

# COMPUTER SCIENCE CYBERSECURITY (B.S.) - ONLINE

**Important:** This degree plan is effective for those starting this degree program in fall 2022 through summer 2023. 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
<b>Communication &amp; Information Literacy</b> <sup>1</sup>		
ENGL 101	Composition and Rhetoric	3
	Communications Elective	3
	Information Literacy Elective	3
	Information Literacy Elective	3
<b>Technological Solutions &amp; Quantitative Reasoning</b> <sup>1</sup>		
UNIV 104	Instructional Technology for Successful Online Learning	0-3
	Math Elective MATH 114 or higher	4
<b>Critical Thinking</b> <sup>1</sup>		
RLGN 104	Christian Life and Biblical Worldview <sup>2</sup>	4
	Critical Thinking Elective	3
<b>Civic &amp; Global Engagement</b> <sup>1</sup>		
	Cultural Studies Elective	3
<b>Social &amp; Scientific Inquiry</b> <sup>1</sup>		
	Natural Science Elective	4
	Social Science Elective	3
<b>Christianity &amp; Contexts</b> <sup>1</sup>		
BIBL 104	Survey of Old and New Testament	4
THEO 104	Introduction to Theology Survey <sup>2</sup>	4
<b>Total Hours</b>		<b>41-44</b>

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

<sup>2</sup> Students transferring in 45 or more UG credit hours will have the requirement of RLGN 104 Christian Life and Biblical Worldview (4 c.h.) waived; Students transferring in 60 or more UG credit hours will also have the requirement of THEO 104 Introduction to Theology Survey (4 c.h.) waived

## Major Requirements

Code	Title	Hours
<b>Major Foundational Courses</b>		
CSIS 110	Introduction to Computer Science <sup>1,2</sup>	3
MATH 128	Elementary Functions and Coordinate Geometry <sup>1,2</sup>	4
PHYS 201	General Physics I <sup>1,2</sup>	4
<b>Total Hours</b>		<b>11</b>

<sup>1</sup> Course may fulfill select general education requirements.

<sup>2</sup> Minimum grade of 'C' required

Code	Title	Hours
<b>Major Core</b>		
CSIS 100	Introduction to Information Sciences and Systems	3
CSIS 111	Introduction to Programming Using C++	3
CSIS 112	Advanced Programming	3
CSIS 215	Algorithms and Data Structures	3
CSIS 325	Database Management Systems	3
CSIS 340	Studies in Information Security	3
CSIS 342	Computer Architecture and Organization	3
CSIS 345	Introduction to Linux	3
CSIS 352	System Administration	3
CSIS 355	Network Architecture and Protocols	3
CSIS 434	Theory of Programming Languages	3
CSIS 443	Operating Systems	3
CSIS 461	Technical Aspects of Computer Security	3
CSIS 463	Modern Cryptography	3
CSIS 471	Software Engineering	3
CSIS 485	Cybersecurity Capstone I	3
CSIS 486	Cybersecurity Capstone II	3

**Total Hours 51**

Code	Title	Hours
<b>Quantitative Studies Courses</b>		
MATH 131	Calculus and Analytic Geometry I	4
MATH 211	Introduction to Statistical Analysis	3
MATH 250	Introduction to Discrete Mathematics	3
MATH 350	Discrete Mathematics	3
<b>Total Hours</b>		<b>13</b>

Code	Title	Hours
<b>Lab Sciences Courses</b>		
	Lab Science Elective <sup>1</sup>	4
<b>Total Hours</b>		<b>4</b>

<sup>1</sup> Choose from BIOL 101 Principles of Biology (3 c.h.) and BIOL 103 Principles of Biology Laboratory (1 c.h.), or PHSC 210 Elements of Earth Science (3 c.h.) and PHSC 211 Elements of Earth Science Lab (1 c.h.), or any other Lab Science Course *and* its associated Lab

Code	Title	Hours
<b>Technical Elective Courses</b>		
	Technical Elective <sup>1,2</sup>	12-15
	Technical Elective <sup>1,2</sup>	
	Technical Elective <sup>1,2</sup>	
	Technical Elective <sup>1,2</sup>	
<b>Total Hours</b>		<b>12-15</b>

<sup>1</sup> Choose a minimum of 12 credits from any CSIS course not already required in the degree, or any ENGx (Engineering) course

<sup>2</sup> A 300-400 level Computer Science Information Systems internship is strongly recommended

*All applicable prerequisites must be met*

## **Graduation Requirements**

- **121** Total Hours
- **2.0** Overall grade point average
- **30.25** Hours must be upper-level courses (300-400 level)
- **Grade of 'C'** Minimum required for **all** courses in the major, quantitative studies, lab science, and technical electives
- **25%** Of major taken through Liberty University
- **30.25** 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