LIBERTY IVERSITY. Ν IJ ONLINE

Bachelor of Science in Computational Mathematics

Computer Science Cognate

2021-2022 Degree Completion Plan

This degree plan is effective for those starting this degree program in fall 2021 through summer 2022. This degree plan will remain in Important: effect for students who do not break enrollment or who do not change degree programs, concentrations or cognates.

GENERAL EDUCATION/

FOUNDAT	IONAL SKILLS REQUIREMENTS	(39-42	hours)					
Course		Hrs	Sem	Grade	Course		Hrs	Sem	Grade
Communica	ation & Information Literacy (12 hou	rs) ¹			Major Foun	dational Courses (0-7 hours)			
ENGL 101	Composition & Rhetoric	3			CSIS 110	Introduction to Computing Sciences ³	3		
	Communications Elective	3			MATH 131	Calculus & Analytic Geometry I ³	4		
	Information Literacy Elective	3							
	Information Literacy Elective	3			MAJOR				
						Core (40 hours)			
Technologic	al Solutions & Quantitative Reasonin	ng (3-6	hours) ¹	INDS 400	Knowledge Synth. For Prof. & Pers. Dev. ⁴	3		
UNIV 104	Instructional Tech. for Online Learning	0-3			MATH 132	Calculus & Analytic Geometry II	4		
MATH	Math Elective (MATH 114 or higher)	3			MATH 211	Introduction to Statistical Analysis	3		
					MATH 250	Introduction to Discrete Mathematics	3		
Critical Thinking (7 hours) ¹					MATH 410	Matrix & Linear Algebra	3		
RLGN 104	Christian Life & Biblical Worldview ²	4			MATH 423	Abstract Algebraic Structures	3		
	Critical Thinking Elective	3			MATH 430	Multivariable Calculus	3		
					MATH 432	Applied Differential Equations	3		
Civic & Glo	bal Engagement (3 hours) ¹				MATH 441	Probability I	3		
	Cultural Studies Elective	3			MATH 460	Mathematical Modeling & Simulation	3		
						Natural Science Elective ^{5,6}	_		
Social & Sci	ientific Inquiry (6 hours) ¹					Natural Science Elective ^{5,6}	_		
	Natural Science Elective	3				Natural Science Elective ^{5,6}	_		
	Social Science Elective	3							
						Cognate (15 hours)			
Christianity	V & Contexts (8 hours) ¹				CSIS 100	Intro. to Information Sciences & Systems	3		
BIBL 104	Survey of Old & New Testament	4			CSIS 111	Introduction to Programming	3		
THEO 104	Introduction to Theology Survey ²	4			CSIS 112	Advanced Programming	3		
					CSIS 215	Algorithms & Data Structures	3		
					CSIS 340	Studies in Information Security	3		

FREE ELECTIVES (16-26 hours)⁷

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	Notes
	All applicable prerequisites must be met
	¹ Refer to the list of approved general education electives at <u>www.liberty.edu/gened</u> before
	enrolling in foundational skills 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
	³ Courses may also fulfill select General Education Requirements. Please refer to the list of
Graduation Requirements	approved general education electives at www.liberty.edu/gened
120 Total Hours	⁴ INDS 400 should be taken in the final semester.
2.0 Overall grade point average	⁵ Choose a 200-400 level BIOL, CHEM, PHSC, or PHYS course not already required in the
30 Hours must be upper-level courses (300-400 level)	degree: a minimum of 9 hours total required ⁶
Grade of 'C' Minimum required for all major foundational courses and all upper-level	⁶ Important: The Natural Science Electives required in the Major must be chosen from the
courses in the major	same discipline (BIOL, CHEM, PHSC, or PHYS)
25% Of major taken through Liberty University	⁷ May need up to 6 hours of 300-400 level electives to fulfill upper-level requirement; this is
30 Hours must be completed through Liberty University	dependent upon courses chosen for the Natural Science Electives. Student should contact
Grad App Submission of Degree Completion Application must be completed	academic advisor for more information
within the last semester of a student's anticipated graduation date	Suggested Course Sequence on second page

SUGGESTED COURSE SEQUENCE

FIRST YEAR

First Semester		Second Semester		
BIBL 104	4	RLGN 104		4
ENGL 101	3	Critical Thinking Elective ¹		3
UNIV 104	0-3	Information Literacy Elective ¹ [CSIS 110	0]	3
Communications Elective ¹	3	Social Science Elective ¹		3
Math Elective ¹ [MATH 131]	<u>4</u>	MATH 132		4
	Total 14-17	7	Fotal	17

SECOND YEAR					
Information Literacy Elective ¹	3	THEO 104	4		
Natural Science Elective ¹	3	Cultural Studies Elective ¹	3		
CSIS 100	3	CSIS 111	3		
MATH 211	3	MATH 250	3		
Elective	<u>3</u>	Natural Science Elective ²	<u>3</u>		
	Total 15		Total 16		

THIRD YEAR					
CSIS 112		3	CSIS 215		3
MATH 410		3	MATH 423		3
Natural Science Elective ²		3	MATH 430		3
Elective ⁴		3	Natural Science Elective ²		3
Elective		<u>3</u>	Elective ⁴		<u>3</u>
	Total	15		Total	15

FOURTH YEAR					
CSIS 340	3	INDS 400	3		
MATH 432	3	MATH 460	3		
MATH 441	3	Elective	3		
Elective	3	Elective	3		
Elective	<u>1</u>	Elective	<u>3</u>		
	Total 13		Total 15		

Notes

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

²Choose a 200-400 level BIOL, CHEM, PHSC, or PHYS course not already required in the degree³

³Important: The Natural Science Electives required in the Major<u>must be chosen from the same discipline</u> (BIOL, CHEM, PHSC, or PHYS)

⁴May need up to 6 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