

CYBERSECURITY SCIENCE & OPERATIONS (B.S.) - RESIDENTIAL

Important: This degree plan is effective for those starting this degree program in fall 2025 through summer 2026. 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
Communication & Information Literacy ¹		
ENGL 101	Composition and Rhetoric	3
	Communications Elective	3
	Information Literacy Elective	3
	Information Literacy Elective	3
Technological Solutions & Quantitative Reasoning ¹		
UNIV 101	Foundational Skills	1
Math Elective	MATH 114 or higher	4
	Technology Competency ²	0-3
Critical Thinking ¹		
RLGN 105	Introduction to Biblical Worldview ³	2
	Critical Thinking Elective	3
Civic & Global Engagement ¹		
EVAN 101	Evangelism and the Christian Life ³	2
	Cultural Studies Elective	3
Social & Scientific Inquiry ¹		
	Natural Science Elective	4
	Social Science Elective	3
Christianity & Contexts ¹		
BIBL 105	Old Testament Survey	2
BIBL 110	New Testament Survey	2
THEO 201	Theology Survey I ³	2
THEO 202	Theology Survey II ³	2
Total Hours		42-45

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

² All students must pass the Computer Assessment OR complete applicable INFT course

³ 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

Major Requirements

Code	Title	Hours
Major Foundational Courses		
BUSI 240	Organizational Behavior and Management ¹	3
CSCN 110	Introduction to Computer Sciences ¹	3

Code	Title	Hours
CSCN 111	Programming In C++ Beginner ¹	3
ENGR 270	Technical Communication ¹	3
MATH 128	Precalculus with Trigonometry ¹	4
PHYS 201	General Physics I ¹	4
Total Hours		20

¹ Course may fulfill select general education requirements.

Code	Title	Hours
Major Courses		
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 321	Python and R for Data Science	3
CSCN 322	Data Engineering	3
CSCN 326	Database Design and Management	3
CSCN 340	Information Security Concepts and Principles	3
CSCN 342	Computer Architecture	3
CSCN 345	Linux Operating System	3
CSCN 352	Windows System Administration	3
CSCN 366	Advanced Communications Architectures, Protocols, and Cybersecurity	3
CSCN 377	Applied Cybersecurity	3
CSCN 435	Malware Analysis Tools and Techniques	3
CSCN 436	Malware Analysis Tools and Techniques - Lab	1
CSCN 437	Embedded Systems	3
CSCN 443	Operating Systems Design	3
CSCN 444	Enterprise System Architectures	3
CSCN 445	Applied Digital Forensics	3
CSCN 461	Aspects of Computer Security-Defensive	3
CSCN 462	Advanced Aspects of Computer Security-Ethical Hacking	3
CSCN 464	Applied Modern Cryptography	3
CSCN 471	Software Engineering Management	3
CSCN 485	Cybersecurity Practicum I	3
CSCN 486	Cybersecurity Practicum II	3
Quantitative Studies Courses		
MATH 201	Introduction to Probability and Statistics	3
MATH 250	Introduction to Discrete Mathematics	3
Technical Elective Course		
	Elective ¹	3
Total Hours		79

¹ Choose any of the following courses that are not already required by the degree: CSIS 209, CSIS 244, any 300-400 level non-programming Computer Science course, any 300-400 level Cybersecurity course, ENGR 245, or MATH 350. Other courses may be approved by the department chair. The student may opt to substitute an achieved and current DoD 8140.03 Cybersecurity (CS) required certification from the list of DoD 8140.03 approved Cybersecurity certification vendors for a technical elective as approved by the department chair.

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, technical elective, and major foundational sections
- **25%** Of major, core, and cognate 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
- **CSER** All requirements must be satisfied before a degree will be awarded

Course Sequence

Course	Title	Hours
Freshman Year		
First Semester		
Information Literacy Elective (CSCN 110) ¹		3
Math Elective ¹		4
Technology Competency ²		0-3
ENGL 101	Composition and Rhetoric	3
EVAN 101	Evangelism and the Christian Life	2
RLGN 105	Introduction to Biblical Worldview	2
UNIV 101	Foundational Skills	1
CSER		
Hours		15-18
Second Semester		
Communications Elective (ENGR 270) ¹		3
Information Literacy Elective (CSCN 111) ¹		3
BIBL 105	Old Testament Survey	2
CSCN 230	Business Data Communications and Networks	3
MATH 201	Introduction to Probability and Statistics	3
CSER		
Hours		14
Sophomore Year		
First Semester		
BIBL 110	New Testament Survey	2
CSCN 112	Programming in C++ Advanced	3
CSCN 340	Information Security Concepts and Principles	3
CSCN 345	Linux Operating System	3
MATH 250	Introduction to Discrete Mathematics	3
CSER		
Hours		14
Second Semester		
Social Science Elective (BUSI 240) ¹		3
CSCN 215	Data Structures and Algorithms using C++	3
CSCN 352	Windows System Administration	3

Course	Title	Hours
CSCN 366	Advanced Communications Architectures, Protocols, and Cybersecurity	3
CSCN 464	Applied Modern Cryptography	3
CSER		
Hours		15
Junior Year		
First Semester		
Natural Science Elective [PHYS 201] ¹		4
CSCN 321	Python and R for Data Science	3
CSCN 326	Database Design and Management	3
CSCN 342	Computer Architecture	3
CSCN 377	Applied Cybersecurity	3
CSER		
Hours		16
Second Semester		
CSCN 322	Data Engineering	3
CSCN 443	Operating Systems Design	3
CSCN 444	Enterprise System Architectures	3
CSCN 461	Aspects of Computer Security-Defensive	3
CSCN 471	Software Engineering Management	3
THEO 201	Theology Survey I	2
CSER		
Hours		17
Senior Year		
First Semester		
CSCN 435	Malware Analysis Tools and Techniques	3
CSCN 436	Malware Analysis Tools and Techniques - Lab	1
CSCN 437	Embedded Systems	3
CSCN 462	Advanced Aspects of Computer Security-Ethical Hacking	3
CSCN 485	Cybersecurity Practicum I	3
Technical Elective ³		3
CSER		
Hours		16
Second Semester		
Critical Thinking Elective ¹		3
Cultural Studies Elective ¹		3
CSCN 445	Applied Digital Forensics	3
CSCN 486	Cybersecurity Practicum II	3
THEO 202	Theology Survey II	2
CSER		
Hours		14
Total Hours		121-124

¹ Refer to the list of approved general education electives at general education electives before enrolling in foundational skills requirements.

² All students must pass the Computer Assessment OR complete applicable INFT course; refer to Computer Assessment for more information.

³ Choose any of the following courses that are not already required by the degree: CSIS 209, or CSIS 244, any 300-400 level Computer Science course, any 300-400 level Cybersecurity course, ENGR 245,

or MATH 350. Other courses may be approved by the department chair. The student may opt to substitute an achieved and current DoD 8140.03 Cybersecurity (CS) required certification from the list of DoD 8140.03 approved Cybersecurity certification vendors for a technical elective as approved by the department chair.