

**Major Program Guide For: B.S. in Mathematics**  
**Concentration: Actuarial Science**  
**Suggested Course Sequence**  
(Updated January 9, 2023)

- Total Hours for Degree: 120
- This sequence assumes that students begin in Calculus I.
- Students may finish earlier if they attend summer school at WCU or another approved institution.

<b>Freshman Year</b>			
<b>Fall</b>	<b>16</b>	<b>Spring</b>	<b>16</b>
MATH 153: Calculus I	4	MATH 250: Introduction to Logic and Proof	3
MATH 270: Statistical Methods I	3	MATH 255: Calculus II	4
ACCT 251*: Financial Accounting: A User Perspec.	3	COMM 201: Foundations of Communication	3
First-Year Seminar (consider MATH/CS/FIN)	3	ENGL 101: Writing and Rhetoric	3
Liberal Studies (P1: FIN 210 recommended)	3	FIN 305*: Financial Management	3

NOTE: If a student is not beginning in Calculus I, see the department for a revised course sequence. General Electives must include a major or minor in another related field.

<b>Sophomore Year</b>			
<b>Fall</b>	<b>16</b>	<b>Spring</b>	<b>15</b>
MATH 256: Calculus III	4	MATH 340: Introduction to Scientific Computing	3
MATH 370: Probability and Statistics I	3	MATH 373 (Exam FM)/MATH 471 (Exam P)	3
ECON 231: Intro. Microeconomics & Social Iss. (P1)	3	ECON 232: Intro. Macroeconomics & Social Issues	3
ENGL 202: Writing and Critical Inquiry	3	Liberal Studies	3
Liberal Studies	3	Liberal Studies	3

<b>Junior Year</b>			
<b>Fall</b>	<b>15</b>	<b>Spring</b>	<b>15</b>
MATH 310: Discrete Structures	3	MATH 373 (Exam FM)/MATH 471 (Exam P)	3
MATH 362: Linear Algebra I	3	Actuarial Science Elective (MATH 472/474 or E304)	3
Actuarial Science Elective (MATH 470 or 475)	3	Liberal Studies	3
Liberal Studies	3	Liberal Studies	3
Liberal Studies	3	Liberal Studies	3

**Upper Level Perspective (ULP):** An approved Upper Level Liberal Studies Perspectives course is required in one of the Liberal Studies Perspectives categories.

<b>Senior Year</b>			
<b>Fall</b>	<b>14</b>	<b>Spring</b>	<b>13</b>
MATH 479: Capstone: Seminar	2	General Elective (ECON or FIN Minor?)	3
General Elective (ECON or FIN Minor?)	3	General Electives (ECON or FIN Minor?)	3
General Electives (ECON or FIN Minor?)	3	General Electives (ECON or FIN Minor?)	3
General Electives (ECON or FIN Minor?)	3	General Electives (ECON or FIN Minor?)	3
General Electives (ECON or FIN Minor?)	3	General Electives (ECON or FIN Minor?)	1

**In the first semester of the senior year, students must apply for graduation.**

\*ACCT 251 and FIN 305 should be taken prior to MATH 373 whenever possible.

**MAJOR IN MATHEMATICS,  
B.S. DEGREE, ACTUARIAL SCIENCE CONCENTRATION**

January 2023

Student Name: \_\_\_\_\_

Term/Year Entered: \_\_\_\_\_

A. Liberal Studies (42 Hours): See Liberal Studies Requirement Completion Record.

B. Core Math Courses (24 Hours): (These must be passed with a C or better.)

Course/Number	Prerequisite/Corequisite	Grade/Semester Taken
MATH 153, Calculus I (4)	MATH 146 or placement	
MATH 255, Calculus II (4)	MATH 153	
MATH 256, Calculus III (4)	MATH 255	
MATH 250, Intro. to Logic and Proof (3)	MATH 140 or 153 or Dept. Head consent	
MATH 270, Statistical Methods I (3)	MATH 146 or MATH 153 or placement	
MATH 310, Discrete Structures (3)	MATH 250 or instructor permission	
MATH 362, Linear Algebra I (3)	MATH 153 and MATH 250	

C. Additional Required Math Courses (14 hours):

Course/Number	Prerequisite/Corequisite	Grade/Semester Taken
MATH 340, Intro. to Scien. Computing (3)	MATH 255	
MATH 370, Probability & Statistics I (3)	MATH 255	
MATH 373, Actuarial Exam FM (3)	MATH 255	
MATH 471, Actuarial Exam P (3)	MATH 255	
MATH 479, Capstone: Seminar (2)	C or better in MATH 250; 75 hours	

D. Additional Required Non-Math Courses (12 hours):

Course/Number	Prerequisite/Corequisite	Grade/Semester Taken
ACCT 251, Financial Accounting (3)		
ECON 231, Intro. Microeconomics (3)		
ECON 232, Intro. Macroeconomics (3)		
FIN 305, Financial Management (3)	ACCT 161 or ACCT 251	

E. Actuarial Science Electives (6 hours):

Choose **TWO** from the following: ECON 304 (Econometrics), MATH 375 (Stat. Methods II), MATH 470 (Prob. & Stat. II), MATH 472 (Data Science), MATH 474 (Intro. Statistical Models), MATH 475 (Stat. Machine Learning)

Course/Number	Prerequisite/Corequisite	Grade/Semester Taken

F. **NOT REQUIRED** A second major or a minor is **NOT** required, but major in Economic Analysis or minors in Economics and/or Finance can be a useful way to utilize general electives.

Major or minor: (If major, attach checksheet; if minor, complete below)		
Course/Number	Prerequisite/Corequisite	Grade/Semester Taken

F. Electives: Enough hours to reach 120 total hours for the degree

Course/Number	Prerequisite/Corequisite	Grade/Semester Taken

Numbers of hours completed after:

Semester							
#Hours							

Note: For all programs, a minimum of 32 credit hours must be earned at WCU at the Junior/Senior level.