LIBERTY UNIVERSITY

GENERAL EDUCATION/

Bachelor of Science in Computer Science *Cybersecurity Cognate*

2023-2024 Degree Completion Plan

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.

FOUNDATIONAL SKILLS REQUIREMENTS (46-49 hours) Sem Grade Course Hrs Sem Grade Course Hrs Communication & Information Literacy (13 hours)¹ Major Foundational Courses (0-20 hours) **ENGL** 101 Organizational Behavior & Management⁴ Composition & Rhetoric 3 BUSI 240 3 **INQR** 101 Inquiry 101 1 CSCN 110 Introduction to Computer Sciences⁴ 3 Programming in C++ Beginner⁴ CSCN 111 3 Communications Elective 3 Information Literacy Elective 3 ENGR 270 Technical Communication⁴ 3 Information Literacy Elective **MATH 131** Calculus & Analytical Geometry I4 3 PHYS 201 General Physics I4 Technological Solutions & Quantitative Reasoning (5-8 hours)¹ **UNIV 101** Foundational Skills MAJOR -1 MATH Math Elective (MATH 114 or higher) 4 Core (42 hours) Technology Competency² 0-3 CSCN 112 Programming in C++ Advanced⁵ 3 CSCN 215 Data Structures & Algorithms Using C++5 Critical Thinking (8 hours)¹ **CSCN 230** Business Data Communications & Networks Intr Bwvw/Contemp Moral Issues³ CSCN 326 Database Design & Management⁵ **RLGN 105** RSCH 201 Research 201 3 **CSCN 342** Computer Architecture⁵ Critical Thinking Elective CSCN 345 Linux Operating Systems⁵ CSCN 352 Windows System Administration⁵ CSCN 355 Civic & Global Engagement (5 hours)¹ Network Architecture, Protocols, & Theory5 EVAN 101 Evangelism & Christian Life³ CSCN 434 Program Language Design & Comp Theory⁵ Cultural Studies Elective CSCN 443 Operating Systems Design⁵ CSCN 461 Aspects of Computer Security - Defensive⁵ Software Engineering Management⁵ CSCN 471 Social & Scientific Inquiry (7 hours)¹ 3 Natural Science Elective CSCN 485 Cybersecurity Practicum I⁵ 3 CSCN 486 3 Social Science Elective Cybersecurity Practicum II5 Christianity & Contexts (8 hours)¹ Cognate (12 hours) CSCN 340 Information Security Concepts & Principles⁵ **BIBL 105** Old Testament Survey 3 CSCN 462 Adv Aspects of Comp Sec - Ethical Hacking⁵ 2 3 **BIBL 110** New Testament Survey **THEO 201** Theology Survey I3 CSCN 463 Modern Cryptography5 3 **THEO 202** Theology Survey II3 CSCN _____ CSCN Programming Language Elective5,6 Quantitative Studies Courses (13 hours) **MATH 128** Elem. Functions & Coordinate Geometry7 4 MATH 211 Introduction to Statistical Analysis **MATH 250** Introduction to Discrete Mathematics 3

MATH 350

Discrete Mathematics

Lab Sciences Courses (4 hours) Lab Science Elective⁸

Technical Elective Courses (3 hours)9

Notes

All applicable prerequisites must be met

¹Refer to the list of approved general education electives at <u>www.liberty.edu/gened</u> before enrolling in foundational skills requirements

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

³Students 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

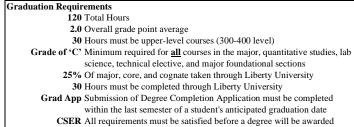
⁴Courses may also fulfill select General Education Requirements. Please refer to the list of approved general education electives at <u>www.liberty.edu/gened</u>

⁵Students 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.

⁶Choose 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.

⁷Any 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) ⁸Choose any science course which includes a lab component. If choosing a Physics course, it must be PHYS 202 *and* 202L, or a higher level Physics course. PHYS 101 and 103 are not allowable.

⁹Choose 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. *Suggested Course Sequence on second page*



SUGGESTED COURSE SEQUENCE

FRESHMAN YEAR

| First Semester | | Second Semester | |
|---|------------|---|----------|
| ENGL 101 | 3 | BIBL 105 | 2 |
| EVAN 101 | 2 | RSCH 201 | 3 |
| INQR 101 | 1 | UNIV 101 | 1 |
| RLGN 105 | 2 | Information Literacy Elective ¹ [CSCN 111] | 3 |
| Information Literacy Elective ¹ [CSCN 110] | 3 | Math Elective ¹ [MATH 131] | 4 |
| Technology Competency ² | 0-3 | CSCN 230 | 3 |
| MATH 128 ³ | 4 | CSER | <u>0</u> |
| CSER | <u>0</u> | Tota | al 16 |
| To | otal 15-18 | | |

| SOPHOMORE YEAR | | | | | |
|---|----------|---|----------|--|--|
| BIBL 110 | 2 | Social Science Elective ¹ [BUSI 240] | 3 | | |
| Communications Elective ¹ [ENGR 270] | 3 | CSCN 215 | 3 | | |
| CSCN 112 | 3 | CSCN 352 | 3 | | |
| CSCN 345 | 3 | CSCN 355 | 3 | | |
| MATH 250 | 3 | MATH 350 | 3 | | |
| CSER | <u>0</u> | CSER | <u>0</u> | | |
| | Total 14 | | Total 15 | | |

| JUNIOR YEAR | | | | | | |
|--|----------|---------------------------------------|----------|--|--|--|
| Natural Science Elective ¹ [PHYS 201] | 4 | CSCN 326 | 3 | | | |
| CSCN 342 | 3 | CSCN 340 | 3 | | | |
| CSCN 461 | 3 | CSCN 471 | 3 | | | |
| CSCN 463 | 3 | Computer Science Programming Elective | 4 3 | | | |
| MATH 211 | 3 | Lab Science Elective ⁵ | 4 | | | |
| CSER | <u>0</u> | CSER | <u>0</u> | | | |
| | Total 16 | | Total 16 | | | |

SENIOR YEAR

| SENIOR LEAR | | | | | |
|-------------|----------|---|----------|--|--|
| THEO 201 | 2 | THEO 202 | 2 | | |
| CSCN 434 | 3 | Critical Thinking Elective ¹ | 3 | | |
| CSCN 443 | 3 | Cultural Studies Elective ¹ | 3 | | |
| CSCN 462 | 3 | CSCN 486 | 3 | | |
| CSCN 485 | 3 | Technical Elective ⁶ | 3 | | |
| CSER | <u>0</u> | CSER | <u>0</u> | | |
| | Total 14 | | Total 14 | | |

Notes

¹Refer to the list of approved general education electives at <u>www.liberty.edu/gened_before enrolling in foundational skills requirements</u> ²All students must pass the Computer Assessment OR complete applicable INFT course; refer to <u>www.liberty.edu/computerassessment</u> for more information

³Any 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)

⁴Choose 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. CSCN 354 is strongly recommended for the Cybersecurity Cognate. ⁵Choose 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.

⁶Choose 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.