College of Science - Mathematics, BS with Concentration in Actuarial Mathematics				
Catalog Year: 2020-2021				Grades
Mason Core Requirements: 24 credits	Course Information	Credits	Earned	Needed
Written Communication:	ENGH 101 (100)	3		
Oral Communication:		3		
*Quantitative Reasoning	*Satisfied by Major Requirements			
*Information Technology	*Satisfied by Major Requirements (CS 112)			
Arts		3		
Global Understanding		3		
Literature		3		
*Natural Science	*Satisfied by Major Requirements			
*Social & Behavioral Sciences	*Satisfied by Concentration Requirement (ECON 103)			
Western Civilization/World History		3		
Written Communication:	ENGH 302	3		
Synthesis/Capstone		3		

Major Requirements (75-76 credits in major with Concentration in Actuarial Mathematics) A maximum of 6 credits of grades below 2.00 in coursework designated MATH or STAT may be applied toward the major				
MATH 113	Analytic Geometry and Calculus I	4		
MATH 114	Analytic Geometry and Calculus II	4		
MATH 203	Linear Algebra	3		
MATH 213	Analytic Geometry and Calculus III or	3		
or MATH 215	Analytic Geometry and Calculus III (Honors)			
MATH 214	Elementary Differential Equations or	3		
or MATH 216	Theory of Differential Equations			
MATH 300	Introduction to Advanced Mathematics	3		
MATH 322	Advanced Linear Algebra	3		
CS 112	Introduction to Computer Programming	4		

Science Requirement: Select a one-year sequence of a laboratory science from the following courses (8-9 credits):				
BIOL 213 and One from the following: BIOL 300, 308, or 311	Cell Structure and Function AND Biodiversity, Foundations of Ecology & Evolution, OR General Genetics			
CHEM 211/213 & CHEM 212/214	General Chemistry I & II with Labs			
GEOL 101 & GEOL 102	Introductory Geology I & II			
PHYS 160/161 or 260/261	University Physics I & II with Labs			

Actuarial Mathematics (39 credits)				
MATH 125	Discrete Mathematics I (Mason Core)	3		
MATH 351	Probability	3		
MATH 352	Statistics	3		
MATH 551	Regression and Time Series	3		
MATH 554	Financial Mathematics	3		
MATH 555	Actuarial Modeling I	3		
MATH 557	Financial Derivatives	3		
ACCT 203	Survey of Accounting	3		
ECON 103	Contemporary Microeconomic Principles	3		
ECON 306	Intermediate Microeconomics (ECON 104 waived by Dept.)	3		
or ECON 310	Money and Banking			
or FNAN 321	Financial Institutions			
STAT 362	Introduction to Computer Statistical Packages	3		
Two from the following (6 credits):				
MATH 441	Deterministic Operations Research	3		
MATH 442	Stochastic Operations Research			
MATH 446	Numerical Analysis I	3		
MATH 453	Advanced Mathematical Statistics			

Degree Notes				
Approx. 20-21 remaining credits may be completed with elective courses to bring the degree total to 120 with 45 of these credits at the 300/400 level. All graduating seniors are required to have an exit interview.				
Advisor Notes:				