**Bachelor of Science in Computer Science**

**Software Design Track**

**Four Year Major Map – 120 Credits**

**Freshman Year - 29 Credits**

**Term One**

CGS 1920 - Introduction to Computing (1 credit)

MAC 2147 - Pre-calculus, if needed, or General Electives (4 credits) **Critical Progress: Completed**

List A (Science Elective) (3 credits)

UCC courses (7 credits)

**Total Hours: 15; Min GPA: 2.2**

**Term Two**

MAC 2311 - Calculus I (4 credits)

List B (Life Science and lab) (4 credits)

UCC courses (6 credits)

**Total Hours: 14; Min GPA: 2.2**

**Sophomore Year - 31 credits**

**Term One**

COP 2210 - Computer Programming I (4 credits) :: **Critical Progress: Completed and B-**

MAC 2312 - Calculus II (4 credits)

UCC courses (6 credits)

**Total Hours: 14; Min GPA: 2.2**

**Term Two**

PHY 2048/PHY 2048L - Physics I w/ Calculus (5 credits)

MAD 2104 - Discrete Mathematics (3 credits) ) :: **Critical Progress: Completed**

COP 3337 Computer Programming II (3 credits) ) :: **Critical Progress: Completed and B-**

UCC courses (3 credits)

General Electives (3 credits)

**Total Hours: 17; Min GPA: 2.2**

**Junior Year – 30 Credits**

**Term One**

PHY 2049/PHY 2049L - Physics II w/Calculus (5 credits)

COP 3530 - Data Structures (3 credits) :: **Critical Progress: Completed and C**

ENC 3213 - Professional and Technical Writing (3 credits) **Critical Progress: Completed**

COM 3110 - Business and Professional Communications (3 credits) **Critical Progress: Completed**

**Total Hours: 14; Min GPA: 2.2**

**Term Two**

CGS 3092 - Professional Ethics and Social Issues (1 credit) **Critical Progress: Completed**

COP 3402 - Fundamentals of Computer Systems (3 credits)

COT 3420 - Logic for Computer Science (3 credits)

COP 4540 - Database (3 credits)

STA 3033 - Introduction to Probability and Statistics for CS (3 credits)

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CEN 4010 - Software Engineering (3 credits, Summer\*) **Critical Progress: Completed**

**Total Hours: 16; Min GPA: 2.2**

**Senior Year - 30 credits**

**Term One**

List C (CS Elective) (3 credits)

CDA 4101 - Structured Computer Organization (3 credits)

COP 4338 - Computer Programming III (3 credits)

MAD 3512 - Theory of Algorithms (3 credits)

List D (Software Engineering Course) (3 credits)

**Total Hours: 15; Min GPA: 2.2**

**Term Two**

COP 4555 - Principles of Programming Languages (3 credits)

COP 4610 - Operating Systems Principles (3 credits)

CIS 4911 - Senior Project (3 credits)

List D (Software Engineering Course) (3 credits)

General Electives (3 credits)

**Total Hours: 15; Min GPA: 2.0**

\* Summer: this course must be taken in the following summer term.

List A: CS Science Electives: Choose from AST, GLY 4450, AST 2004, MCB 2000, BOT 1010, OCB 2003, BSC 1010, OCE 3014, BSC 1011, PCB 2061, CHM 1045, PHY 3123, CHM 1046, PHY 3124, GLY 1010, PHY 3513, GLY 1100, PHY 4323, GLY 3754, PHY 4324, GLY 4400   
List B: UCC Life Science classes that are also acceptable as CS Science electives: Choose from: BSC 1010, BOT 1010, MCB 2000, OCB 2003 and corresponding lab  
List C: CS Electives: Choose one from (CAP 4770 , COP 4225 , CEN 4021, COP 4226 , CEN 4072 , COP 4520 , CNT 4513).

List D: Software Engineering Courses (CEN4072, CEN4012). Each course is offered once a year, select the one that is offered for the current semester.

For students who are deficient in a foreign language, the general electives should include a two-semester sequence in one foreign language.

Students are required to earn at least nine credit hours prior to graduation by attending one or more summer semesters at FIU or any other University in the Florida State system.