

COMPUTATIONAL MATHEMATICS (B.S.) - ACTUARIAL - ONLINE

Important: This degree plan is effective for those starting this degree program in fall 2025 through summer 2026. This degree plan will remain in effect for students who do not break enrollment or who do not change degree programs, concentrations, or cognates.

General Education/Foundational Skills Requirements

Code	Title	Hours
Communication & Information Literacy ¹		
ENGL 101	Composition and Rhetoric	3
	Communications Elective	3
	Information Literacy Elective	3
	Information Literacy Elective	3
Technological Solutions & Quantitative Reasoning ¹		
UNIV 104	Instructional Technology for Successful Online Learning	0-3
Math Elective	MATH 114 or higher	3
Critical Thinking ¹		
RLGN 104	Christian Life and Biblical Worldview ²	4
	Critical Thinking Elective	3
Civic & Global Engagement ¹		
	Cultural Studies Elective	3
Social & Scientific Inquiry ¹		
	Natural Science Elective	3
	Social Science Elective	3
Christianity & Contexts ¹		
BIBL 104	Survey of Old and New Testament	4
THEO 104	Introduction to Theology Survey ²	4
Total Hours		39-42

¹ Refer to the list of approved general education electives before enrolling in foundational skill requirements

² Students transferring in 45 or more UG credit hours will have the requirement of RLGN 104 waived; Students transferring in 60 or more UG credit hours will also have the requirement of THEO 104 waived

Major Requirements

Code	Title	Hours
Major Foundational Courses		
CSIS 110	Introduction to Computer Science ¹	3
MATH 131	Calculus and Analytic Geometry I ¹	4
Total Hours		7

¹ Course may fulfill select general education requirements.

Code	Title	Hours
Major Courses		
MATH 132	Calculus and Analytic Geometry II	4
MATH 211	Introduction to Statistical Analysis	3
MATH 250	Introduction to Discrete Mathematics	3
MATH 345	Introduction to the History of Mathematics	3
MATH 410	Matrix and Linear Algebra	3
MATH 412	Numerical Methods	3
MATH 423	Abstract Algebraic Structures	3
MATH 430	Multivariable Calculus	3
MATH 432	Applied Differential Equations	3
MATH 441	Probability I	3
MATH 460	Mathematical Modeling and Simulation	3
MATH 491	Computational Mathematics Capstone	3
STAT 420	Regression and Forecasting I	3
Total Hours		40

Code	Title	Hours
Concentration		
ACCT 211	Financial Principles	3
ACCT 212	Managerial Principles	3
BUSI 320	Finance Principles	3
ECON 213	Principles of Microeconomics	3
ECON 214	Principles of Macroeconomics	3
MATH 442	Probability II	3
Total Hours		18

Code	Title	Hours
Free Electives		
Choose 13-23 credit hours of Free Electives		13-23
Total Hours		13-23

All applicable prerequisites must be met

Graduation Requirements

- 120 Total hours
- 2.0 Overall grade point average
- 30 Hours must be upper-level courses (300-400 level)
- **Grade of 'C'** Minimum required for all major foundational courses and all upper-level courses in the major
- 25% Of major taken through Liberty University
- 30 Hours must be completed through Liberty University
- **Grad App** Submission of Degree Completion Application must be completed within the last semester of a student's anticipated graduation date

Course Sequence

Course	Title	Hours
Freshman Year		
First Semester		
BIBL 104	Survey of Old and New Testament	4
ENGL 101	Composition and Rhetoric	3
UNIV 104	Instructional Technology for Successful Online Learning	0-3

Course	Title	Hours
Communications Elective ¹		3
MATH Elective (MATH 131) ¹		4
Hours		14-17
Second Semester		
RLGN 104	Christian Life and Biblical Worldview	4
Information Literacy Elective (CSIS 110) ¹		3
MATH 132	Calculus and Analytic Geometry II	4
MATH 211	Introduction to Statistical Analysis	3
MATH 250	Introduction to Discrete Mathematics	3
Hours		17
Sophomore Year		
First Semester		
Critical Thinking Elective ¹		3
Information Literacy Elective ¹		3
Natural Science Elective ¹		3
ACCT 211	Financial Principles	3
Elective		3
Hours		15
Second Semester		
Cultural Studies Elective ¹		3
Social Science Elective ¹		3
ACCT 212	Managerial Principles	3
ECON 214	Principles of Macroeconomics	3
MATH 430	Multivariable Calculus	3
Hours		15
Junior Year		
First Semester		
THEO 104	Introduction to Theology Survey	4
MATH 410	Matrix and Linear Algebra	3
MATH 441	Probability I	3
STAT 420	Regression and Forecasting I	3
Elective		3
Hours		16
Second Semester		
BUSI 320	Finance Principles	3
ECON 213	Principles of Microeconomics	3
MATH 423	Abstract Algebraic Structures	3
MATH 442	Probability II	3
Core Elective ²		3
Hours		15
Senior Year		
First Semester		
MATH 345	Introduction to the History of Mathematics	3
MATH 432	Applied Differential Equations	3
Elective		3
Elective		3
Elective		1
Hours		13
Second Semester		
MATH 460	Mathematical Modeling and Simulation	3
MATH 491	Computational Mathematics Capstone	3

Course	Title	Hours
Elective		3
Elective		3
Elective		3
Hours		15
Total Hours		120-123

¹ Refer to the list of approved general education electives at www.liberty.edu/gened before enrolling foundational skills requirements.

² Choose any MATH, PHYS, or STAT course note already applying to the degree.