COMPUTATIONAL MATHEMATICS (B.S.) -INFORMATION SYSTEM -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			
Information Liter	acy Elective	3	
Information Literacy Elective			
Technological So	olutions & 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			
Civic & Global Engagement ¹			
Cultural Studies Elective			
Social & Scientific Inquiry ¹			
Natural Science Elective		3	
Social Science Elective			
Christianity & Contexts ¹			
BIBL 104	Survey of Old and New Testament	4	
THEO 104	Introduction to Theology Survey ²	4	
Total Hours		39-42	

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

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

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
Cognate	Title	Hours
CSIS 100	Introduction to Information Sciences and Syste	ms 3
CSIS 100	Application Programming	3
CSIS 208		3
CSIS 310	Web Programming	3
CSIS 330	Business Data Communication Systems	
	Studies in Information Security	3
Total Hours		15
Code	Title	Hours
Free Electives		
Choose 16-26 credit hours of Free Electives 16-		
Total Hours		16-26

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
- ullet 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
First 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
Communications Elective ¹		3

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

Hours	Course	Title	Hours
Hours	Math Elective (M.	ATH 131) ¹	4
RLGN 104			14-17
Critical Thinking Elective 1 Information Literacy Elective (CSIS 110) 1 3 Information Literacy Elective (CSIS 110) 1 3 MATH 132 Calculus and Analytic Geometry II 4 MATH 250 Introduction to Discrete Mathematics 3 Hours First Semester Information Literacy Elective 1 3 Natural Science Elective 1 3 MATH 211 Introduction to Statistical Analysis 3 MATH 430 Multivariable Calculus Elective 4 Hours Second Semester THEO 104 Introduction to Theology Survey 4 Cultural Studies Elective 1 3 Social Science Elective 2 3 Second Semester MATH 410 Matrix and Linear Algebra 3 3 SElective 1 3 Second Semester MATH 345 Introduction to the History of Mathematics 3 MATH 423 Abstract Algebraic Structures 3 3 Second Semester MATH 345 Introduction to the History of Mathematics 3 3 Second Semester MATH 432 Applied Differential Equations 3 3 Second Semester MATH 441 Probability 1 3 Engineering Elective 2.3 5 Elective 1 Hours 1 Second Semester MATH 460 Mathematical Modeling and Simulation 3 MATH 491 Computational Mathematics Capstone	Second Semeste	r	
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	MATH 460	Mathematical Modeling and Simulation	3
Engineering Elective ^{2,3} 3	MATH 491	Computational Mathematics Capstone	3
	Engineering Elect	rive ^{2,3}	3

Course	Title	Hours
Elective ⁵		3
Elective		3
	Hours	15
	Total Hours	120-123

- Refer to the list of approved general education electives at www.liberty.edu/gened before enrolling foundational skills requirements.
- Choose a course not already applying to the degree from one of the following disciplines: ENGI, ENGR, or ENGV.
- ³ A minimum of 15 hours total is required for the Cognate.
- Choose any MATH, PHYS, or STAT course not already applying to the degree.
- May need up to 9 hours of 300-400 level electives to fulfill upper-level requirement; this is dependent upon courses chosen for the Natural Science Electives. Student should contact academic advisor for more information.