University of Houston DOWNTOWN

Bachelor of Science in Computer Science
(120 hours)

This is a recommended course sequence based on the UHD 2024-25 Undergraduate Catalog for a degree in Computer Science which equips students to apply computing techniques in business and industry. Courses with asterisks (*) indicate Common Core courses.

First Year

Semester 1	Hours	Grade	Semester 2	Hours	Grade
ENG 1301* (Composition I) P: A TSIA2 score meeting college readiness in Reading and Writing, or TSIA2 Reading and Writing complete, or TSIA2 Reading and Writing exempt	3		ENG 1302* (Composition II) P: A grade of C or better in ENG 1301 or placement by examination	3	
MATH 2401* (Calculus I) P: A grade of C or better in MATH 1505 or placement by exam taken at UHD; Refer to catalog	4		CS 2411 (Procedural and Object-Oriented Programming with C++) P: Grade of C or better in CS 1311; credit or enrollment in MATH 2401	4	
CS 1411 (Introduction to Computer Science with Python) P: Credit or enrollment in MATH 1404 or MATH 1505	4		POLS 2305* (Federal Government) (Summer Option) P: Enrollment in or completion of ENG 1301 or 010 core complete	3	
UHD First-year Seminar* Refer to catalog for approved options	3		MATH 2402 (Calculus II) P: A grade of C or better in MATH 2411 or MATH 2401	4	
			MATH 2305 (Discrete Mathematical Structures) P: A grade of C or better in MATH 1505	3	
Total Hours	**14**		**Total Hours**	**17**	

Second Year

Semester 1	Hours	Grade	Semester 2	Hours	Grade
Approved Language, Philosophy, and Culture course* (Summer Option) Refer to catalog for approved options	3		Science w/ Lab	4	
Science w/ Lab	4		CS 2302 (Digital Logic) P: Grade of C or better in CS 1411 and MATH 2305	3	
CS 3304 (Data and Information Structures) P: Grade of C or better in CS 2411 and MATH 2305	3		CS 3306 (Theory of Computation) P: Grade of C or better in CS 2411 and MATH 2305	3	
CS 2301 (Introduction to Computer Organization) P: Grade of C or better in CS 1411 or CS 1408	3		MATH 2307 (Linear Algebra) P: A grade of C or better in MATH 2401 or MATH 2305 or MATH 2409	3	
CS Elective (Any level)	3		Approved American History Course* Refer to catalog for approved options	3	
Total Hours	**16**		**Total Hours**	**16**	

Third Year

Semester 1	Hours	Grade	Semester 2	Hours	Grade
CS 3321 (Software Engineering) *P: C or better in CS 3304*	3		CS 4318 (Database Systems) *P: Grade of C or better in CS 3304*	3	
CS 4315 (Operating Systems) *P: Grade of C or better in CS 2301 and CS 3304*	3		CS Elective (Upper Level)	3	
TCOM 3302 (Business and Technical Writing) *P: 010 core complete and 040 core complete*	3		MATH 3302 (Probability and Statistics) or STAT 3311 (Statistics for Natural Sciences) *P: Refer to catalog*	3	
POLS 2306* (Texas Government) (Summer Option) *P: Enrollment in or completion of ENG 1301 or 010 complete*	3		COMM 1304* (Introduction to Communication)	3	
CS Elective (Upper Level)	3		Approved Creative Arts course* (Summer Option) *Refer to catalog for approved options*	3	
Total Hours	**15**		**Total Hours**	**15**	

Fourth Year

Semester 1	Hours	Grade	Semester 2	Hours	Grade
CS Elective (Upper Level)	3		CS 4395 (Senior Project) *P: COMM 1304, TCOM 3302, grade of B or better in CS 4294, 3.0 GPA, senior standing and department approval*	3	
Approved American History Course* *Refer to catalog for approved options*	3		CS Elective (Upper Level)	3	
Approved Social & Behavioral Sciences Course* (Summer Option) *Refer to catalog for approved options*	3		CS Elective (Upper Level)	3	
CS 4294 (Senior Seminar) *P: COMM 1304, TCOM 3302, senior standing and department approval*	2		Free elective	4	
CS 4303 (Programming Language Concepts) *P: Grade of C or better in CS 3304 and CS 3306*	3				
Total Hours	**14**		**Total Hours**	**13**	

15 to Finish
Fall: 15 hours • Spring: 15 hours

30 in 3
Fall: 12 hours • Spring: 12 hours • Summer: 6 hours