

# COMPUTER SCIENCE (B.S.) - CYBER SECURITY - RESIDENT

**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
INQR 101	Inquiry	1
Communications Elective		3
Information Literacy Elective		3
Information Literacy Elective		3
<b>Technological Solutions &amp; Quantitative Reasoning</b> <sup>1</sup>		
UNIV 101	Foundational Skills	1
Math Elective	MATH 114 or higher	4
Technology Competency <sup>2</sup>		0-3
<b>Critical Thinking</b> <sup>1</sup>		
RLGN 105	Introduction to Biblical Worldview <sup>3</sup>	2
RSCH 201	Research	3
Critical Thinking Elective		3
<b>Civic &amp; Global Engagement</b> <sup>1</sup>		
EVAN 101	Evangelism and the Christian Life <sup>3</sup>	2
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 105	Old Testament Survey	2
BIBL 110	New Testament Survey	2
THEO 201	Theology Survey I <sup>3</sup>	2
THEO 202	Theology Survey II <sup>3</sup>	2
<b>Total Hours</b>		<b>46-49</b>

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

<sup>2</sup> All students must pass the Computer Assessment OR complete applicable INFT course

<sup>3</sup> Students transferring in 45 or more UG credit hours will have the requirements of RLGN 105 Introduction to Biblical Worldview (2 c.h.) & EVAN 101 Evangelism and the Christian Life (2 c.h.) waived; Students transferring in 60 or more UG credit hours will also have the requirements of THEO 201 Theology Survey I (2 c.h.) & THEO 202 Theology Survey II (2 c.h.) waived

## Major Requirements

Code	Title	Hours
<b>Major Foundational Courses</b>		
BUSI 240	Organizational Behavior & Management <sup>1</sup>	3
CSCN 110	Introduction to Computer Sciences <sup>1</sup>	3
CSCN 111	Programming In C++ Beginner <sup>1</sup>	3
ENGR 270	Technical Communication <sup>1</sup>	3
MATH 131	Calculus and Analytic Geometry I <sup>1</sup>	4
PHYS 201	General Physics I <sup>1</sup>	4
<b>Total Hours</b>		<b>20</b>

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

Code	Title	Hours
<b>Major Core</b> <sup>1</sup>		
CSCN 112	Programming in C++ Advanced	3
CSCN 215	Data Structures and Algorithms using C++	3
CSCN 230	Business Data Communications and Networks	3
CSCN 326	Database Design and Management	3
CSCN 342	Computer Architecture	3
CSCN 345	Linux Operating System	3
CSCN 352	Windows System Administration	3
CSCN 355	Network Architecture, Protocols, and Theory	3
CSCN 434	Programming Language Design and Compiler Theory	3
CSCN 443	Operating Systems Design	3
CSCN 461	Aspects of Computer Security-Defensive	3
CSCN 471	Software Engineering Management	3
CSCN 485	Cybersecurity Practicum I	3
CSCN 486	Cybersecurity Practicum II	3
<b>Total Hours</b>		<b>42</b>

<sup>1</sup> Students are required to take these courses residually in support of ABET accreditation. Exceptions are on a case-by-case basis and require ABET coordinator review and Department Chair approval.

Code	Title	Hours
<b>Cognate</b> <sup>1</sup>		
CSCN 340	Information Security Concepts and Principles	3
CSCN 462	Advanced Aspects of Computer Security-Ethical Hacking	3
CSCN 463	Modern Cryptography	3
CSCN Programming Language Elective <sup>2</sup>		3
<b>Total Hours</b>		<b>12</b>

<sup>1</sup> Students are required to take these courses residually in support of ABET accreditation. Exceptions are on a case-by-case basis and require ABET coordinator review and Department Chair approval.

<sup>2</sup> Choose one of the following Programming Language courses: CSIS 209, CSIS 212, CSIS 244, CSIS 312, CSIS 315, CSCN 315, CSIS 316, CSCN 316, CSIS 354, CSCN 354, or BMIT 212. Other languages may be approved by the department chair.

Code	Title	Hours
<b>Quantitative Studies Courses</b>		
MATH 128	Elementary Functions and Coordinate Geometry <sup>1</sup>	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>

<sup>1</sup> Any student entering the major directly into MATH 131 will require a 4 credit MATH Elective to substitute in place of MATH 128 (for example, MATH 132 may sub for credit)

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 any science course which includes a lab component. If choosing a Physics course, it must be PHYS 202 and PHYS 202L, or a higher level Physics course. PHYS 101 and PHYS 103 are not allowable.

Code	Title	Hours
<b>Technical Elective Courses</b>		
Technical Elective <sup>1</sup>		3
<b>Total Hours</b>		<b>3</b>

<sup>1</sup> Choose from: BUSI 300, BUSI 301, BUSI 313, BUSI 424, BUSI 427, any 200-400 level Computer Science course, any 200-400 level Engineering course (except ENGR 210), or any Advanced Math course (MATH 132 or higher) not already required by the degree.

*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** courses in the Major, Quantitative Studies, Lab Sciences and 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