

## B.S. Computer Science (CS 26): Major Checklist, Fall 2020

Complete	<b>Lower Division (52 units)</b>
	<b>Intro to Computer Science</b>
	CSE 8B/11, Introduction to Computer Science: Java
	<b>Lower-Division Computer Science</b>
	CSE 12, Basic Data Structures and Object-Oriented Programming
	CSE 15L (2 units), Software Tools and Technique Laboratory
	CSE 20 <b>or</b> Math 15A, Introduction to Discrete Mathematics
	CSE 21 Mathematics for Algorithms and Systems
	CSE 30, Computer Organization & Systems Programming
	Lower-Division Elective (2 units from): CSE 3, CSE 4GS, CSE 5A, CSE 6GS, CSE 8A, CSE 42, CSE 86, CSE 90, CSE 91, CSE 95, CSE 99, CSE 180, CSE 180R, MAE 8, MAE 9, COGS 9, COGS 10, COGS 18, ECE 15, NANO 15, CENG 15, or any CSE upper-division course not used to fulfill other degree requirements.
	<b>Mathematics</b>
	Math 20A, Calculus for Science and Engineering
	Math 20B, Calculus for Science and Engineering
	Math 20C, Calculus and Analytical Geometry for Science and Engineering (or MATH 31BH Honors Multivariable Calculus)
	Math 18, Linear Algebra (or MATH 31AH Honors Linear Algebra)
	<b>General Science</b> , Any two courses (eight units) chosen from the following list (the courses do not need to be sequential):
	Phys 2A, Phys 2B, Phys 4A, Phys 4B, Chem 6A or Chem 6AH, Chem 6B or Chem 6BH, BILD 1, BILD 2, BILD 3, or BICD 100
	<b>Statistics</b>
	MATH 181A <b>or</b> Math 183 <b>or</b> ECON 120A <b>or</b> ECE 109 <b>or</b> CSE 103
Complete	<b>Upper Division (72 units)</b>
	<b>Upper-Division (Core) Computer Science</b>
	CSE 100, Advanced Data Structures and Programming
	CSE 101, Design and Analysis of Algorithms/Theory
	CSE 105, Theory of Computability/Algorithms
	CSE 110, Software Engineering
	Systems/Networks: CSE 120 or CSE 123 or CSE 124
	PL/Databases: CSE 130 or CSE 132A
	Security/Cryptography: CSE 107 or CSE 127
	Learning/Vision/Graphics: CSE 150A or CSE 151A or CSE 151B or CSE 152A or CSE 158 or CSE 167
	Hardware: CSE 140 Components and Design Techniques for Digital Systems (4 units) <b>and</b> CSE 140L Digital Systems Laboratory (2 units)
	Architecture: [CSE 141 Introduction to Computer Architecture (4 units) <b>and</b> CSE 141L Project in Computer Architecture (2 units)] <b>or</b> [CSE 142 Comp Arch Software Perspective (4 units) <b>and</b> CSE 142L Software Projects Comp Arch (2 units)]
	<b>Electives (7 total, 4 units each)</b>
	CSE Elective
	CSE Elective
	CSE Elective
	CSE Elective
	CSE Elective
	CSE Elective (may also be from approved list of Technical Electives)
	CSE Elective (may also be from approved list of Technical Electives)

**ALL major requirements must be taken for letter grade AND passed with a C- or better with the exceptions of: CSE 91, CSE 197, CSE 198, and CSE 199.**