits</b>		<b>15</b>
<b>Year Four</b>		
<b>Fall</b>		
MAT 423	Applied Probability	3
MAT 491	Internship in Applied Mathematics <sup>2</sup>	3
	or Free Elective <sup>1</sup>	
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 <sup>1</sup>		3
Arts Gen Ed		3
<b>Credits</b>		<b>15</b>
<b>Spring</b>		
MAT 443	Applied Analysis I	3
MAT 479	Financial Calculus	3
Free Elective <sup>1</sup>		3
Free Elective <sup>1</sup>		3
<b>Credits</b>		<b>12</b>
<b>Total Credits</b>		<b>121</b>

<sup>1</sup> Must be approved by advisor.

<sup>2</sup> May be taken for variable credit and repeated for credit.