MAJOR IN MATHEMATICS, ACTUARIAL SCIENCE CONCENTRATION

Requirements
Effective Fall 2022

A minimum grade of C (3.000) is required in all mathematics, statistics, and computer science courses that are required for graduation.

Freshman

		AUCC	Credits
CO 150	College Composition (GT-CO2)	1A	3
ECON 202	Principles of Microeconomics (GT-SS1)	3C	3
ECON 204	Principles of Macroeconomics (GT-SS1)	3C	3
MATH 160	Calculus for Physical Scientists I (GT-MA1)	1B	4
MATH 161	Calculus for Physical Scientists II (GT-MA1)	1B	4
MATH 192	First Year Seminar in Mathematical Sciences		1
Arts and Humanities (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#arts-humanities)		3B	3
Biological and Physical Sciences (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#biological-physical-sciences)[1]		3A	5
Diversity, Equity, and Inclusion (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#diversity-equity-inclusion)		1C	3
Elective			1
	Total Credits		**30**

Sophomore

		AUCC	Credits
ACT 210	Introduction to Financial Accounting		3
FIN 310	Financial Markets and Institutions		3
Select one course from the following:			2-4
CS 220	Discrete Structures and their Applications		
MATH 235	Introduction to Mathematical Reasoning		
MATH 261	Calculus for Physical Scientists III		4
MATH 369	Linear Algebra I	4A	3
STAT 315	Intro to Theory and Practice of Statistics		3
Select four credits from the following:			4
CS 150A	Culture and Coding: Java (GT-AH3)	3B	
CS 150B	Culture and Coding: Python (GT-AH3)	3B	
CS 152	Python for STEM		
CS 158/MATH 158	Mathematical Algorithms in C		
CS 163	CS1---No Prior Programming Experience		
CS 164	CS1--Computational Thinking with Java		
MATH 151	Mathematical Algorithms in Matlab I		
MATH 152	Mathematical Algorithms in Maple		
STAT 158	Introduction to R Programming		
Biological and Physical Sciences (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#biological-physical-sciences)[1]		3A	5

Historical Perspectives (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#historical-perspectives)		3D	3
	Total Credits		**30-32**
Junior			
FIN 300[2]	Principles of Finance		3
ECON 335/AREC 335	Introduction to Econometrics		3
JTC 300	Strategic Writing and Communication (GT-CO3)	2	3
MATH 317	Advanced Calculus of One Variable	4B	3
STAT 420	Probability and Mathematical Statistics I		3
STAT 421	Introduction to Stochastic Processes		3
STAT 430	Probability and Mathematical Statistics II		3
Select one course from the following:			4
MATH 340	Intro to Ordinary Differential Equations		
MATH 345	Differential Equations		
Arts and Humanities (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#arts-humanities)		3B	3
Elective			2
	Total Credits		**30**
Senior			
BUS 205	Legal and Ethical Issues in Business		3
FIN 342	Risk Management and Insurance		3
FIN 370	Financial Management-Theory and Application		3
MATH 495[3]	Independent Study		1
Select one course from the following:			3
MATH 417	Advanced Calculus I	4C	
MATH 435	Projects in Applied Mathematics	4C	
Electives[4]			15-17
	Total Credits		**28-30**
	Program Total Credits:		**120**

[1] Students in this concentration must take a total of 10 credits in category 3A, and at least one course must have a laboratory component.

[2] Students in this concentration may need to obtain a prerequisite override from the appropriate department to enroll in this class.

[3] Preparation for Exam I administered by the Society of Actuaries.

[4] Select enough elective credits to bring program total to a minimum of 120 credits, of which at least 42 must be upper-division (300- to 400-level).