

# **Bachelor of Science in Computer Science**

Web and Mobile Programming Cognate

2020-2021 Degree Completion Plan

**Important**: This degree plan is effective for those starting this degree program in fall 2020 through summer 2021. 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>FOUNDATIO</b>	<u>ONAL SKILLS REQUIREMENTS (46-4</u>	9 hours)							
Course		<u>Hrs</u>	Sem	Grade	Course		Hrs	Sem	Grad
Communicat	ion & Information Literacy (13 hours) <sup>1</sup>				Major Found	lational Courses (0-20 hours)			
ENGL 101	Composition & Rhetoric	3			BUSI 240	Organizational Behavior I4	3		
INQR 101	Inquiry 101	1			CSIS 110	Introduction to Computing Sciences <sup>4</sup>	3		
	Communications Elective	3			CSIS 111	Introduction to Programming <sup>4</sup>	3		
	Information Literacy Elective	3			ENGR 270	Technical Communication <sup>4</sup>	3		
	Information Literacy Elective	3			MATH 131	Calculus & Analytical Geometry I <sup>4</sup>	4		
	•				PHYS 201	General Physics I <sup>4</sup>	4		
Technologica	l Solutions & Quantitative Reasoning (5-	8 hours)	1						
UNIV 101	Foundational Skills	1			MAJOR				
MATH	Math Elective (MATH 114 or higher)	4				Core (42 hours)			
	Technology Competency <sup>2</sup>	0-3			CSIS 100	Intro. to Information Sciences & Systems	3		
					CSIS 112	Advanced Programming	3		
Critical Thin	king (8 hours) <sup>1</sup>				CSIS 215	Algorithms & Data Structures	3		
RLGN 105	Intr Bwww/Contemp Moral Issues <sup>3</sup>	2			CSIS 326	Database System Concepts	3		
RSCH 201	Research 201	3			CSIS 342	Computer Architecture & Organization	3		
	Critical Thinking Elective	3			CSIS 345	Introduction to Linux	3		
	C				CSIS 352	System Administration	3		
Civic & Glob	pal Engagement (5 hours) <sup>1</sup>				CSIS 355	Network Architecture & Protocols	3		
EVAN 101	Evangelism & Christian Life <sup>3</sup>	2			CSIS 434	Theory of Programming Languages	3		
	Cultural Studies Elective	2			CSIS 443	Operating Systems	3		
					CSIS 461	Technical Aspects of Computer Security	3		
Social & Scientific Inquiry (7 hours) <sup>1</sup>					CSIS 471	Software Engineering	3		
	Natural Science Elective	4			CSIS 481	CS Capstone I <sup>5</sup>			
	Social Science Elective	3			or CSIS 485	Cybersecurity Capstone I <sup>5</sup>	3		
					CSIS 482	CS Capstone II <sup>5</sup>			
Christianity	& Contexts (8 hours) <sup>1</sup>				or CSIS 486	Cybersecurity Capstone II <sup>5</sup>	3		
BIBL 105	Old Testament Survey	2				-,, <u>-</u>			
BIBL 110	New Testament Survey	2				Cognate (12 hours)			
THEO 201	Theology Survey I <sup>3</sup>	2			CSIS 310	Web Architecture & Development	3		
THEO 202	Theology Survey II <sup>3</sup>	2			CSIS 315	Client-Side Programming	3		
11120 202	Theology burvey II	_			CSIS 316	Server-Side Programming	3		
					CSIS 408	Web & Mobile Programming	3		
						Quantitative Studies Courses (13 hours)			
					MATH 128	Elem. Functions & Coordinate Geometry	4		
					MATH 211	Introduction to Statistical Analysis	3		-
					MATH 250	Introduction to Discrete Mathematics	3		
					MATH	Math Elective <sup>6</sup>	3		-
					MAIII	Man Elective	3		
						Lab Sciences Courses (4 hours)			
						Lab Science Elective <sup>7</sup>	4		
						Science Liceave			-
						Technical Elective Courses (3 hours) <sup>8</sup>			

#### 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

<sup>2</sup>All students must pass the Computer Assessment OR complete applicable INFT course; refer to <a href="www.liberty.edu/computerassessment">www.liberty.edu/computerassessment</a> for more information

<sup>3</sup>Students transferring in 45 or more UG credit hours will have the requirements of RLGN 105 & EVAN 101 waived; Students transferring in 60 or more UG credit hours will also have the requirements of THEO 201 & THEO 202 waived

<sup>4</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>

5Cybersecurity Cognate students are required to take the Cybersecurity Capstones (CSIS 485 & 486). Students in other Cognates are required to take the CS Capstones (CSIS 481 & 482) 6Choose one of the following courses not already required by the degree: MATH 125, 130, 132, 200, 217, 221, 301, 302, 305, 307, 350, or 352. Applicable prerequisites must be met. 7Choose any science course which includes a lab component. Students typically choose BIOL 101 and 103, 102 and 104, 224, CHEM 105, 107, 121 or PHYS 202. If choosing a Physics course, it must be one that adds to the material in PHYS 201.

Choose from: BUSI 300, 301, 313, 424, 427, or any 200-400 level Computer Science, Math, or Engineering course not already required by the degree

Suggested Course Sequence on second page

## 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 <u>all</u> courses in the major, quantitative studies, lab science, technical elective, and major foundational sections

25% Of major, core, and cognate 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

CSER All requirements must be satisfied before a degree will be awarded

Revised: 06.02.2020 Effective: Catalog Term 2020-40

# SUGGESTED COURSE SEQUENCE

### FRESHMAN YEAR

First Semester		Second Semester			
ENGL 101	3	EVAN 101		2	
UNIV 101	1	INQR 101		1	
Information Literacy Elective <sup>1</sup> [CSIS 110]	3	RLGN 105		2	
Technology Competency <sup>2</sup>	0-3	Communications Elective <sup>1</sup> [ENGR 270]		3	
CSIS 100	3	Information Literacy Elective <sup>1</sup> [CSIS 111]	]	3	
MATH 128	4	Math Elective <sup>1</sup> [MATH 131]		4	
CSER	<u>0</u>	CSER		<u>0</u>	
,	Total 14-17		Total	15	
	SOPHOMOR	E YEAR			
BIBL 105	2	BIBL 110		2	
Natural Science Elective <sup>1</sup> [PHYS 201]	4	RSCH 201		3	
Social Science Elective <sup>1</sup> [BUSI 240]	3	CSIS 215		3	
CSIS 112	3	CSIS 310		3	
MATH 250	3	CSIS 345		3	
CSER	<u>0</u>	MATH 211		3	
	Total 15	CSER		0	
			Total	17	
	JUNIOR Y				
CSIS 315	3	CSIS 316		3	
CSIS 326	3	CSIS 434		3	
CSIS 342	3	CSIS 443		3	
CSIS 352	3	CSIS 461		3	
CSIS 355	3	CSIS 471		3	
CSER	<u>0</u>	CSER		0	
,	Total 15		Total	15	
	SENIOR Y	EAR			
THEO 201	2	THEO 202		2	
CSIS 408	3	Critical Thinking Elective <sup>1</sup>		3	
CSIS 481	3	Cultural Studies Elective <sup>1</sup>		3	
Lab Science Elective <sup>3</sup>	4	CSIS 482		3	
MATH Elective <sup>4</sup>	3	Technical Elective <sup>5</sup>		3-4	
CSER	<u>0</u>	CSER		0	
•	Total 15		Total	14-15	

#### Notes

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