UNIVERSITY OF SOUTH FLORIDA

COLLEGE OF ENGINEERING
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

BACHELOR OF SCIENCE:
CYBERSECURITY
2024-2025

B.S. CYBERSECURITY - FUSE SAMPLE CURRICULUM PLAN – 120 CREDITS

This curriculum plan is for students in the Fuse program entering their first semester of college at a Florida College System (FCS) institute **during the 2024-2025 academic year.** Fuse students entering during a different academic year must follow the Fuse curriculum plan for that year.

Students must meet multiple requirements, including prerequisite courses and a minimum grade average in specified major-related courses, for admittance to the Cybersecurity major at USF. Currently, ***a minimum grade average is required for this program in key courses (those in BOLD below****).* ***Read more about these requirements on the next page.*** *Connect regularly with your advisors to ensure you understand and are meeting all requirements.*

Semesters 1 to 4 at FCS college (60 credits)

Semester 1

CGS 1540 Intro to Databases for IT[1]*	3
MAC 1147 Precalculus Algebra and Trigonometry*	**4**
ENC 1101 Composition I	3
Natural Science Elective (Life or Physical)	3
General Elective	3
Total	16

Semester 2

COP 2512 Programming Fundamentals for IT[2]	3
MAD 2104 Discrete Math*	**3**
ENC 1102 Composition II	3
PHY 2020 Conceptual Physics*[3]	**3**
SGEH Gen Ed Core Humanities	3
Total	15

Semester 3

COP 2513 Object Oriented Programming for IT[4]	3
STA 2023 Introductory Statistics I*	**3**
ECO 2013 Economic Principles (Macroeconomics)	3
General Elective	3
General Elective	3
Total	15

Semester 4

PSY 2012 Intro to Psychological Science	3
TGED Gen Ed Human and Cultural Diversity	3
TGEI Gen Ed Information and Data Literacy	3
General Elective	3
General Elective	2
Total	14

Semesters 5 to 8 at USF (60 credits)

Semester 5

EGN 3000 Foundations of Engineering	0
CIS 3213 Foundations of Cyber Security	3
COP 3515 Advanced Program Design for IT	3
ISM 4323 Information Sec and IT Risk Management	3
ENC 3246 Communication for Engineers	3
Approved Cybersecurity Elective	3
Total	15

Semester 6

CIS 4219 Human Aspects of Cybersecurity	3
COP 4538 Data Structures and Algorithms for IT	3
Approved Cybersecurity Elective	3
CIS 4622 Hands-on Cybersecurity	3
CNT 4104 Comp Info Networks for IT	3
CNT 4104L Comp Info Networks for IT Lab	1
Total	16

Summer

Recommended Internship/Co-op Participation
(**Note:** See Department Advisor for credit as CIS 4947)

Semester 7

CNT 4403 Network Security and Firewalls	3
CIS 4200 Penetration Testing for IT	3
Approved Cybersecurity Elective	3
Approved Cybersecurity Elective	3
General Elective	3
Total	15

Semester 8

COP 4703 Advanced Database Systems for IT	3
LIS 4414 Information Policy and Ethics	3
Approved Cybersecurity Elective	3
Approved Cybersecurity Elective	3
General Elective	2
Total	14

[1]CGS 1545, CGS 2541, COP 2071, CGS 1543, or CTS 2442 may substitute for CGS 1540; see notes on next page for more information.
[2]COP 2250, COP 2220, COP 2360, or COP 2510 may substitute for COP 2512; see notes on next page for more information.
[3]PHY 2048/2048L may substitute for PHY 2020.
[4]COP 2251, COP 2222, COP 2362, or COP 2250C+COP 2805C may substitute for COP 2513; see notes on next page for more information.
*Must be sufficiently completed for admission into the program at USF; see notes on next page for more information.

This curriculum plan is only a guide; the USF catalog is the definitive authority on required curriculum. Students must meet regularly with both their state college and Fuse advisors to ensure they are selecting appropriate courses that fit their individual circumstances and meet catalog requirements.

REQUIRED PREREQUISITE COURSES AND GRADE AVERAGE IN 4 OF THE BELOW

In addition to completing the requirements of the AA program, the following courses (or pre-approved substitutes) specific to the Cybersecurity program must be completed for admission into the Cybersecurity major at USF. **Unless otherwise noted,** minimum grades of C are required for these courses (C- is insufficient). A minimum grade average is required in the four bold courses below (calculus 1, calculus 2, and calculus-based physics with lab).

- **MAD 2104 - Discrete Mathematics**
- **STA 2023 - Introductory Statistics**
- **PHY 2020 - Conceptual Physics**
- **MAC 1147 - Pre-Calc with Algebra and Trig**.

MINIMUM ACCEPTABLE GRADE AVERAGE IN THESE 4 COURSES IS POSTED ON THE DEPARTMENT WEBSITE

- CGS 1540 - Introduction to Databases for IT (**CGS 1540 must be completed with a minimum grade of B; B- is insufficient**, and it **must be 3 credits**; if it is fewer than 3 credits, select an approved substitute)
- PSY 2012 – Intro to Psychological Science
- ECO 2013 – Economic Principles (Macroeconomics)
- COP 2512 – Programming Fundamentals for IT
- COP 2513 – Object Oriented Programming for IT

ADDITIONAL NOTES ABOUT CURRICULUM AND ACADEMIC REQUIREMENTS

1. All students must complete the equivalent of USF Discrete Mathematics (MAD 2104), Introductory Statistics (STA 2023), Conceptual Physics (PHY 2020), and Pre-calculus with Algebra and Trigonometry (MAC 1147) with minimum grades of C in each course (grades of C- are insufficient).
    - The **minimum overall grade average in these four courses required for progression to the upper level will be posted on the department's website one year prior to the fall semester** that the revised grade average is applicable. The computed grade average is based on the best attempts in these courses. These requirements must be met with a maximum of two attempts allowed for each course. Grades of W, I, IF, U, R, and M are considered attempts.

2. Completion of CGS 1540 with a minimum grade of B (grade of B- is insufficient) or another introductory database course with a minimum grade of B (grade of B- is insufficient). This requirement must be met with a maximum of two attempts allowed for the course.

3. The curriculum plan above includes some requirements for which substitutions may be possible. Availability of the indicated required courses or approved substitutes depends on the state college attended. Students may also take the required course at USF as a transient student if the student's community college doesn't offer the required course or any of its approved substitutes. Students should speak with an advisor at their community college to determine the best plan at their institution for completing these courses.

REQUIREMENTS OF THE FUSE PROGRAM

To remain in the Fuse program, the following minimum requirements must be met (some individual Fuse programs may have higher requirements than these minimums):

- Students must graduate with an Associate's degree within 3 years.
- Students must complete their Associate's degree with a minimum GPA of 2.0. Note some USF majors require higher GPAs; check the Fuse graduation path to confirm the minimum required GPA for that major.
- Students must complete all requirements of the graduation path.

CONTACT INFORMATION

For questions about the curriculum and requirements of the Cybersecurity program, contact eng-advisingmail@usf.edu. Students may also learn more by visiting the webpage of the Department of Computer Science and Engineering.

For general inquiries about the transfer process, contact transfer-advising@usf.edu. Students may also visit the Fuse website to learn more about the program, and the USF Office of Transfer Student Success website to learn more about resources available to transfer students.

For questions about financial aid or scholarships, visit the Office of Financial Aid website.

To learn more about USF admissions, visit the Office of Admissions website.