COMPUTER SCIENCE (B.S.) - GENERAL - RESIDENT

Important: This degree plan is effective for those starting this degree program in fall 2023 through summer 2024. 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
INQR 101	Inquiry	1
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
RSCH 201	Research	3
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		**46-49**

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

1. Course may fulfill select general education requirements

Code	Title	Hours
Major Core [1]		
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 481	Computer Sciences Practicum I	3
CSCN 482	Computer Sciences Practicum II	3
Total Hours		**42**

1. Students are required to take these courses residentially 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
Cognate [1]		
CSCN 354	Fundamentals of Distributed Systems	3
CSCN Elective [2]		3
CSCN Elective [2]		3
CSCN Programming Language Elective [3]		3
Total Hours		**12**

1. Students are required to take these courses residentially in support of ABET accreditation. Exceptions are on a case-by-case basis and require ABET coordinator review and Department Chair approval.
2. Choose from any 300-400 level CSCN course not already required by the degree.
3. 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
Quantitative Studies Courses		
MATH 128	Elementary Functions and Coordinate Geometry [1]	4
MATH 211	Introduction to Statistical Analysis	3
MATH 250	Introduction to Discrete Mathematics	3
MATH 350	Discrete Mathematics	3
Total Hours		**13**

[1] 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
Lab Sciences Courses		
Lab Science Elective [1]		4
Total Hours		**4**

[1] Choose any science course which includes a lab component. If choosing a Physics course, it must be PHYS 201 and PHYS 202L, or a higher level Physics course. PHYS 101 and PHYS 103 re not allowable.

Code	Title	Hours
Technical Elective Courses		
Technical Elective [1]		3
Total Hours		**3**

[1] 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 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

Course Sequence

Course	Title	Hours
First Year		
First Semester		
ENGL 101	Composition and Rhetoric	3
EVAN 101	Evangelism and the Christian Life	2
INQR 101	Inquiry	1
RLGN 105	Introduction to Biblical Worldview	2
Information Literacy Elective (CSCN 110) [1]		3
Technology Competency [2]		0-3
MATH 128	Elementary Functions and Coordinate Geometry [3]	4
CSER		0
	Hours	**15-18**
Second Semester		
BIBL 105	Old Testament Survey	2
RSCH 201	Research	3
UNIV 101	Foundational Skills	1
Information Literacy Elective (CSCN 111) [1]		3
Math Elective (MATH 131) [1]		4
CSCN 230	Business Data Communications and Networks	3
CSER		0
	Hours	**16**
Second Year		
First Semester		
BIBL 110	New Testament Survey	2
Communications Elective (ENGR 270) [1]		3
CSCN 112	Programming in C++ Advanced	3
CSCN 345	Linux Operating System	3
MATH 250	Introduction to Discrete Mathematics	3
CSER		0
	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
CSCN 355	Network Architecture, Protocols, and Theory	3
MATH 350	Discrete Mathematics	3
CSER		0
	Hours	**15**
Third Year		
First Semester		
Natural Science Elective (PHYS 201) [1]		4
CSCN 342	Computer Architecture	3
CSCN 461	Aspects of Computer Security-Defensive	3
MATH 211	Introduction to Statistical Analysis	3
Computer Science Programming Elective [4]		3
CSER		0
	Hours	**16**
Second Semester		
CSCN 326	Database Design and Management	3
CSCN 354	Fundamentals of Distributed Systems	3
CSCN 471	Software Engineering Management	3
Computer Science Elective [5]		3
Lab Science Elective [6]		4

Course	Title	Hours
CSER		0
	Hours	**16**
Fourth Year		
First Semester		
THEO 201	Theology Survey I	2
CSCN 434	Programming Language Design and Compiler Theory	3
CSCN 443	Operating Systems Design	3
CSCN 481	Computer Sciences Practicum I	3
Computer Science Elective [5]		3
CSER		0
	Hours	**14**
Second Semester		
THEO 202	Theology Survey II	2
Critical Thinking Elective [1]		3
Cultural Studies Elective [1]		3
CSCN 482	Computer Sciences Practicum II	3
Technical Elective [7]		3
CSER		0
	Hours	**14**
	Total Hours	**120-123**

1. Refer to the list of approved general education electives at www.liberty.edu/gened before enrolling in foundational skills requirements
2. All students must pass the Computer Assessment OR complete applicable INFT course; refer to www.liberty.edu/computerassessment for more information
3. 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)
4. Choose one of the following Programming Language courses: CSCN (or CSIS) 209, 212, 244, 312, 315, 316, or 354, or BMIT 212. Other languages may be approved by the department chair.
5. Choose any 300-400 level CSCN course not already required by the degree.
6. Choose any science course which includes a lab component. If choosing a Physics course, it must be PHYS 201 and 202L, or a higher level Physics course. PHYS 101 and 103 are not allowable.
7. Choose from: BUSI 300, 301, 313, 424, 427, any 200-400 level Computer Science course, any 200-400 level Engineering course (except ENGR 210), or any Advanced Math course (must be MATH 132 or higher) not already required by the degree.