

## **Bachelor of Science in Computational Mathematics**

Information Systems Cognate

2023-2024 Degree Completion Plan

# OTTETTLE

**Important:** This degree plan is effective for those starting this degree program in fall 2023 through summer 2024. 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/**

<b>FOUNDAT</b>	IONAL SKILLS REQUIREMENTS	(39-42 hours	<u>s)</u>						
Course		Hrs Sem	Grade	Course		<u>Hrs</u>	Sem	Grade	
Communication & Information Literacy (12 hours) <sup>1</sup>				Major Foundational Courses (0-7 hours)					
ENGL 101	Composition & Rhetoric	3		CSIS 110	Introduction to Computer Science <sup>3</sup>	3			
	Communications Elective	3		MATH 131	Calculus & Analytic Geometry I <sup>3</sup>	4			
	Information Literacy Elective	3							
	Information Literacy Elective	3		<b>MAJOR</b>					
					Core (40 hours)				
Technological Solutions & Quantitative Reasoning (3-6 hours) <sup>1</sup>			MATH 132	Calculus & Analytic Geometry II	4				
UNIV 104	Instructional Tech. for Online Learning	0-3		MATH 211	Introduction to Statistical Analysis	3			
MATH	Math Elective (MATH 114 or higher)	3		MATH 250	Introduction to Discrete Mathematics	3			
				MATH 345	Intro. to the History of Mathematics	3			
Critical Thinking (7 hours) <sup>1</sup>				MATH 410	Matrix & Linear Algebra	3			
RLGN 104	Christian Life & Biblical Worldview <sup>2</sup>	4		MATH 423	Abstract Algebraic Structures	3			
	Critical Thinking Elective	3		MATH 430	Multivariable Calculus	3			
				MATH 432	Applied Differential Equations	3			
Civic & Global Engagement (3 hours) <sup>1</sup>				MATH 441	Probability I	3			
	Cultural Studies Elective	3		MATH 460	Mathematical Modeling & Simulation	3			
				MATH 491	Computational Mathematics Capstone	3			
Social & Scientific Inquiry (6 hours) <sup>1</sup>				STAT 420	Regression & Forecasting I	3			
	Natural Science Elective	3			4	_			
	Social Science Elective	3							
					Cognate (15 hours)				
Christianity & Contexts (8 hours) <sup>1</sup>				CSIS 100	Intro. to Information Sciences & Systems	3			
BIBL 104	Survey of Old & New Testament	4		CSIS 208	Application Programming	3			
THEO 104	Introduction to Theology Survey <sup>2</sup>	4		CSIS 310	Web Architecture & Development	3			
				CSIS 330	Business Data Communication Systems	3			
				CSIS 340	Studies in Information Security	3			
				FREE ELECTIVES (16-26 hours)					
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						_			
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## 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

#### Notes

All applicable prerequisites must be met

<sup>1</sup>Refer to the list of approved general education electives at <a href="www.liberty.edu/gened">www.liberty.edu/gened</a> before enrolling in foundational skills requirements

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

<sup>3</sup>Courses may also fulfill select General Education Requirements. Please refer to the list of approved general education electives at <a href="www.liberty.edu/gened">www.liberty.edu/gened</a>

<sup>4</sup>Choose any MATH, PHYS, or STAT course not already applying to the degree Suggested Course Sequence on second page

Revised: 03.08.2023 Effective: Catalog Term 2023-40

## SUGGESTED COURSE SEQUENCE

### FIRST YEAR

First Semester			Second Semester									
BIBL 104		4	RLGN 104		4							
ENGL 101		3	Critical Thinking Elective <sup>1</sup>		3							
UNIV 104		0-3	Information Literacy Elective <sup>1</sup> [CSIS 110]		3							
Communications Elective <sup>1</sup>		3	MATH 132		4							
Math Elective <sup>1</sup> [MATH 131]		<u>4</u>	MATH 250		<u>3</u>							
	Total	14-17	То	al	17							
SECOND YEAR												
Information Literacy Elective <sup>1</sup>		3	THEO 104		4							
Natural Science Elective <sup>1</sup>		3	Cultural Studies Elective <sup>1</sup>		3							
CSIS 100		3	Social Science Elective <sup>1</sup>		3							
MATH 211		3	CSIS 208		3							
MATH 430		<u>3</u>	Elective		<u>3</u>							
	Total	15	To	al	16							
THIRD YEAR												
CSIS 310		3	CSIS 330		3							
MATH 410		3	MATH 345		3							
STAT 420		3	MATH 423		3							
Elective		3	Core Elective <sup>2</sup>		3							
Elective		<u>3</u>	Elective		<u>3</u>							
	Total	15	To	al	15							
	E	OURTH Y	ZE A D									
CSIS 340	r	3	MATH 460		3							
MATH 432		3	MATH 400 MATH 491		3							
MATH 441		3	Elective		3							
Elective		3	Elective		3							
Elective		1	Elective		3							
	Total	_		al	15							

## Notes

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<sup>&</sup>lt;sup>1</sup>Refer to the list of approved general education electives at <a href="www.liberty.edu/gened">www.liberty.edu/gened</a> before enrolling in foundational skills requirements

<sup>&</sup>lt;sup>2</sup>Choose any MATH, PHYS, or STAT course not already applying to the degree