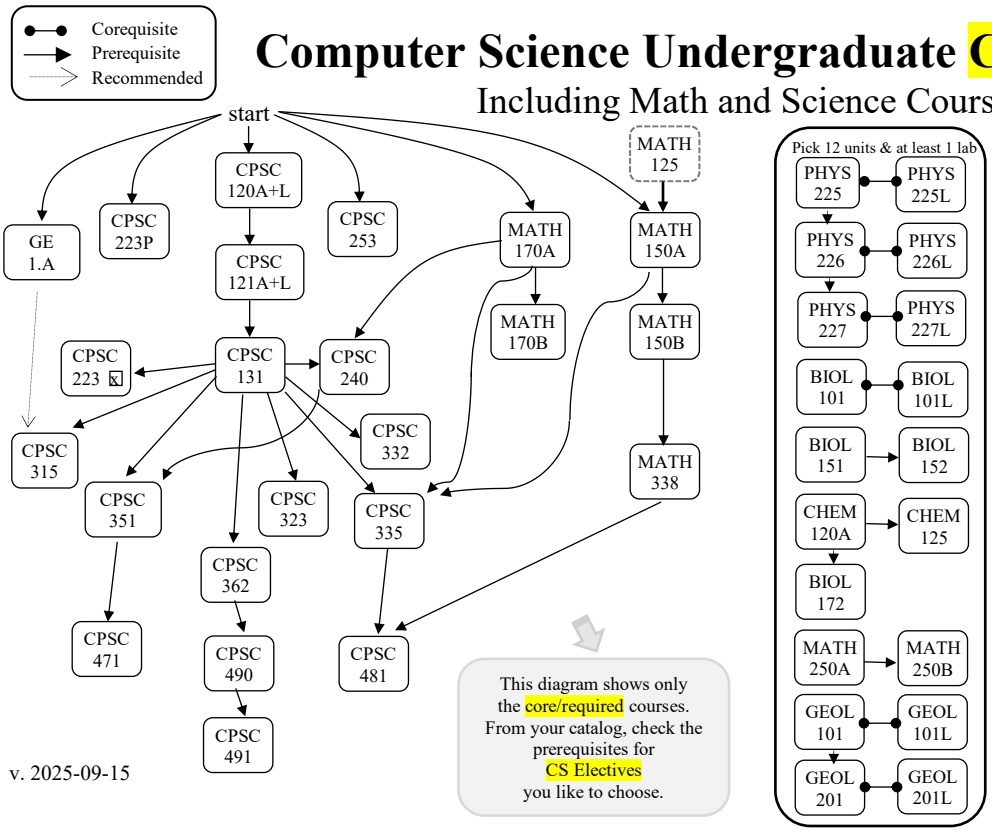
Computer Science Undergraduate Core Courses

Including Math and Science Courses



Students must complete all G.E. courses, all the lower- and upper-division Computer Science core courses, all the required math courses, 12-units of math and science electives, and 15-units of Computer Science elective courses. The degree is a total of 120-units. Students must complete 30-units per year to complete a degree in 4-years.

Students must apply for graduation two semesters prior to graduating.

Do not plan on taking all your elective courses in your last year.

All 100 and 200-level courses may be completed at community college. See <<http://assist.org/>> for CA community college articulation agreements.

University Catalog
https://catalog.fullerton.edu/

Computer Science Department (Resources/Contact)
http://www.fullerton.edu/ecs/cs/

Advising (new/transferred students)
http://www.fullerton.edu/ecs/resources/StudentSuccessCenter.php

Advising (junior/senior)
http://www.fullerton.edu/ecs/cs/resources/advisement.php

	Lower Division Core (18 units)		CS Electives (15 units)
CPSC 120A	Intro to Programming Lecture	CPSC 254	Applied Artificial Intelligence
CPSC 120L	Intro to Programming Lab	CPSC 349	Web Front-End Engineering
CPSC 121A	Object-Oriented Programming Lecture	CPSC 352	Cryptography
CPSC 121L	Object-Oriented Programming Lab	CPSC 375	Intro to Data Science and Big Data
CPSC 131	Data Structures	CPSC 386	Intro to Game Design and Production
CPSC 223x, 223P	{x = C/Java/C#/Swift} P=Python Programming	CPSC 411	Mobile Device Application Programming (iOS)
CPSC 240	Computer Organization and Assembly Language	CPSC 411A	Mobile Device App Programming for Android
CPSC 253	Cybersecurity Foundations and Principles	CPSC 431	Database and Applications
	Upper Division Core (30 units)	CPSC 439	Theory of Computation
CPSC 315	Professional Ethics in Computing	CPSC 440	Computer System Architecture
CPSC 323	Compilers and Languages	CPSC 449	Web Back-End Engineering
CPSC 332	File Structures & Database Systems	CPSC 454	Cloud Computing and Security
CPSC 335	Algorithm Engineering	CPSC 455	Web Security
CPSC 351	Operating Systems Concepts	CPSC 456	Network Security Fundamentals
CPSC 362	Foundations of Software Engineering	CPSC 458	Malware Analysis
CPSC 471	Computer Communications	CPSC 459	Blockchain Technologies
CPSC 481	Artificial Intelligence	CPSC 462	Software Design
CPSC 490	Undergraduate Seminar in CS	CPSC 463	Software Testing
CPSC 491	Senior Capstone Project in CS	CPSC 464	Software Architecture
	Math Requirements (18 units)	CPSC 465	Modern Software Deployment and Operations
Math 150A	Calculus 1	CPSC 466	Software Process
Math 150B	Calculus 2	CPSC 474	Parallel & Distributed Computing
Math 170A	Math Structures 1	CPSC 479	Intro to High Performance Computing
Math 170B	Math Structures 2	CPSC 483	Intro to Machine Learning
Math 338	Statistics Applied to Natural Sciences	CPSC 484	Principles of Computer Graphics
	Science/Math Electives (12 units)	CPSC 485	Computational Bioinformatics
	General Education (GE) (24 units)	CPSC 486	Game Programming
	Graduation Requirement (3 units)	CPSC 487	Computational Epidemiology
		CPSC 488	Natural Language Processing
		CPSC 499	Independent Study
		EGGN 495	Professional Practice (Internship)
		Math xxx	…some math electives… M-335/340/370

(Total 120 units) See your catalog-year (e.g., 2025F) https://catalog.fullerton.edu/preview_program.php?catoid=95&poid=44697