

# Requirements effective Fall 2021 for class of 2025+

## Department of Mathematics and Computer Science COMPUTER SCIENCE MAJOR Checklist

Student: \_\_\_\_\_

### Department Requirements:

Course	Taken Quarter/Year	Course	Taken Quarter/Year	Course	Taken Quarter/Year
CSCI 10 & L		COEN 20 & L		COEN 177 & L	(4)
CSCI 60 & L		COEN/ELEN 21 & L		CSCI Emphasis I *	(5)
CSCI 61		MATH 51		CSCI Emphasis II *	(6)
MATH 11		MATH 53		CSCI Emphasis III *	(7)
MATH 12		CSCI 161	(1)	CSCI Emphasis IV *	(8)
MATH 13		CSCI 163	(2)	CSCI Emphasis V *	(9)
MATH 14		MATH 122	(3)		

\* Five 4- or 5-unit upper-division courses in one of the following emphases.

**Algorithms and Complexity Emphasis:** CSCI 162, CSCI 164; two more courses from CSCI 146, 147, 165, 181; MATH 101, 175, 176, 177, 178; one more course from the prior list or any other 4-5 unit upper-division CSCI course below 190 or COEN course below 188.

**Data Science Emphasis:** CSCI 182, 183, 184; two more courses from CSCI 127, 146, 147, 164, 166; MATH 123; COEN 166, or any other 4-5 unit upper-division CSCI courses below 190 or COEN courses below 188.

**Security Emphasis:** MATH 178, CSCI 180, CSCI 181; two more courses from MATH 175, COEN 152 and 152L, COEN 161 and 161L, COEN 146 and 146L, or any other 4-5 unit upper-division CSCI courses below 190 or COEN courses below 188.

**Software Emphasis:** CSCI 169, CSCI 187, COEN 146 and 146L; one more course from CSCI 183, 180, 168, or any other 4-5 unit upper-division CSCI course below 190; one other course from CSCI 183, 180, 168; COEN 161, 178 or any other 4-5 unit upper-division CSCI course below 190 or COEN course below 188.

**Open emphasis of the student's choosing.** In order to pursue this emphasis the student must get their courses approved along with their advisor's signature at least three quarters before they graduate. Three of the five upper division courses must be CSCI or MATH. See the Bulletin for some examples.

*It is highly recommended that students (especially in the Software Emphasis) take additional upper-division courses beyond the minimum required for the degree, e.g. COEN 178 (Databases).*

### College and University Requirements:

Course	Taken Quarter/Year	Course	Taken Quarter/Year	Course	Taken Quarter/Year
CTW 1		Natural Science ***		Culture&Ideas III	(12?)
CTW 2		Rel Theol Culture I		Civic Engag.	
Adv Wrtg**	(11?)	Rel Theol Culture II		Elective	(11?)
Ethics		Rel Theol Culture III	(10)	Elective	(12?)
Diversity		Social Science		Elective	
Arts		Culture&Ideas I		Elective	
Language I		Culture&Ideas II		Elective	
Language II				(Elective)	

\*\* MATH 100 is highly recommended, if offered, but may not be taken to fulfill any mathematics and computer science upper-division requirements for students majoring in mathematics or computer science.

\*\*\* One of ANTH 1, PHYS 31, CHEM 11 or ENV5 21.

**EXPERIENTIAL LEARNING COURSE:** \_\_\_\_\_

**PATHWAY NAME:** \_\_\_\_\_

**Pathway Courses:** 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_

NOTE: A student must take at least 12 Upper Division courses as noted below. These courses are noted in places marked by (1), (2), ... (12).

**Class Status Summary:**

Freshman 44 units (11 courses)  
Sophomore 88 units  
Junior 131 units  
Senior 175 units

**Graduation Requirements:**

- 1) 175 units
- 2) 60 Upper Division units (at least 12-15 courses)
- 3) 2.0 GPA overall
- 4) 2.0 GPA in major/minor
- 5) Residency

**Check University Bulletin for complete information.**